

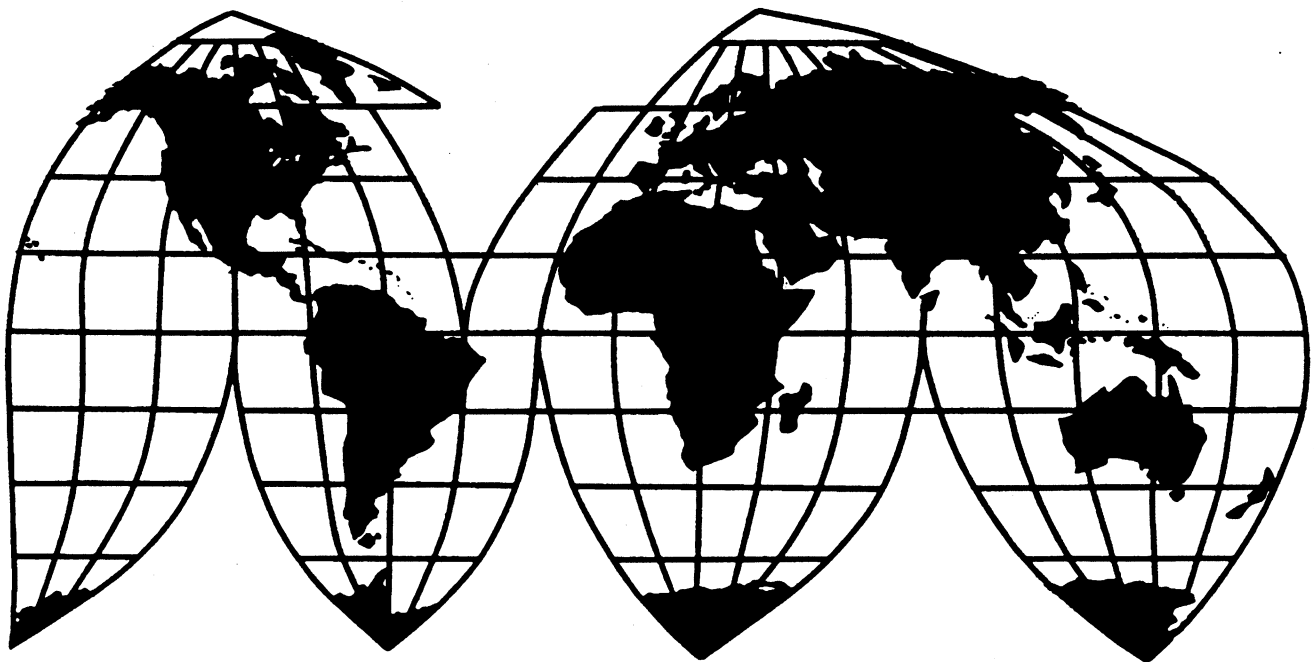
# **Aramid Fiber Formed of Poly Para-Phenylene Terephthalamide From the Netherlands**

Investigation No. 731-TA-652 (Review)

**Publication 3394**

**February 2001**

**U.S. International Trade Commission**



Washington, DC 20436

# U.S. International Trade Commission

## COMMISSIONERS

**Stephen Koplan, Chairman**  
**Deanna Tanner Okun, Vice Chairman**  
**Lynn M. Bragg**  
**Marcia E. Miller**  
**Jennifer A. Hillman**  
**Dennis M. Devaney**

---

Robert A. Rogowsky  
*Director of Operations*

---

*Staff assigned:*

Cynthia Trainor, *Investigator and Industry Analyst*  
John Benedetto, *Economist*  
James Stewart and Gerald Tepper, *Accountants*  
Karen Veninga Driscoll, *Attorney*  
  
George Deyman, *Supervisory Investigator*

**Address all communications to  
Secretary to the Commission  
United States International Trade Commission  
Washington, DC 20436**

# **U.S. International Trade Commission**

Washington, DC 20436  
[www.usitc.gov](http://www.usitc.gov)

## **Aramid Fiber Formed of Poly Para- Phenylene Terephthalamide From the Netherlands**

Investigation No. 731-TA-652 (Review)



**Publication 3394**

**February 2001**



# CONTENTS

	<i>Page</i>
Determination .....	1
Views of the Commission .....	3
Part I: Introduction and overview .....	I-1
Background .....	I-1
The original investigation .....	I-1
Statutory criteria and organization of the report .....	I-2
Commerce's results of full review .....	I-4
Commerce's administrative reviews .....	I-4
Antidumping duties collected .....	I-4
The subject product .....	I-4
Domestic like product issues .....	I-5
The product .....	I-5
Physical characteristics and uses .....	I-5
Manufacturing facilities and production employees .....	I-6
Interchangeability and customer and producer perceptions .....	I-8
Channels of distribution .....	I-8
Price .....	I-8
U.S. market participants .....	I-8
U.S. producer .....	I-8
U.S. subcontractors .....	I-9
U.S. importers .....	I-9
U.S. purchasers .....	I-9
Apparent U.S. consumption and market shares .....	I-9
Part II: Conditions of competition in the U.S. market .....	II-1
Market structure .....	II-1
U.S. market segments .....	II-1
Channels of distribution .....	II-2
U.S. supply: Domestic production for the U.S. market .....	II-2
Capacity utilization and inventories .....	II-3
U.S. alternative markets .....	II-3
U.S. production alternatives .....	II-3
U.S. supply: The potential of subject imports to supply the U.S. market .....	II-3
Capacity utilization and inventories .....	II-4
Production alternatives .....	II-4
Alternative markets .....	II-4
U.S. supply: Nonsubject imports .....	II-4
U.S. demand .....	II-4
Demand trends .....	II-5
Substitute products .....	II-6
Substitutability issues .....	II-6
U.S. purchasers .....	II-6
Factors affecting purchasing decisions .....	II-7
Comparisons of domestic products and subject imports .....	II-8
Lead times .....	II-9

**CONTENTS—Continued**

	<i>Page</i>
<b>Part II: Conditions of competition in the U.S. market—Continued</b>	
Modeling estimates . . . . .	II-9
U.S. supply elasticity . . . . .	II-10
U.S. demand elasticity . . . . .	II-10
Substitution elasticity . . . . .	II-10
Exogenous growth in demand and supply . . . . .	II-10
Model findings and discussion . . . . .	II-11
<b>Part III: Condition of the U.S. industry . . . . .</b>	<b>III-1</b>
U.S. producer's capacity, production, and capacity utilization . . . . .	III-1
U.S. producer's commercial U.S. shipments, company transfers, and export shipments . . . . .	III-1
U.S. producer's inventories . . . . .	III-2
U.S. producer's employment, wages, and productivity . . . . .	III-3
Subcontractors' capacity, production, and capacity utilization . . . . .	III-3
Subcontractors' shipments . . . . .	III-4
Subcontractors' inventories . . . . .	III-4
Subcontractors' employment, wages, and productivity . . . . .	III-4
U.S. producer's financial condition and experience . . . . .	III-5
Background . . . . .	III-5
Operations on PPD-T aramid fiber . . . . .	III-5
Investment in productive facilities, capital expenditures, and research and development expenses . . . . .	III-7
<b>Part IV: U.S. imports and the foreign industry . . . . .</b>	<b>IV-1</b>
U.S. imports . . . . .	IV-1
U.S. importers' inventories . . . . .	IV-2
Producer in the Netherlands . . . . .	IV-2
Capacity, production, capacity utilization, domestic shipments, export shipments, and inventories in the Netherlands . . . . .	IV-3
<b>Part V: Pricing and related information . . . . .</b>	<b>V-1</b>
Characteristics of likely dumping . . . . .	V-1
Exchange rates . . . . .	V-1
Transportation costs to the U.S. market . . . . .	V-2
U.S. inland transportation costs . . . . .	V-2
Pricing practices . . . . .	V-2
Price data . . . . .	V-4
Price comparisons . . . . .	V-8
 <b>Appendixes</b>	
A. <i>Federal Register</i> notices and the Commission's statement on adequacy . . . . .	A-1
B. Calendar of the public hearing . . . . .	B-1
C. Summary tables . . . . .	C-1
D. U.S. producer's, U.S. subcontractors', U.S. importers', U.S. purchasers', and foreign producer's comments regarding effects of the order and the likely effects of revocation . . . . .	D-1
E. Substitute products . . . . .	E-1
F. COMPAS presentation . . . . .	F-1
G. PPD-T aramid fiber prices in the United States and Europe according to DuPont . . . . .	G-1
H. Purchaser price data . . . . .	H-1

**CONTENTS--Continued**

	<i>Page</i>
<b>Figures</b>	
V-1. Exchange rates: Indices of the nominal and real exchange rates of the Dutch guilder in relation to the U.S. dollar, by quarters, January 1997 through June 2000 .....	V-1
V-2. Exchange rates: Indices of the nominal and real exchange rates of the Dutch guilder in relation to the U.S. dollar, 1994-99 .....	V-2
V-3. PPD-T aramid fiber: Weighted-average delivered prices of product 1 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-6
V-4. PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 1 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-6
V-5. PPD-T aramid fiber: Weighted-average delivered prices of product 3 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-6
V-6. PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 3 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-6
V-7. PPD-T aramid fiber: Weighted-average delivered prices of product 4 reported by DuPont, by quarters, January 1997-September 2000 .....	V-7
V-8. PPD-T aramid fiber: Weighted-average delivered prices of product 5 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-7
V-9. PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 5 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-7
V-10. PPD-T aramid fiber: Weighted-average delivered prices of product 6 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-7
V-11. PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 6 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-7
V-12. PPD-T aramid fiber: Weighted-average delivered prices of product 7 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-7
V-13. PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 7 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-7
V-14. PPD-T aramid fiber: Weighted-average delivered prices of product 8 reported by DuPont, by quarters, January 1997-September 2000 .....	V-7
V-15. PPD-T aramid fiber: Weighted-average delivered prices of product 9 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-7
V-16. PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 9 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-8
V-17. PPD-T aramid fiber: Weighted-average delivered prices of product 9 reported by DuPont and product 10 reported by Twaron, by quarters, January 1997-September 2000 .....	V-8
V-18. PPD-T aramid fiber: Percent margins of underselling/(overselling) of Dupont product 9 and Twaron product 10 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-8
V-19. PPD-T aramid fiber: Weighted-average delivered prices of product 11 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-8
V-20. PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 11 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-8
V-21. PPD-T aramid fiber: Weighted-average delivered prices of product 12 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-8
V-22. PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 12 reported by DuPont and Twaron, by quarters, January 1997-September 2000 .....	V-8

**CONTENTS—Continued**

	<i>Page</i>
<b>Tables</b>	
I-1. PPD-T aramid fiber: Summary data from the original investigation and current review, 1991-93 and 1997-99 .....	I-2
I-2. PPD-T aramid fiber: Actual duties collected and imports from the Netherlands, fiscal years 1994-99 .....	I-4
I-3. PPD-T aramid fiber: U.S. shipments of domestic product, U.S. shipments of imports, and apparent U.S. consumption, 1997-99, January-September 1999, and January-September 2000 .....	I-9
I-4. PPD-T aramid fiber: U.S. market shares, 1997-99, January-September 1999, and January-September 2000 .....	I-10
III-1. PPD-T aramid fiber: U.S. producer's capacity, production, and capacity utilization, 1997-99, January-September 1999, and January-September 2000 .....	III-1
III-2. PPD-T aramid fiber: U.S. producer's shipments, by types, 1997-99, January-September 1999, and January-September 2000 .....	III-2
III-3. PPD-T aramid fiber: U.S. producer's commercial U.S. shipments, by end uses, 1997-99, January-September 1999, and January-September 2000 .....	III-2
III-4. PPD-T aramid fiber: U.S. producer's end-of-period inventories, 1997-99, January-September 1999, and January-September 2000 .....	III-2
III-5. PPD-T aramid fiber: Average number of production and related workers, hours worked, wages paid to such employees, hourly wages, productivity, and unit labor costs, 1997-99, January-September 1999, and January-September 2000 .....	III-3
III-6. PPD-T aramid fiber: Subcontractors' toll-processing capacity, toll processing, and capacity utilization, 1997-99, January-September 1999, and January-September 2000 .....	III-4
III-7. PPD-T aramid fiber: Subcontractors' toll-processed shipments, 1997-99, January-September 1999, and January-September 2000 .....	III-4
III-8. PPD-T aramid fiber: Subcontractors' end-of-period inventories, 1997-99, January-September 1999, and January-September 2000 .....	III-4
III-9. PPD-T aramid fiber: Average number of subcontractor production and related workers, hours worked, wages paid to such employees, hourly wages, productivity, and unit labor costs, 1997-99, January-September 1999, and January-September 2000 .....	III-4
III-10. Results of operations of DuPont in the production of PPD-T aramid fiber, 1997-99, January-September 1999, and January-September 2000 .....	III-6
III-11. Summary of selected cost data of DuPont in the production of PPD-T aramid fiber, 1997-99, January-September 1999, and January-September 2000 .....	III-6
III-12. Selected data for the reporting subcontractors of DuPont in the production of PPD-T aramid fiber, 1997-99, January-September 1999, and January-September 2000 .....	III-6
III-13. Results of operations (on a dollars per-pound basis) of DuPont in the production of PPD-T aramid fiber, 1997-99, January-September 1999, and January-September 2000 .....	III-6
III-14. Variance analysis for PPD-T aramid fiber operations, 1997-99, January-September 1999, and January-September 2000 .....	III-7
III-15. Value of assets, capital expenditures, and research and development expenses of DuPont on its PPD-T aramid fiber operations, 1997-99, January-September 1999, and January-September 2000 .....	III-7



**CONTENTS--Continued**

*Page*

**Tables--Continued**

IV-1.	PPD-T aramid fiber: U.S. imports, by sources, 1997-99, January-September 1999, and January-September 2000 . . . . .	IV-1
IV-2.	PPD-T aramid fiber: U.S. imports from the Netherlands under HTS basket subheadings, 1997-99, January-September 1999, and January-September 2000 . . . . .	IV-2
IV-3.	PPD-T aramid fiber: U.S. importers' commercial U.S. shipments from all sources, by end uses, 1997-99, January-September 1999, and January-September 2000 . . . . .	IV-2
IV-4.	PPD-T aramid fiber: U.S. importers' end-of-period inventories of non-TIB imports, 1997-99, January-September 1999, and January-September 2000 . . . . .	IV-2
IV-5.	PPD-T aramid fiber: Data for the producer in the Netherlands, 1997-99, January-September 1999, and January-September 2000 . . . . .	IV-3
V-1.	PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 1 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000 . . . . .	V-5
V-2.	PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 3 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000 . . . . .	V-5
V-3.	PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic product 4 reported by DuPont, by quarters, January 1997-September 2000 . . . . .	V-5
V-4.	PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 5 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000 . . . . .	V-5
V-5.	PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 6 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000 . . . . .	V-5
V-6.	PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 7 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000 . . . . .	V-5
V-7.	PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic product 8 reported by DuPont, by quarters, January 1997-September 2000 . . . . .	V-5
V-8.	PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 9 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000 . . . . .	V-6
V-9.	PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic product 9 reported by DuPont and imported product 10 reported by Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000 . . . . .	V-6
V-10.	PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 11 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000 . . . . .	V-6
V-11.	PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 12 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000 . . . . .	V-6

**CONTENTS--Continued**

*Page*

**Tables--Continued**

C-1.	PPD-T aramid fiber: Summary data concerning the U.S. market, 1997-99, January-September 1999, and January-September 2000 .....	C-3
C-2.	PPD-T aramid fiber: Summary data concerning the U.S. market, including subcontractors' data, 1997-99, January-September 1999, and January-September 2000 .....	C-3
E-1.	Alternatives to Kevlar®, by end use .....	E-3
E-2.	Potential substitutes for PPD-T aramid fiber, by end use .....	E-3
G-1.	PPD-T aramid fiber prices in the United States and Europe, according to DuPont .....	G-3
H-1.	PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000 .....	H-3
H-2.	PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000 .....	H-3
H-3.	PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 5 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000 .....	H-3
H-4.	PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 6 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000 .....	H-3
H-5.	PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 7 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000 .....	H-3
H-6.	PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 9 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000 .....	H-3
H-7.	PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 11 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000 .....	H-3
H-8.	PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 12 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000 .....	H-4
H-9.	PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic products 4 and 8 and imported product 10, reported by end users, by quarters, January 1998-September 2000 .....	H-4

**Note.--Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted from this report. Such deletions are indicated by asterisks.**

# UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-652 (Review)

## ARAMID FIBER FORMED OF POLY PARA-PHENYLENE TEREPHTHALAMIDE FROM THE NETHERLANDS

### DETERMINATION

On the basis of the record<sup>1</sup> developed in the subject five-year review, the United States International Trade Commission determines, pursuant to section 751(c) of the Tariff Act of 1930 (19 U.S.C. § 1675(c)) (the Act), that revocation of the antidumping duty order on aramid fiber formed of poly para-phenylene terephthalamide from the Netherlands would not be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.<sup>2</sup>

### BACKGROUND

The Commission instituted this review on December 1, 1999 (64 FR 67302) and determined on March 3, 2000 that it would conduct a full review (65 FR 13988, March 15, 2000). Notice of the scheduling of the Commission's review and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* on August 21, 2000 (65 F.R. 50720). The hearing was held in Washington, DC, on January 9, 2001, and all persons who requested the opportunity were permitted to appear in person or by counsel.

---

<sup>1</sup> The record is defined in sec. 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR § 207.2(f)).

<sup>2</sup> Commissioner Dennis M. Devaney did not participate in this investigation.



## VIEWS OF THE COMMISSION

Based on the record<sup>1</sup> in this five-year review, we determine<sup>2</sup> under section 751(c) of the Tariff Act of 1930, as amended (“the Act”), that revocation of the antidumping duty order covering aramid fiber formed of poly para-phenylene terephthalamide (“PPD-T aramid fiber”) from the Netherlands would not be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

### I. BACKGROUND

The original investigation of PPD-T aramid fiber from the Netherlands was instituted when E.I. du Pont de Nemours & Co. (“DuPont”) filed a petition with Commerce and the Commission on July 2, 1993. Subsequently, the Commission determined that an industry in the United States was materially injured by reason of imports of PPD-T aramid fiber that were being sold at less than fair value (“LTFV”).<sup>3</sup> On June 21, 1994, the Department of Commerce (“Commerce”) issued an antidumping duty order on PPD-T aramid fiber from the Netherlands.<sup>4</sup>

On December 1, 1999, the Commission instituted a review pursuant to section 751(c) of the Act to determine whether revocation of the antidumping duty order on PPD-T aramid fiber would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time.<sup>5</sup> In five-year reviews, the Commission determines whether to conduct a full review (which would include a public hearing, the issuance of questionnaires, and other procedures) or an expedited review, as follows. First, the Commission determines whether individual responses of interested parties to the notice of institution are adequate. Second, based on those responses deemed individually adequate, the Commission determines whether the collective responses submitted by each of two groups of interested parties -- domestic interested parties (producers, unions, trade associations, or worker groups) and respondent interested parties (importers, exporters, foreign producers, trade associations, or subject country governments) -- demonstrate a sufficient willingness among each group to participate and provide information requested in a full review.<sup>6</sup> If the Commission finds the responses from both groups of interested parties to be adequate, or if other circumstances warrant, it will determine to conduct a full review.

In the instant review, the Commission received a response to the Notice of Institution from the sole domestic producer of PPD-T aramid fiber, DuPont, and a joint response from Twaron Products

---

<sup>1</sup> For purposes of this determination, we are disregarding the new factual information submitted by DuPont in its final comments dated February 2, 2001, that is described in OINV Memorandum INV-Y-018 dated February 6, 2001. This new factual information was not included in the factual record which closed on January 31, 2001. See 19 U.S.C. § 1677m(g); 19 C.F.R. § 207.68(b).

<sup>2</sup> Commissioner Devaney did not participate in this determination.

<sup>3</sup> Aramid Fiber Formed of Poly Para-Phenylene Terephthalamide from the Netherlands, Inv. No. 731-TA-652 (Final), USITC Pub. 2783 (June 1994). Hereinafter, we refer to the public version of the Commission’s original opinion as “USITC Pub. 2783” and to the confidential version as “Confidential Original Opinion.” Commissioner Bragg did not participate in the Commission’s original determination; USITC Pub. 2783 at I-3, n.2.

<sup>4</sup> 59 Fed. Reg. 32678 (June 24, 1994).

<sup>5</sup> 64 Fed. Reg. 67302 (December 1, 1999).

<sup>6</sup> See 19 C.F.R. § 207.62(a); 63 Fed. Reg. 30599, 30602-05 (June 5, 1998).

V.o.F. and Twaron Products, Inc., respectively the sole producer and exporter of aramid fiber in the Netherlands, and the primary U.S. importer of the subject merchandise (collectively “Twaron”).<sup>7</sup>

On March 3, 2000, the Commission determined that the domestic interested party group response to its notice of institution was adequate, and that the respondent interested party group response was adequate with respect to PPD-T aramid fiber from the Netherlands. Accordingly, the Commission voted unanimously to proceed with full reviews with respect to PPD-T aramid fiber from the Netherlands pursuant to section 751(c)(5) of the Act.<sup>8</sup>

## II. DOMESTIC LIKE PRODUCT AND INDUSTRY

### A. Domestic Like Product

In making determinations under section 751(c), the Commission defines “the domestic like product” and the “industry.”<sup>9</sup> The Act defines “domestic like product” as “a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation under this subtitle.”<sup>10</sup>

Commerce has defined the subject merchandise in this review as follows:

all forms of aramid fiber from the Netherlands. These consist of aramid fiber in the form of filament yarn (including single and corded), staple fiber, pulp (wet or dry), spun-laced and spun-bonded nonwovens, chopped fiber and floc. Tire cord is excluded from the class or kind of merchandise under review.<sup>11 12</sup>

PPD-T aramid fiber is a high-performance synthetic fiber. All forms of PPD-T aramid fiber are produced from the same raw materials, have the same chemical composition, and have the same special characteristics: high strength, high modulus (resists deformation by stretching), high thermal stability,

---

<sup>7</sup> On April 1, 2000, Twaron Products V.o.F. officially began using the name Twaron Products bv. \*\*\*. \*\*\*. Teijin, Ltd. of Japan acquired Twaron in December 2000, and Twaron Products bv and Twaron Products, Inc. became Teijin Twaron bv and Teijin Twaron, USA, Inc. Transcript of the Commission's hearing (“Tr.”) at 10; Twaron Posthearing Brief Attachments at Exhibit 16 \*\*\*. For consistency, we refer to the sole foreign producer and exporter from the Netherlands and its related U.S. importer both prior to and after the sale as “Twaron.”

<sup>8</sup> See Explanation of Commission Determination on Adequacy in Inv. No. 731-TA-652 (Review); 65 Fed. Reg. 13988 (March 15, 2000).

<sup>9</sup> 19 U.S.C. § 1677(4)(A).

<sup>10</sup> 19 U.S.C. § 1677(10). See NEC Corp. v. Department of Commerce, 36 F. Supp. 2d 380, 383 (CIT 1998); Nippon Steel Corp. v. United States, 19 CIT 450, 455 (1995); Torrington Co. v. United States, 747 F. Supp. 744, 749 n.3 (CIT 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991). See also S. Rep. No. 96-249, at 90-91 (1979).

<sup>11</sup> Final Results of Full Sunset Review: Aramid Fiber Formed of Poly Para-phenylene Terephthalamide from the Netherlands. 65 Fed. Reg. 65294 (November 1, 2000).

<sup>12</sup> All further references in these views to “aramid fiber” or to “PPD-T aramid fiber” are to aramid fiber formed of poly para-phenylene terephthalamide aramid fiber. There is no indication in the record that Commerce intended to expand the scope of this review beyond the original scope, which was limited to PPD-T aramid fiber. See Antidumping Duty Order and Amended Final Determination: Aramid Fiber Formed of Poly-Phenylene Terephthalamide From The Netherlands, 59 Fed Reg. 32678 (June 24, 1994).

fire resistance, and chemical resistance. The fiber's chemical properties determine its physical and performance characteristics, which are shared among all forms of the fiber.<sup>13</sup>

Demand for PPD-T aramid fiber is derived from the demand for the products using it. PPD-T aramid fiber is utilized in a variety of end uses including: protective apparel, friction products, fiber optic cable, gaskets and seals, hoses and belts, aircraft, military ballistic applications and composites, and automatic transmission paper.<sup>14</sup>

PPD-T aramid fiber comes in various forms: filament yarn, staple, pulp, floc, chopped fiber, and nonwovens.<sup>15</sup> A customer may choose one fiber form over another for incorporation in a downstream end product. It may be difficult for a customer to switch from one fiber form to another after the "designing in" process has occurred.<sup>16</sup> Filament yarn can be used to make ropes and cables, including fiber optic cables. Staple can be used to make protective apparel. Floc can be used as a reinforcement material, and as an input in circuit boards. Chopped fiber is used in friction materials and rubber goods.<sup>17</sup>

In the original investigation, the Commission found that all forms of PPD-T aramid fiber corresponding to Commerce's scope should be treated as one domestic like product.<sup>18</sup> The Commission reached this conclusion because of generally common physical characteristics and product qualities that distinguished aramid fiber from other fibers, common channels of distribution, largely common production employees, and producer perceptions of aramid fiber as a single product.<sup>19</sup> The Commission found that the differences among the various forms of aramid fiber were "less significant than the common product characteristics shared by all forms."<sup>20</sup> In the instant review, DuPont has urged the Commission to readopt its original like product definition, and Twaron has indicated that the like product definition is not an ongoing issue since it was addressed in the original investigation.<sup>21</sup> We find no information in the record of this review to suggest that a different like product definition is appropriate. We therefore define the domestic like product in this review as all PPD-T aramid fiber corresponding to Commerce's scope.

## **B. Domestic Industry**

Section 771(4)(A) of the Act defines the relevant industry as the domestic "producers as a [w]hole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."<sup>22</sup> In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market, provided that adequate production-related activity is conducted in the United

---

<sup>13</sup> Confidential Staff Report ("CR") at I-9-10; Public Staff Report ("PR") at I-5-6 .

<sup>14</sup> CR at II-15-16, & n.8; PR at II-6-7, & n.8.

<sup>15</sup> CR at I-9; PR at I-5.

<sup>16</sup> CR at I-10; PR at I-6.

<sup>17</sup> CR at I-9-10; PR at I-5-6.

<sup>18</sup> USITC Pub. 2783 at I-6.

<sup>19</sup> *Ibid.* at I-8.

<sup>20</sup> *Ibid.*

<sup>21</sup> Tr. at 41 (Testimony of John Greenwald, counsel for DuPont), Tr. at 109-110 (Testimony of Barbara Murphy, counsel for Twaron).

<sup>22</sup> 19 U.S.C. § 1677(4)(A).

States.<sup>23</sup> The Commission bases its analysis on a firm's production-related activities in the United States.<sup>24</sup>

In the original investigation, the Commission defined the domestic industry as the sole domestic producer of PPD-T aramid fiber, petitioner DuPont, as well as DuPont's U.S.-based subcontractors that further processed yarn into staple and pulp forms.<sup>25</sup> The Commission included DuPont's subcontractors in the domestic industry because the record indicated that pulp and staple production required specialized equipment and some technical expertise and because the value added by the further processing activities was not *de minimis*.<sup>26</sup>

The situation has changed since the original investigation insofar as \*\*\*.<sup>27</sup> Both DuPont and Twaron agree that DuPont's current subcontractors perform minor activities and therefore should not be included in the domestic industry.<sup>28</sup> Subcontractors \*\*\* aramid fiber for \*\*\*, which owns the processing equipment for \*\*\*.<sup>29</sup> The subcontractors' further processing of the yarn is less complex than yarn production and adds little value to the product.<sup>30</sup> Therefore, given the more limited operations now performed by subcontractors, the fact that all parties agree that the subcontractors do not engage in sufficient production-related activities to be part of the domestic industry, and the low value-added to the product by DuPont's subcontractors, we do not include these subcontractors in the domestic industry.

Twaron also has some U.S.-based subcontractors.<sup>31</sup> These subcontractors \*\*\*. Similar to DuPont's subcontractors, these subcontractors perform minor activities compared to yarn production, and do not add significant value to the product. For the reasons discussed above, we do not include Twaron's subcontractors in the domestic industry.

---

<sup>23</sup> See, e.g., Uranium from Kazakhstan, Inv. No. 731-TA-539-A (Final), USITC Pub. 3213 at 8-9 (July 1999); Manganese Sulfate from the People's Republic of China, Inv. No. 731-TA-725 (Final), USITC Pub. 2932, at 5 & n.19 (November 1995) ("the Commission has generally included toll producers that engage in sufficient production-related activity to be part of the domestic industry"). See, e.g., United States Steel Group v. United States, 873 F. Supp. 673, 682-83 (CIT 1994), aff'd, 96 F.3d 1352 (Fed. Cir. 1996).

<sup>24</sup> In deciding whether a firm qualifies as a domestic producer, the Commission typically considers six factors: (1) the extent and source of a firm's capital investment; (2) the technical expertise involved in U.S. production activity; (3) the value added to the product in the United States; (4) employment levels; (5) the quantities and types of parts sourced in the United States; and (6) any other costs and activities in the United States leading to production of the like product. See Certain Cut-to-Length Steel Plate from France, India, Indonesia, Italy, Japan, and Korea, Invs. Nos. 701-TA-387-391 (Final) and 731-TA-816-821 (Final), USITC Pub. 3273 at 8-9 (January 2000).

<sup>25</sup> USITC Pub. 2783 at I-9.

<sup>26</sup> *Ibid.*

<sup>27</sup> In 1996, DuPont \*\*\* of aramid pulp production \*\*\*. CR at III-1; PR at III-1. \*\*\*. CR at II-5; PR at II-2.

<sup>28</sup> DuPont describes its current subcontractors' activities as \*\*\*. DuPont Posthearing Brief, Answers to Commission Questions at 25. Twaron describes the DuPont subcontractors' activities as "ancillary" to yarn production. Twaron Posthearing Brief, Responses of Teijin Twaron BV and Teijin Twaron USA, Inc. to Questions of Commissioners and Staff ("Responses to Commission Questions") at 10.

<sup>29</sup> CR at III-8-9 & n.11; PR at III-3 & n.11.

<sup>30</sup> CR at I-11-12; PR at I-7. \*\*\*. Staff Trip Notes, John Benedetto, October 25, 2000. Staff approximated the value added by the reporting subcontractors as \*\*\* percent in 1997, \*\*\* percent in 1998, and \*\*\* percent in 1999, and interim periods (January-September) 1999 and 2000. CR at III-16, n.21; PR at III-6, n.22.

<sup>31</sup> Twaron Posthearing Brief, Responses to Commission Questions at 9-10. Consistent with our prior practice, we consider the overall nature of Twaron's subcontractors' production-related activities in the United States in deciding whether their U.S. activities are sufficient to constitute domestic production, including considering the value added by them to the product in the United States.



Consistent with our definition of the like product, we define a single domestic industry consisting of producers of PPD-T aramid fiber. In this investigation, the domestic industry consists of DuPont, the sole domestic producer of PPD-T aramid fiber.<sup>32</sup>

### III. NO LIKELIHOOD OF CONTINUATION OR RECURRENCE OF MATERIAL INJURY IF THE ANTIDUMPING DUTY ORDER IS REVOKED

#### A. Legal Standard In A Five-Year Review

In a five-year review conducted under section 751(c) of the Act, Commerce will revoke a countervailing or antidumping duty order and terminate a suspended investigation unless: (1) it makes a determination that dumping or subsidization is likely to continue or recur, and (2) the Commission makes a determination that revocation of an order or termination of a suspended investigation “would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time.”<sup>33</sup> The SAA states that “under the likelihood standard, the Commission will engage in a counter-factual analysis; it must decide the likely impact in the reasonably foreseeable future of an important change in the status quo – the revocation or termination of a proceeding and the elimination of its restraining effects on volumes and prices of imports.”<sup>34</sup> Thus, the likelihood standard is prospective in nature.<sup>35</sup> The statute states that “the Commission shall consider that the effects of revocation or termination may not be imminent, but may manifest themselves only over a longer period of time.”<sup>36</sup> According to the SAA, a “‘reasonably foreseeable time’ will vary from case-to-case, but normally will exceed the ‘imminent’ time frame applicable in a threat of injury analysis [in antidumping and countervailing duty investigations].”<sup>37 38</sup>

---

<sup>32</sup> There are no related parties issues in this review. \*\*\*. CR at IV-1; PR at IV-1. In addition, \*\*\*. DuPont Questionnaire at 4, 13.

<sup>33</sup> 19 U.S.C. § 1675a(a).

<sup>34</sup> SAA at 883-84. The SAA states that “[t]he likelihood of injury standard applies regardless of the nature of the Commission’s original determination (material injury, threat of material injury, or material retardation of an industry). Likewise, the standard applies to suspended investigations that were never completed.” SAA at 883.

<sup>35</sup> While the SAA states that “a separate determination regarding current material injury is not necessary,” it indicates that “the Commission may consider relevant factors such as current and likely continued depressed shipment levels and current and likely continued [*sic*] prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material injury if the order is revoked.” SAA at 884.

<sup>36</sup> 19 U.S.C. § 1675a(a)(5).

<sup>37</sup> SAA at 887. Among the factors that the Commission should consider in this regard are “the fungibility or differentiation within the product in question, the level of substitutability between the imported and domestic products, the channels of distribution used, the methods of contracting (such as spot sales or long-term contracts), and lead times for delivery of goods, as well as other factors that may only manifest themselves in the longer term, such as planned investment and the shifting of production facilities.” *Id.*

<sup>38</sup> In analyzing what constitutes a reasonably foreseeable time, Chairman Koplan examines all the current and likely conditions of competition in the relevant industry. He defines “reasonably foreseeable time” as the length of time it is likely to take for the market to adjust to a revocation or termination. In making this assessment, he considers all factors that may accelerate or delay the market adjustment process including any lags in response by foreign producers, importers, consumers, domestic producers, or others due to: lead times; methods of contracting; the need to establish channels of distribution; product differentiation; and any other factors that may only manifest

Although the standard in five-year reviews is not the same as the standard applied in original antidumping or countervailing duty investigations, it contains some of the same fundamental elements. The statute provides that the Commission is to “consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated.”<sup>39</sup> It directs the Commission to take into account its prior injury determination, whether any improvement in the state of the industry is related to the order or the suspension agreement under review, and whether the industry is vulnerable to material injury if the order is revoked or the suspension agreement is terminated.<sup>40 41</sup>

We note that the statute authorizes the Commission to take adverse inferences in five-year reviews, but such authorization does not relieve the Commission of its obligation to consider the record evidence as a whole in making its determination.<sup>42</sup> We generally give credence to the facts supplied by the participating parties and certified by them as true, but base our decision on the evidence as a whole, and do not automatically accept the participating parties’ suggested interpretation of the record evidence. Regardless of the level of participation and the interpretations urged by participating parties, the Commission is obligated to consider all evidence relating to each of the statutory factors, and may not draw adverse inferences that render such analysis superfluous. “In general, the Commission makes determinations by weighing all of the available evidence regarding a multiplicity of factors relating to the domestic industry as a whole and by drawing reasonable inferences from the evidence it finds most persuasive.”<sup>43</sup>

In evaluating the likely volume of imports of subject merchandise if the orders under review are revoked or the suspended investigation is terminated, the Commission is directed to consider whether the likely volume of subject imports would be significant either in absolute terms or relative to the production or consumption in the United States.<sup>44</sup> In doing so, the Commission must consider “all relevant economic factors,” including four enumerated factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise into countries other than the United States; and (4) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products.<sup>45</sup>

---

themselves in the longer term. In other words, this analysis seeks to define “reasonably foreseeable time” by reference to current and likely conditions of competition, but also seeks to avoid unwarranted speculation that may occur in predicting events into the more distant future.

<sup>39</sup> 19 U.S.C. § 1675a(a)(1).

<sup>40</sup> 19 U.S.C. § 1675a(a)(1). The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission’s determination. 19 U.S.C. § 1675a(a)(5). While the Commission must consider all factors, no one factor is necessarily dispositive. SAA at 886.

<sup>41</sup> Section 752(a)(1)(D) of the Act directs the Commission to take into account in five-year reviews involving antidumping proceedings “the findings of the administrative authority regarding duty absorption.” 19 U.S.C. § 1675a(a)(1)(D). Commerce has not issued any duty absorption findings with respect to this review. CR at I-7, PR at I-4.

<sup>42</sup> 19 U.S.C. § 1675(e).

<sup>43</sup> SAA at 869.

<sup>44</sup> 19 U.S.C. § 1675a(a)(2).

<sup>45</sup> 19 U.S.C. § 1675(a)(2)(A)-(D).

In evaluating the likely price effects of subject imports if the orders are revoked or the suspended investigation is terminated, the Commission is directed to consider whether there is likely to be significant underselling by the subject imports as compared with the domestic like product and whether the subject imports are likely to enter the United States at prices that would have a significant depressing or suppressing effect on the price of domestic like products.<sup>46</sup>

In evaluating the likely impact of imports of subject merchandise if the orders are revoked or the suspended investigation is terminated, the Commission is directed to consider all relevant economic factors that are likely to have a bearing on the state of the industry in the United States, including but not limited to: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.<sup>47</sup> All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive to the industry.<sup>48</sup> As instructed by the statute, we have considered the extent to which any improvement in the state of the domestic industry is related to the antidumping duty order at issue and whether the industry is vulnerable to material injury if the order is revoked.<sup>49</sup>

For the reasons stated below, we determine that revocation of the antidumping duty order on PPD-T aramid fiber from the Netherlands would not be likely to lead to continuation or recurrence of material injury to the domestic industry within a reasonably foreseeable time.

## **B. Conditions of Competition**

In evaluating the likely impact of the subject imports on the domestic industry, the statute directs the Commission to consider all relevant economic factors “within the context of the business cycle and conditions of competition that are distinctive to the affected industry.”<sup>50</sup>

---

<sup>46</sup> 19 U.S.C. § 1675a(a)(3). The SAA states that “[c]onsistent with its practice in investigations, in considering the likely price effects of imports in the event of revocation and termination, the Commission may rely on circumstantial, as well as direct, evidence of the adverse effects of unfairly traded imports on domestic prices.” SAA at 886.

<sup>47</sup> 19 U.S.C. § 1675a(a)(4).

<sup>48</sup> 19 U.S.C. § 1675a(a)(4). Section 752(a)(6) of the Act states that “the Commission may consider the magnitude of the margin of dumping” in making its determination in a five-year review. 19 U.S.C. § 1675a(a)(6). The statute defines the “magnitude of the margin of dumping” to be used by the Commission in five-year reviews as “the dumping margin or margins determined by the administering authority under section 1675a(c)(3) of this title.” 19 U.S.C. § 1677(35)(C)(iv). *See also* SAA at 887. In the final results of its full review regarding subject imports from the Netherlands, Commerce found that revocation of the order would be likely to lead to continuation or recurrence of dumping at margins of 2.90 for Netherlands producer Akzo (named “Azko” in Commerce’s final results, and now Twaron), and 66.92 percent for all other producers/exporters. CR at I-7, PR at I-4; 65 Fed. Reg. 65294 (November 1, 2000).

<sup>49</sup> The SAA states that in assessing whether the domestic industry is vulnerable to injury if the order is revoked, the Commission “considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they may also demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.” SAA at 885.

<sup>50</sup> 19 U.S.C. § 1675a(a)(4).

DuPont and Twaron are the only two global producers of PPD-T aramid fiber. DuPont's product is marketed under the name "Kevlar®" and Twaron markets its product under the name "Twaron®." DuPont originally developed PPD-T aramid fiber and \*\*\*.<sup>51</sup> The United States is the largest market worldwide for PPD-T aramid fiber, although Europe and other markets are significant.<sup>52</sup> \*\*\* is currently experiencing \*\*\* and, apparently, \*\*\*. Nevertheless, no new producers have entered the market, and none are expected to do so.<sup>53</sup>

Production of PPD-T aramid fiber industry requires sophisticated technology and a very large investment in capital to build a plant and develop product applications. DuPont states that since 1967, it has spent \$1 billion in plant facilities, research, and market development for aramid fiber.<sup>54</sup> It also states that a quarter of that investment was for product development,<sup>55</sup> and an additional quarter was for market development.<sup>56</sup> At the design stage, PPD-T aramid fiber competes with alternative fibers to be designed into an end-use. Aramid fiber manufacturers usually work not only with their purchasers at this stage but with their purchasers' downstream customers to design aramid fiber into an end-use product.<sup>57</sup> Depending on the application, and the testing involved, it could take a short time or several years to develop an application.<sup>58</sup> There are substitutes for aramid fiber, but in most cases, these substitutes would involve re-designing the end-use product, a process which could take over a year.<sup>59</sup> \*\*\* maintains that alternative products \*\*\*.<sup>60</sup> Thus, \*\*\*.<sup>61</sup>

Apparent U.S. consumption of PPD-T aramid fiber has increased since the original investigation, ranging between \*\*\* and \*\*\* pounds during 1991-1993 and between \*\*\* and \*\*\* pounds during 1997-1999.<sup>62</sup> There has been a significant increase in fiber optic cable demand, as well as some new end uses.<sup>63</sup> Both DuPont and Twaron agree that demand will continue to increase, but disagree on the rate of increase.<sup>64</sup> Demand growth is not expected in all market segments.<sup>65</sup> However, there is currently a

---

<sup>51</sup> CR at II-1, II-9; PR at II-1, II-3.

<sup>52</sup> DuPont Posthearing Brief at 10, Answers to Commission Questions at 24. Twaron Posthearing Brief, Exhibit 1.

<sup>53</sup> Twaron Prehearing Brief at 10-11. \*\*\*. Tr. at 127 (Testimony of Richard Boltuck, economist for Twaron).

<sup>54</sup> Tr. at 14-15 (Testimony of William Harvey, DuPont).

<sup>55</sup> Tr. at 45 (Testimony of Ronald Meltzer, counsel for DuPont).

<sup>56</sup> Tr. at 16 (Testimony of William Harvey, DuPont).

<sup>57</sup> CR at II-1; PR at II-1.

<sup>58</sup> Tr. at 43-44 (Testimony of Marcelo Van de Kamp, DuPont).

<sup>59</sup> CR at II-21; PR at II-10.

<sup>60</sup> CR at II-14-15, PR at II-6 & Appendix E. DuPont maintains that \*\*\*. Id.

<sup>61</sup> CR at II-14-15, CR at II-21-22; PR at II-6, PR at II-10.

<sup>62</sup> Table I-1, CR at I-3; PR at I-2.

<sup>63</sup> CR at II-1, II-4; PR at II-1, II-2. Twaron Prehearing Brief at 5, 9-10, 19 n.33 and Exhibits 2 & 3; Twaron Posthearing Brief, Responses to Commission Questions at 1-2 and Exhibit 2. Twaron emphasizes \*\*\*. Twaron provides \*\*\*. Twaron Posthearing Brief, Exhibit 2, unnumbered pages 9 and 11. See also DuPont Questionnaire at 29 \*\*\*.

<sup>64</sup> DuPont projects a \*\*\* annual demand growth, whereas Twaron projects a \*\*\* annual demand growth. DuPont Posthearing Brief at 8; Twaron Posthearing Brief at 9.

<sup>65</sup> The Commission recognizes that at the present time, demand for PPD-T aramid fiber by the automotive industry may be declining due to softening new car production, and may decline in the reasonably foreseeable future, although any decline would be \*\*\*. Tr. at 23, 55. See also DuPont's Prehearing Brief, Exhibit A, and DuPont Posthearing Brief, Answers to Commission Questions at 5-6 & Exhibit O. Twaron Posthearing Brief,

global shortage of aramid fiber with demand increases in several critical market segments.<sup>66</sup> Strong demand has caused both producers to allocate aramid fiber among various customers.<sup>67</sup> DuPont has \*\*\*.<sup>68</sup> The shortage is so acute that Twaron asserts that the two producers have referred customers to each other.<sup>69</sup> DuPont says that Twaron has \*\*\*, but that rather than \*\*\*.<sup>70</sup> DuPont states that it is not bidding on “a number of Asian and European helmet and vest tender opportunities” due to their low prices, and that it \*\*\*.<sup>71</sup> Twaron has submitted extensive documentation of an acute shortage in aramid fiber and global customer allocations, including \*\*\*.<sup>72</sup> Purchaser questionnaire responses further confirm allocations by the two producers.<sup>73</sup>

---

Responses to Commission Questions at 1, Tr. at 131-132 (Testimony of Richard Boltuck, economist for Twaron). Most purchasers in automotive sectors reported decreased demand or no increase in demand for aramid fiber. CR at II-12; PR at II-5.

The market segments most heavily relying on the automobile industry applications are friction, gaskets and seals, and belts and hoses. These market segments represented \*\*\* of DuPont’s U.S. commercial shipments in 1999 by quantity and \*\*\* by value. Table III-3, CR at III-5-6; PR at III-2. DuPont also expects \*\*\* if demand for aramid fiber in the automotive sector declines, \*\*\*. DuPont Posthearing Brief, Answers to Commission Questions at 6. However, it appears that DuPont shifted somewhat its product mix \*\*\*. The \*\*\* segment comprised \*\*\* of DuPont’s U.S. shipments in 1999, but only \*\*\* in 2000. Similarly, the \*\*\* segment comprised \*\*\* of DuPont’s U.S. shipments in 1999, but only \*\*\* in 2000. CR at II-2, PR at II-1. DuPont Posthearing Brief, Attachment B. Furthermore, in \*\*\*. DuPont Posthearing Brief, Answers to Commission Questions at 14.

<sup>66</sup> CR at II-1; PR at II-1. Tr. at 16, 37, 57 (Testimony of William Harvey, DuPont). Tr. at 165 (Testimony of John Greenwald, counsel for DuPont). Tr. at 23, 55 (Testimony of Marcelo Van de Kamp, DuPont). In its testimony at the hearing, one of DuPont’s representatives stated that demand peaks had been in all market segments, and another said that demand peaks were in several critical market segments, but that demand had begun to fall in the auto sector. Compare Tr. at 16, 57 with Tr. at 23, 55. Twaron agrees with DuPont’s assessment that demand is strong, and characterizes it as increasing in “all applications worldwide.” Tr. at 83-84 (Testimony of Gert Frederiks, Twaron). Tr. at 12 (Testimony of Barbara Murphy, counsel for Twaron). Purchasers reported that both DuPont and Twaron were operating at \*\*\* at the end of 2000. Eight purchasers reported that PPD-T aramid fiber production limits had either just begun to affect price and availability or were about to begin. \*\*\* said that there was a “worldwide aramid shortage status.” \*\*\* described increased demand for PPD-T aramid fiber as “sharp,” “heavy,” and “significant,” with \*\*\* forecasting that aramid fiber demand in the \*\*\* would grow 10 percent annually for the next three years. Most purchasers expected either continuing stability or continuing growth in demand. CR at II-7, II-13-14; PR at II-2-3, II-5-6. See also Twaron Prehearing Brief at 16, n.29 (quoting various purchasers’ \*\*\*).

<sup>67</sup> Tr. at 54 (Testimony of John Greenwald, counsel for DuPont). DuPont Posthearing Brief, Answers to Commission Questions at 13-15. Tr. at 83-84 (Testimony of Gert Frederiks, Twaron).

<sup>68</sup> DuPont Posthearing Brief, Answers to Commission Questions at 13-15. See also Tr. at 35-37 (Testimony of William Harvey, DuPont, regarding DuPont’s focus on “sustainable” end uses).

<sup>69</sup> Tr. at 83-84 (Testimony of Gert Frederiks, Twaron).

<sup>70</sup> DuPont Posthearing Brief, Answers to Commission Questions at 31. See also Tr. at 70-71 (Testimony of Marcelo Van de Kamp, DuPont)

<sup>71</sup> DuPont Posthearing Brief, Answers to Commission Questions at 13-14. Twaron submitted evidence that \*\*\*. Twaron Posthearing Brief, Exhibit 9. \*\*\*.

<sup>72</sup> Twaron Posthearing Brief, Responses to Commission Questions 1-2 and Exhibits 2-9. Twaron’s documentation specifies \*\*\*: \*\*\*, \*\*\*, \*\*\*, and \*\*\*. Id. at Exhibit 4, 6, 7, and 8. These anticipated shortages total \*\*\*. Although not always designated as such, these are apparently \*\*\*.

<sup>73</sup> CR at II-7; PR at II-3. One purchaser, \*\*\*, stated that DuPont was phasing out several products that were high production and low yield, and that as a result \*\*\* was working on qualifying replacement products. \*\*\* said that both DuPont and Twaron were allocating supply and cutting back small or marginal users. Id.

Kevlar® and Twaron® are substitutable. DuPont, Twaron, and fourteen out of fifteen purchasers stated that imported and U.S. PPD-T aramid fiber could be used in the same end-use applications.<sup>74</sup> Purchasers report that \*\*\*.<sup>75</sup> Purchasers state that quality, customer specifications, price, and availability were the most important factors in their purchasing decisions.<sup>76</sup> The preference of their end-use customers for one supplier over another can also be important.<sup>77</sup>

Both DuPont and Twaron negotiate with customers individually to price their products based on “value-in-use.”<sup>78</sup> In this pricing system, the price paid by the customer is based on the value the product brings to the particular application.<sup>79</sup> This system allows DuPont and Twaron to \*\*\*.<sup>80</sup> Thus, \*\*\*, in some cases, \*\*\*.<sup>81</sup>

As stated earlier, Teijin, Ltd. has recently acquired Twaron. In its questionnaire response, Twaron reported that \*\*\*.<sup>82</sup> One Twaron representative testified that it would not affect its ongoing expansion investment application, except that a different board would review it, and an economist testified that \*\*\*.<sup>83</sup>

We find that the foregoing conditions of competition are likely to prevail for the reasonably foreseeable future and thus provide an adequate basis by which to assess the likely effects of revocation within the reasonably foreseeable future.

### C. Likely Volume of Subject Imports

In the original investigation, the Commission found that both the volume of LTFV imports and the increase in that volume, relative to consumption in the United States, were significant. At that time, the Commission noted the \*\*\* in the volume of U.S. shipments of LTFV imports by quantity and value throughout the period of investigation, and a \*\*\* increase in their market share.<sup>84</sup>

The order has not resulted in a \*\*\* in subject import volumes. U.S. shipments of subject imports increased by quantity and by value between 1993 and 1997.<sup>85</sup> Between 1997 and 1999, U.S. shipments

---

<sup>74</sup> CR at II-15, II-18; PR at II-6, II-7.

<sup>75</sup> Staff telephone notes dated January 10-11, 2001. \*\*\*. CR at II-15; PR at II-6.

<sup>76</sup> CR at II-17; PR at II-7.

<sup>77</sup> CR at II-17-19; PR at II-7-8.

<sup>78</sup> CR at V-2-3; PR at V-2-3.

<sup>79</sup> Tr. at 42 (Testimony of William Harvey, DuPont).

<sup>80</sup> Tr. at 128 (Testimony of Richard Boltuck, economist for Twaron).

<sup>81</sup> Compare unit values for \*\*\*. Table III-3, CR/PR at III-5. Table IV-3, CR/PR at IV-4-5.

<sup>82</sup> Twaron Questionnaire at Insert to page 3. Twaron Posthearing Brief, Answers to Commission Questions at 6.

<sup>83</sup> Tr. at 93 (Testimony of Eiso Alberda van Ekenstein, Twaron). Tr. at 142-143 (Testimony of Richard Boltuck, economist for Twaron).

<sup>84</sup> Confidential Original Opinion at I-21.

<sup>85</sup> In 1993, U.S. shipments of subject imports were \*\*\* pounds in quantity and \*\*\* by value. In 1997, U.S. shipments of subject imports were \*\*\* pounds in quantity and \*\*\* by value. Table I-1, CR at I-3; PR at I-2; Table I-3, CR at I-18; PR at I-9. A \*\*\* of imports from the Netherlands entered the U.S. during the review period as temporary imports under bond (TIBs). These TIB imports were re-exported \*\*\*. CR at IV-6, n.2; PR at IV-2, n.2. Consistent with prior Commission determinations, we are not treating TIB imports re-exported to non-NAFTA countries as subject imports. Certain Cut-To-Length Steel Plate from the Czech Republic, France, India, Indonesia, Italy, Japan, Korea and Macedonia, Invs. Nos. 701-TA-387-392 (Preliminary) and 731-TA-815-822 (Preliminary), USITC Pub. 3181 (April 1999) at 13-14; Titanium Sponge from Japan, Kazakhstan, Russia and Ukraine, Invs. Nos.

of subject imports fell \*\*\* in terms of quantity and fell \*\*\* by value, but were higher in quantity and value in interim 2000 as compared to interim 1999.<sup>86</sup>

Despite increasing import volumes, Twaron's share of apparent U.S. consumption has not changed significantly since the imposition of the order, due to the increase in demand. Its market share \*\*\* over the review period, but was \*\*\* in interim 2000 as compared to interim 1999.<sup>87</sup> Twaron was operating at \*\*\* during the original investigation.<sup>88</sup> Twaron's capacity utilization rate was \*\*\* than during the original investigation in 1997 to 1998 and then \*\*\*. In 1999 and interim 2000, Twaron's capacity utilization \*\*\*.<sup>89</sup> Twaron's \*\*\* is explained by \*\*\*.<sup>90</sup> Given today's current shortage, the record indicates that Twaron has \*\*\*.<sup>91</sup>

Twaron's inventory levels were approximately the same in 1997 as in 1999. However, the record also indicates that there was a \*\*\* drop in Twaron's end-of-period inventories in interim 2000 as compared to interim 1999. This same pattern is reflected in Twaron's ratio of end-of-period inventories to production and shipments.<sup>92</sup> Although duties vary from country to country, there are no quantitative barriers to the importation of PPD-T aramid fiber into countries other than the United States.<sup>93</sup> Twaron cannot shift production from other products to produce aramid fiber.<sup>94</sup>

Twaron's sales in all markets have increased due to strong global demand, as noted above.<sup>95</sup> Twaron has provided extensive documentation that there is an acute global shortage of aramid fiber and that it has had to \*\*\*.<sup>96</sup> Twaron's \*\*\* are in all market sectors, and in all markets around the world.<sup>97</sup>

---

751-TA-17-20, USITC Pub. 3119 (August 1998) at 18.

<sup>86</sup> In terms of quantity, U.S. shipments of subject imports were \*\*\* pounds in 1997, \*\*\* pounds in 1998, and \*\*\* pounds in 1999. In the interim periods, they were \*\*\* pounds in 1999 as compared to \*\*\* pounds in 2000. Table I-3, CR/PR at I-18. In terms of value, U.S. shipments of subject imports were \*\*\* in 1997, \*\*\* in 1998, and \*\*\* in 1999. In the interim periods, they were \*\*\* by value in 1999 as compared to \*\*\* in 2000. Table I-3, CR at I-18, PR at I-9.

<sup>87</sup> Twaron's market share of apparent U.S. consumption was \*\*\* in 1993 and \*\*\* in 1997. Twaron's market share \*\*\* from \*\*\* in 1997 to \*\*\* in 1998, and then \*\*\* to \*\*\* in 1999. In interim 1999, Twaron's market share was \*\*\* as compared to \*\*\* in interim 2000. Table I-1, CR at I-3, PR at I-2 and Table I-4, CR at I-19, PR at I-10.

<sup>88</sup> In the original investigation, Twaron's capacity utilization was \*\*\*. Table 15, Original CR at I-56.

<sup>89</sup> Over the review period, Twaron's capacity utilization was \*\*\* in 1997, \*\*\* in 1998, and \*\*\* percent in 1999. Twaron's capacity utilization was \*\*\* in interim 1999 and \*\*\* in interim 2000. Table IV-5, CR at IV-9, PR at IV-3.

<sup>90</sup> CR at IV-8, PR at IV-3.

<sup>91</sup> Twaron Prehearing Brief at 15. Twaron's Posthearing Brief, Responses to Commission Questions at 2-3 & Exhibits 2 - 9.

<sup>92</sup> Table IV-5, CR at IV-9, PR at IV-3. \*\*\*. Id.

<sup>93</sup> CR at IV-8, PR at IV-3.

<sup>94</sup> CR at IV-8, PR at IV-3. Twaron Prehearing Brief at 17.

<sup>95</sup> CR at II-8-10, PR at II-3-4.

<sup>96</sup> Tr. at 129 (Testimony of Richard Boltuck, economist for Twaron).

<sup>97</sup> Twaron Posthearing Brief, Exhibits 3-9.

We recognize that given the currently higher prices in the United States, compared to other markets,<sup>98 99</sup> revocation of the order may result in some increase in subject import volume, as the U.S. market could be viewed as an attractive one after the order is lifted. Given the projected significant continued shortages in all markets,<sup>100</sup> and Twaron's lack of excess capacity, we do not find it likely that the volume of imports would increase significantly.<sup>101</sup> Indeed, Twaron has been struggling to supply its existing customers in a severe shortage situation.<sup>102</sup>

DuPont argues that Twaron's planned \*\*\* will cause material injury to the domestic industry.<sup>103</sup> We first note that Twaron's expansion plans<sup>104</sup> would not result in increased product until mid-2003 at the earliest.<sup>105</sup> In the near term, the \*\*\* in place for both DuPont and Twaron, and the allocations, will continue.<sup>106</sup>

If Twaron's entire planned capacity expansion takes place, increasing its production by \*\*\*, Twaron has provided evidence that \*\*\*.<sup>107</sup> Twaron also asserts that \*\*\*.<sup>108</sup>

---

<sup>98</sup> CR at V-5-6; PR at V-3.

<sup>99</sup> European prices, however, are increasing. Twaron presented documentation indicating that European prices \*\*\*. Twaron Posthearing Brief, Exhibit 10. Twaron also states that since January 1, 2001, it has announced \*\*\* for some of its European customers. Twaron Posthearing Brief at 3 & n.9. Purchasers confirm that prices are \*\*\*. Staff Telephone Notes, January 10-11, 2001. CR at V-4; PR at V-3.

<sup>100</sup> Demand for aramid fiber is also increasing in markets outside Europe and the United States. Twaron Posthearing Brief, Exhibit 2 \*\*\*. The replacement of asbestos by aramid fiber in brake pads in countries such as China and India is also a major demand area. Twaron Prehearing Brief at 10. DuPont agrees that asbestos replacement in brake and gasket applications outside the United States is providing additional demand. CR at II-11; PR at II-4-5.

<sup>101</sup> We recognize that Twaron may receive some additional military business by virtue of a recent waiver of the Berry Amendment once the order is revoked. The Berry Amendment restricts the foreign sourcing of synthetic fabric, including fibers and yarns used in such fabrics, by the Department of Defense. The Under Secretary of Defense instituted a waiver to the Berry Amendment on February 12, 1999, authorizing the procurement of articles containing para-aramid fibers and yarns manufactured in the Netherlands. 64 Fed. Reg. 24528, 24528-24529 (May 7, 1999). However, the record reflects that DuPont receives a \*\*\*. Twaron Posthearing Brief, Responses to Commission Questions at 4. Moreover, the Under Secretary of Defense, in his findings of fact in granting this waiver, noted that sole-source contracts could result in higher prices and less favorable terms, including delivery schedules, for the U.S. military. Twaron Posthearing Brief, Exhibit 12 at 2. Purchasers frequently wish to dual source aramid fiber to assure supply. CR at II-19, PR at II-8 \*\*\*; Telephone Notes of January 10-11, 2001 \*\*\*. Twaron Posthearing Brief, Responses to Commission Questions at 7.

<sup>102</sup> Tr. at 84-85 (Testimony of Gert Frederiks, Twaron). Tr. at 123-124 (Testimony of Barbara Murphy, counsel for Twaron). Twaron Posthearing Brief at 8, Exhibit 3. \*\*\*.

<sup>103</sup> DuPont Prehearing Brief at 23-24; DuPont Posthearing Brief at 9.

<sup>104</sup> Twaron's planned capacity expansion is not a certainty. \*\*\*. Twaron Posthearing Brief, Exhibit 17. Twaron maintains that its 2003 capacity expansion is contingent on healthy demand growth for aramid fiber to justify the project. Twaron Posthearing Brief at 13.

<sup>105</sup> Tr. at 82 (Testimony of Eiso Alberda van Ekenstein, Twaron).

<sup>106</sup> Twaron reports that it is \*\*\*. Twaron Prehearing Brief at 15. DuPont's capacity utilization rate in interim 2000 was \*\*\*. \*\*\*. CR at III-2, PR at III-1; & Table III-1, CR at III-2, PR at III-1. DuPont Posthearing Brief, Answers to Commission Questions at 3, n.1.

<sup>107</sup> Twaron Posthearing Brief at 14, Exhibit 14. \*\*\*.

<sup>108</sup> Twaron Posthearing Brief at 13-14. Tr. at 82 (Testimony of Eiso Alberda van Ekenstein). Tr. at 200 (Testimony of Barbara Murphy, counsel for Twaron).



Assessing the significance of Twaron's potential expansion for the period of 2003 and beyond is speculative given the difficulty of forecasting medium-to long term demand for this product.<sup>109</sup> The existence of a significant current shortage of PPD-T aramid fiber means that even at current levels of demand the market can absorb some additional supply without displacing existing suppliers. Moreover, we are persuaded that demand will continue to rise at a moderate to fast pace in the near term.<sup>110</sup> Thus, we do not find that Twaron's potential expansion in capacity will result in a significant increase in the volume of imports in the reasonably foreseeable future, should the order be revoked.<sup>111</sup>

We conclude that the likely volume of subject imports from the Netherlands would not be significant within a reasonably foreseeable time if the antidumping duty order is revoked.<sup>112</sup>

#### **D. Likely Price Effects of the Subject Imports**

In the original investigation, the Commission found significant price underselling by the subject imports as compared with the domestic product. It found that the pervasive underselling was significant because of the interchangeability of the domestic and imported products.<sup>113</sup>

PPD-T aramid fiber is primarily priced based on value-in-use, which means that the same product can be sold at \*\*\* to different end users. The Commission gathered pricing information on twelve products. Over the review period, prices for both the domestic and imported products generally either remained constant or fell somewhat, and there was mixed under and overselling by Twaron of the domestic product.<sup>114</sup>

We have found that there will be no likely significant increase in the volume of subject imports if the order is revoked, and given the current shortage, there will be no need for Twaron to cut prices to generate sales volumes. While it is possible that U.S. prices could be somewhat negatively affected in some instances when the order is lifted, given the present disparity of prices in the United States and

---

<sup>109</sup> Industry demand has historically fluctuated over relatively short periods of time, and this fluctuation has affected capacity expansions. Twaron has delayed capacity expansion decisions due to slower than expected growth. Tr. at 80-81 (Testimony of Eiso Alberda van Ekenstein, Twaron). Twaron also \*\*\*. CR at IV-8; PR at IV-3. Similarly, \*\*\*. DuPont Questionnaire at 15.

<sup>110</sup> Fourteen purchasers reported that U.S. demand for PPD-T aramid fiber had increased in at least one end-use segment since 1994. One purchaser reported being told that demand was heaviest in the fiber optic and ballistics segment. Most purchasers expect either continuing stability or continuing growth in PPD-T aramid fiber demand. CR at II-13-14; PR at II-5-6.

<sup>111</sup> In its final comments, DuPont comments on a \*\*\*. DuPont suggests that Twaron is \*\*\* and that this would "erase the current shortage" because aramid fiber \*\*\*. DuPont Final Comments at 13. DuPont's statement that "[t]here is an increasing customer preference for lower denier items in the product mix that is most notable in \*\*\*" refutes its comment. DuPont Posthearing Brief, Answers to Commission Questions at 3, n.1. \*\*\*. This increasing customer preference is more likely to \*\*\* the shortage.

<sup>112</sup> Commissioners Miller and Hillman find that the current volume and market share of subject imports is large and conclude that the likely volume would continue to be significant upon revocation of the order. However, as described above, they do not find it likely that there would be a substantial increase in volume upon revocation.

<sup>113</sup> USITC Pub. 2783 at I-13.

<sup>114</sup> CR at V-8-V-29, V-33; PR at V-5-V-8, V-9.

Europe,<sup>115</sup> we note that overall prices are currently rising in both the United States and Europe.<sup>116</sup> Furthermore, with the order in place, Twaron has maintained a significant presence in the U.S. market without engaging in significant underselling. Given the shortages of the product, and likely further expanding demand, it is unlikely that the small additional volumes of subject imports would generate significant price depressing or suppressing effects, or that Twaron would significantly reduce prices on its existing sales volume in the United States.

For the foregoing reasons, we find that revocation of the antidumping duty order would not be likely to lead to significant underselling by the subject imports of the domestic like product, or to significant price depression and suppression, within a reasonably foreseeable time.

#### **E. Likely Impact of the Subject Imports**

In the original investigation, the Commission found that the domestic industry suffered declines in sales, market shares, financial condition, and employment levels during the period of investigation, and curtailed critical research and development and capital expenditures, by reason of LTFV imports.<sup>117</sup>

The industry's condition has improved \*\*\* since the original investigation. DuPont has increased production since the order was imposed, while its capacity has remained virtually constant.<sup>118</sup> DuPont \*\*\* production and capacity utilization over the review period,<sup>119</sup> and is currently operating at \*\*\*. DuPont's capacity utilization was \*\*\* percent in 1999; and \*\*\* in interim 2000 as compared to \*\*\* in interim 1999.<sup>120</sup> DuPont's inventories fell from 1997 to 1999, although in interim 2000 Dupont had \*\*\* higher inventories as compared to interim 1999. Its ratio of inventories to production has also fallen.<sup>121</sup>

In the original investigation, DuPont's operating income margins declined over the period of investigation, from \*\*\* in 1991 to \*\*\* in 1992, ending at \*\*\* in 1993.<sup>122</sup> In contrast, DuPont's operating income margins have been \*\*\* in the review period, \*\*\*, \*\*\* in 1998, and \*\*\* in 1999. Furthermore, its operating income margin was \*\*\* in interim 2000 compared to \*\*\* in interim 1999.<sup>123</sup> This \*\*\* has occurred in part because of a \*\*\* due to DuPont's \*\*\*.<sup>124</sup>

The domestic industry's share of apparent U.S. consumption has \*\*\* since 1993 and over the review period. In terms of quantity, the domestic industry's market share was \*\*\* in 1993, \*\*\* in 1997,

---

<sup>115</sup> CR at V-4-V-6; PR at V-3-4.

<sup>116</sup> Tr. at 85 (Testimony of Gert Frederiks, Twaron). DuPont Posthearing Brief at 7. Twaron Posthearing Brief at 3 & n.9. Twaron Posthearing Brief, Exhibit 3 (\*\*\*).

Purchasers confirm that prices are increasing. Purchaser \*\*\* said that DuPont raised its prices by \*\*\* in \*\*\* and Twaron followed suit. Purchaser \*\*\* cited \*\*\* in 2000. CR at V-4; PR at V-3. Purchaser \*\*\*. Staff Telephone Notes, January 10-11, 2001.

<sup>117</sup> USITC Pub. 2783 at I-15.

<sup>118</sup> Table I-1, CR at I-4, PR at I-2; and Table III-1, CR at III-2, PR at III-1.

<sup>119</sup> DuPont produced \*\*\* pounds of PPD-T aramid fiber in 1997, \*\*\* in 1998, and \*\*\* in 1999. It produced \*\*\* pounds of PPD-T aramid fiber in interim 2000, as compared to \*\*\* million pounds in interim 1999. DuPont's capacity utilization \*\*\* from \*\*\* in 1997, to \*\*\* in 1998, and further to \*\*\* in 1999. DuPont's capacity utilization was \*\*\* in interim 1999, as compared to \*\*\* in interim 2000. Table III-1, CR at III-2, PR at III-1.

<sup>120</sup> Table III-1, CR at III-2, PR at III-1.

<sup>121</sup> Table III-4, CR at III-6, PR at III-2.

<sup>122</sup> Table I-1, CR at I-4, PR at I-2.

<sup>123</sup> Table III-10, CR at III-14, PR at III-6.

<sup>124</sup> CR at III-13; PR at III-5. The extent to which \*\*\*. Table III-15, CR at III-19, PR at III-7.

\*\*\* in 1998 and \*\*\* in 1999. In terms of value, it was \*\*\* in 1993, \*\*\* in 1997, \*\*\* in 1998, and \*\*\* in 1999.<sup>125</sup> The number of production workers and wages paid have increased \*\*\* since the original investigation, and over the review period, although the number of hours worked has not changed \*\*\* since the original investigation.<sup>126</sup>

Combining the robust condition of this industry with a current shortage of aramid fiber, we do not find the domestic industry to be vulnerable to material injury if the order is revoked.

While the antidumping duty order may have played a role, the improvement in the domestic industry's condition since the original investigation is primarily due to higher demand for most if not all PPD-T aramid fiber market segments, \*\*\*. Although the antidumping duty order may have helped DuPont initially, it is evident that DuPont's current condition is attributable to extremely propitious market conditions and fixed assets that are \*\*\*.

Given the global shortage of PPD-T aramid fiber, demand is likely to remain strong, and the industry's condition is likely to remain strong. We find that revocation of the antidumping duty order would not be likely to have a significant adverse impact on the domestic industry's production, market share, profits, sales, revenues, capacity utilization, employment, ability to raise capital, future capital investment, or product development.

Accordingly, based on the record in these reviews, we conclude that, if the antidumping duty order is revoked, the subject imports would not be likely to have a significant adverse impact on the domestic industry within a reasonably foreseeable time.

## CONCLUSION

For the foregoing reasons, we determine that revocation of the antidumping duty order on PPD-T aramid fiber from the Netherlands would not be likely to lead to continuation or recurrence of material injury to the domestic industry producing PPD-T aramid fiber within a reasonably foreseeable time.

---

<sup>125</sup> Table I-1, CR at I-3, PR at I-2. The domestic industry's market share by quantity was \*\*\* in interim 2000 as compared to \*\*\* in interim 1999, and by value it was \*\*\* in interim 2000 as compared to \*\*\* in interim 1999. Table I-4, CR at I-19, PR at I-10.

<sup>126</sup> Table I-1, CR at I-4, PR at I-2; Table III-5, CR at III-7, PR at III-3.



## PART I: INTRODUCTION AND OVERVIEW

### BACKGROUND

On December 1, 1999, the Commission gave notice, pursuant to section 751(c) of the Tariff Act of 1930 (the Act), that it had instituted a review to determine whether revocation of the antidumping duty (AD) order on aramid fiber formed of poly para-phenylene terephthalamide (PPD-T aramid fiber) from the Netherlands would likely lead to the continuation or recurrence of material injury to a domestic industry. Effective March 3, 2000, the Commission determined that it would conduct a full review pursuant to section 751(c)(5) of the Act. Information relating to the background and schedule of the review is provided in the following tabulation.<sup>1</sup>

Effective date	Action
June 24, 1994	Commerce's AD order and amended final determination (59 FR 32678, June 24, 1994)
December 1, 1999	Commission's institution of review (64 FR 67302)
March 3, 2000	Commission's decision to conduct a full review (65 FR 13988, March 15, 2000)
August 10, 2000	Commission's scheduling of the review (65 FR 50720, August 21, 2000)
October 26, 2000	Commerce's final results of full review (65 FR 65294, November 1, 2000)
January 9, 2001	Commission's hearing <sup>2</sup>
February 8, 2001	Date of the Commission's vote
February 22, 2001	Commission's determination sent to Commerce

### The Original Investigation

On July 2, 1993, a petition was filed with Commerce and the Commission by E.I. du Pont de Nemours & Co. (DuPont) alleging that an industry in the United States was materially injured by reason of dumped imports of PPD-T aramid fiber from the Netherlands. On May 6, 1994, Commerce made a final affirmative dumping determination,<sup>3</sup> with margins as follows: Akzo, 55.84 percent and all others, also 55.84 percent. On June 24, 1994, Commerce published notice of amended margins<sup>4</sup> as follows: Akzo, 66.92 percent and all others, also 66.92 percent. The Commission made its final affirmative injury determination on June 15, 1994, and Commerce issued an AD order on June 24, 1994. Table I-1 presents a summary of data from the original investigation and from this review.

---

<sup>1</sup> The Commission's notice of institution, notice to conduct a full review, scheduling notice, and statement on adequacy appear in app. A and may also be found at the Commission's web site (internet address [www.usitc.gov](http://www.usitc.gov)). Commissioners' votes on whether to conduct an expedited or full review may also be found at the web site. The notice of Commerce's final results of full review also appears in app. A.

<sup>2</sup> A list of witnesses who appeared at the hearing is presented in app. B.

<sup>3</sup> 59 FR 23684, May 6, 1994.

<sup>4</sup> 59 FR 32678, June 24, 1994.

Table I-1

PPD-T aramid fiber: Summary data from the original investigation and current review, 1991-93 and 1997-99

\* \* \* \* \*

### Statutory Criteria and Organization of the Report

Section 751(c) of the Act requires Commerce and the Commission to conduct a review no later than five years after the issuance of an antidumping or countervailing duty order or the suspension of an investigation to determine whether revocation of the order or termination of the suspended investigation “would be likely to lead to continuation or recurrence of dumping or a countervailable subsidy (as the case may be) and of material injury.”<sup>5</sup>

Section 752(a) of the Act provides that in making its determination of likelihood of continuation or recurrence of material injury--

*(1) IN GENERAL.-- . . . the Commission shall determine whether revocation of an order, or termination of a suspended investigation, would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time. The Commission shall consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated. The Commission shall take into account--*

*(A) its prior injury determinations, including the volume, price effect, and impact of imports of the subject merchandise on the industry before the order was issued or the suspension agreement was accepted,*

*(B) whether any improvement in the state of the industry is related to the order or the suspension agreement,*

*(C) whether the industry is vulnerable to material injury if the order is revoked or the suspension agreement is terminated, and*

*(D) in an antidumping proceeding . . . , (Commerce’s findings) regarding duty absorption . . .*

*(2) VOLUME.--In evaluating the likely volume of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether the likely volume of imports of the subject merchandise would be significant if the order is revoked or the suspended investigation is terminated, either in absolute terms or relative to production or consumption in the United States. In so doing, the Commission shall consider all relevant economic factors, including--*

*(A) any likely increase in production capacity or existing unused production capacity in the exporting country,*

*(B) existing inventories of the subject merchandise, or likely increases in inventories,*

---

<sup>5</sup> Certain transition rules apply to the scheduling of reviews (such as this one) involving antidumping and countervailing duty orders and suspensions of investigations that were in effect prior to January 1, 1995 (the date the WTO Agreement entered into force with respect to the United States). Reviews of these transition orders will be conducted over a three-year transition period running from July 1, 1998, through June 30, 2001. Transition reviews must be completed not later than 18 months after institution.

*(C) the existence of barriers to the importation of such merchandise into countries other than the United States, and  
(D) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products.*

*(3) PRICE.--In evaluating the likely price effects of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether--*

*(A) there is likely to be significant price underselling by imports of the subject merchandise as compared to domestic like products, and*

*(B) imports of the subject merchandise are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of domestic like products.*

*(4) IMPACT ON THE INDUSTRY.--In evaluating the likely impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated, the Commission shall consider all relevant economic factors which are likely to have a bearing on the state of the industry in the United States, including, but not limited to--*

*(A) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity,*

*(B) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, and*

*(C) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.*

*The Commission shall evaluate all such relevant economic factors . . . within the context of the business cycle and the conditions of competition that are distinctive to the affected industry.*

Section 752(a)(6) of the Act states further that in making its determination, “the Commission may consider the magnitude of the margin of dumping or the magnitude of the net countervailable subsidy. If a countervailable subsidy is involved, the Commission shall consider information regarding the nature of the countervailable subsidy and whether the subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement.”

Information obtained during the course of the review that relates to the above factors is presented throughout this report. A summary of data collected in the review is presented in appendix C. U.S. industry data are based on the questionnaire responses of DuPont and its subcontractors, which accounted for 100 percent of U.S. production of PPD-T aramid fiber during 1999. U.S. import data are based on responses of 4 firms that accounted for the great bulk of U.S. imports of PPD-T aramid fiber from the Netherlands and from all sources during 1999. Responses by U.S. producers, importers, and purchasers of PPD-T aramid fiber and the producer of PPD-T aramid fiber in the Netherlands to a series of questions concerning the significance of the existing AD order and the likely effects of revocation are presented in appendix D.

## COMMERCE'S RESULTS OF FULL REVIEW

On November 1, 2000, Commerce published its notice of the final results of its full review of the AD order on PPD-T aramid fiber from the Netherlands (65 FR 65294). As a result of this review, Commerce found that revocation of the AD order on PPD-T aramid fiber from the Netherlands would likely lead to continuation or recurrence of dumping at the following percentage weighted-average margins: Akzo (Twaron), 2.90 percent and all others, 66.92 percent. Commerce has not issued a duty absorption determination with respect to this order.

## COMMERCE'S ADMINISTRATIVE REVIEWS

Commerce has conducted 5 administrative reviews of the AD order on PPD-T aramid fiber from the Netherlands as shown in the following tabulation:

Period of review	Date review issued	Margin (percent)
12/16/93-5/31/95	October 2, 1996 (61 FR 51406)	22.03
6/1/95-5/31/96	July 16, 1997 (62 FR 38058)	26.25 <sup>6</sup>
6/1/96-5/31/97	July 13, 1998 (63 FR 37516)	6.31
6/1/97-5/31/98	November 15, 1999 (64 FR 61822)	2.90
6/1/98-5/31/99	November 9, 2000 (65 FR 67347)	3.20

## ANTIDUMPING DUTIES COLLECTED

Table I-2 presents the actual amount of customs duties collected under the AD order from 1994 to 1999.

**Table I-2**  
**PPD-T aramid fiber: Actual duties collected and imports from the Netherlands, fiscal years 1994-99**

\* \* \* \* \*

## THE SUBJECT PRODUCT

The imported product subject to the AD order on PPD-T aramid fiber from the Netherlands has been defined by Commerce as:

all forms of aramid fiber from the Netherlands. These consist of aramid fiber in the form of filament yarn (including single and corded), staple fiber, pulp (wet or dry), spun-laced and spun-bonded nonwovens, chopped fiber, and floc. Tire cord is excluded from the class or kind of merchandise under review. This merchandise is currently classifiable under the Harmonized Tariff schedule of the United States (HTSUS) subheadings 5402.10.30, 5402.10.60, 5503.10.90,

---

<sup>6</sup> Subsequently revised to 26.51 percent after a remand determination by the Court of International Trade.



5601.30.00, and 5603.14.90. The HTSUS item numbers are provided for convenience and Customs purposes. The written description of the scope remains dispositive.<sup>7</sup>

## DOMESTIC LIKE PRODUCT ISSUES

The Commission's decision regarding the appropriate domestic products that are "like" the subject imported products is based on a number of factors, including the following: (1) physical characteristics and uses; (2) common manufacturing facilities and production employees; (3) interchangeability; (4) customer and producer perceptions; (5) channels of distribution; and, where appropriate, (6) price. In the original determination concerning PPD-T aramid fiber from the Netherlands, the Commission found the appropriate domestic like product to be all forms of PPD-T aramid fiber.<sup>8</sup> In this review, no party has presented a challenge to a domestic like product consisting of all PPD-T aramid fiber.

## THE PRODUCT

### Physical Characteristics and Uses

Aramid fiber formed of PPD-T is a high-performance, synthetic fiber. Special characteristics include high strength, high modulus (resists deformation by stretching), high thermal stability, fire resistance, and chemical resistance. PPD-T aramid fiber is distinguished from other fibers by its chemical composition, specific properties, method of production, and range of end uses. PPD-T aramid fiber may be produced in a variety of forms including filament yarn (single and corded), staple, pulp, floc, chopped fiber, and nonwovens.

PPD-T aramid filament yarn, which may consist of one continuous filament or multiple filaments grouped together, is used as a reinforcement material in advanced composites. Filament yarn may also be used to make ropes and cables, including fiber optic cables. It is offered in standard, intermediate, and high-modulus ranges.

In its other forms, the PPD-T aramid filament yarn is cut to specific lengths. Staple fibers are precision-cut short fibers which typically range from approximately 3/4 inch to 6 inches in length. Staple fibers may be further processed into spun yarns used to make fabric for specialty and protective apparel and other textile products.<sup>9</sup> Floc fibers are precision-cut short fibers which typically range from approximately 1/25 inch to 1/4 inch in length. Floc is used in a wide variety of reinforcement resin systems and to produce PPD-T paper for substrate material in printed circuit boards. Chopped fiber is randomly cut in 1/4-inch to 1/2-inch lengths and is used in friction materials, rubber goods, and

---

<sup>7</sup> 65 FR 65294, November 1, 2000. The 2001 normal trade relations duty rates for these HTS subheadings are 9.2 percent *ad valorem*, 8.3 percent, 4.5 percent, 1.5 percent, and free, respectively.

<sup>8</sup> *Aramid Fiber Formed of Poly Para-Phenylene Terephthalamide from the Netherlands*, Investigation No. 731-TA-652 (Final), USITC Pub. 2783, June 1994 (1994 final report), p. I-8.

<sup>9</sup> Staple fiber may also be used to make spunlaced nonwovens. Spunbonded and spunlaced nonwovens composed of PPD-T aramid fiber are the only types of nonwovens subject to this review. These nonwovens are web-like fabrics in which PPD-T aramid fiber is arranged and entangled in either a directional or random manner. DuPont is the only U.S. producer of PPD-T aramid fiber spunlaced nonwovens and there are no U.S. producers of spunbonded nonwovens composed of PPD-T aramid fiber. In addition, the Dutch firm Twaron Products BV does not produce any type of PPD-T aramid nonwoven. Other nonwovens which are produced from PPD-T aramid fiber require substantial amounts of binders or other additives to ensure cohesion and instill certain properties sought in the end product. These other nonwovens are produced in the United States by purchasers of DuPont's and Twaron's product. 1994 final report, p. II-6.

composites. Pul, a highly fibrillated form of the fiber, is used in brakes and gaskets as a replacement for asbestos and in specialty composites.

All forms of PPD-T aramid fiber are produced from the same raw materials and have the same chemical composition. DuPont asserts that, although the form of the fiber can be tailored so that it can be used efficiently in each end-use application, the fiber's chemical properties determine its physical and performance characteristics, which are shared among all forms of the fiber. While it may be difficult for a customer to switch from one fiber form or type to another after the "designing in" process has occurred, there is choice before a particular form or type of fiber is designed into the downstream product. Whatever form of PPD-T aramid fiber is chosen by the customer, the reason for the selection is the properties that are common to all forms of the fiber (i.e., its low weight delivery of high strength, resistance to stretch, thermal stability, and chemical resistance).<sup>10</sup>

PPD-T aramid fibers are produced in commercial quantities under the trademark Kevlar® by DuPont in the United States and DuPont facilities in Northern Ireland and Japan, and under the trademark Twaron® by Twaron in the Netherlands. Kevlar® and Twaron® are produced using similar technology, possess similar properties and characteristics, and are interchangeable in most end uses for which they are qualified. Both producers offer PPD-T aramid fiber in the form of filament yarn, staple, floc, and pulp forms;<sup>11</sup> offer standard, intermediate, and high-modulus filament yarns; and provide similar fiber finishes.

### **Manufacturing Facilities and Production Employees**

Synthetic fiber, including PPD-T aramid fiber, is formed by a spinning<sup>12</sup> process in which a polymer solution is extruded through the tiny holes of a spinneret to form continuous filament fiber. The polymer may be produced "in-line" with the spinning process or may be produced in a separate process at a different location.<sup>13</sup>

Production of PPD-T polymer involves the low temperature polycondensation of para-phenylenediamine (PPD) and terephthaloyl chloride (TCL) in an amide-type solvent such as dimethyl acetamide, N-methylpyrrolidinone, hexamethylphosphoric triamide, or tetramethylurea. The polymer resulting from this reaction is washed and filtered several times to remove the acid and then dried.

In preparation for spinning, the PPD-T polymer is redissolved in a strong acid, such as sulfuric acid or chloro- or fluorosulfuric acid. A dry-jet, wet, or air-gap spinning method is used, in which the polymer solution is extruded through a spinneret located a fraction of an inch above a coagulating bath of dilute sulfuric acid. The filament fiber, which is extruded into the acid bath, rapidly coagulates and crystallizes, developing its full orientation and structure. After coagulation, the filament fiber is pulled through a series of washing stages of either water or dilute caustic to completely remove the acid and achieve a pH-neutral filament fiber. The filament fiber is then dried on steam-heated rolls. At this time the physical tensile properties are substantially developed. Any further changes in modulus or other physical tensile properties require the application of substantial heat and tension, which may be done in

---

<sup>10</sup> Ibid.

<sup>11</sup> DuPont produces spunlaced nonwovens composed of PPD-T aramid fiber \*\*\*. Twaron does not produce PPD-T aramid nonwovens.

<sup>12</sup> The term "spinning" used here is not to be confused with the textile mill process in which spun yarn is processed from staple fiber such as cotton.

<sup>13</sup> In the United States, DuPont produces PPD-T polymer and spins the fiber at its plant in Richmond, VA. In the Netherlands, Twaron produces PPD-T polymer at its plant in Delfzijl and spins the fiber at its plant in Emmen.

an off-line process. Depending on the fiber's end-use, various finishes may be applied to the dried filament yarn before it is wound onto a bobbin or tube.<sup>14</sup>

PPD-T aramid filament yarn is produced in three modulus ranges: standard modulus (approximately 550 grams per denier), intermediate modulus (approximately 780 grams per denier), and high modulus (approximately 890 grams per denier).<sup>15</sup> The process described above produces a standard modulus fiber. In order to achieve a higher modulus, the filament fiber must undergo additional heat treatment under tension.

\*\*\*<sup>16</sup>

At this stage, cost-effective processing of filament yarn is generally carried out by subcontractors. Staple, floc, and chopped fiber are derived by cutting continuous filament fiber into desired lengths.<sup>17</sup> Staple is processed by gathering together multiple filaments to form a bundle called tow, which is then precision-cut into uniform lengths (typically 3/4 to 6 inches). Crimp, which gives the fiber bulk, may or may not be added to the tow by applying steam and pressure to the filament fiber before cutting. Precision-length floc is also cut from a tow bundle, but the process involves specially-designed, precision equipment which cuts the filament fiber in lengths ranging from 1/25 inch to 1/4 inch. Chopped fiber is processed by cutting bulk filament fiber into random lengths (roughly 1/4 inch to 1/2 inch) using a guillotine-like method.

Staple used as feedstock for pulp is cut in much the same way as other staple,<sup>18</sup> although the fibers are typically 1/4 inch to 1/2 inch in length. In the production of wet pulp, staple is dispersed in water and fibrillated to form a slurry. The slurry is then formed into continuous sheets and dried to a \*\*\*-percent moisture content. In the production of dry pulp, wet pulp is separated into small pieces and dried to a \*\*\*-percent moisture content.<sup>19</sup>

PPD-T nonwoven fabrics are produced by DuPont in the United States using a spunlacing process.<sup>20</sup> The production of spunlaced nonwovens involves constructing a fibrous web of staple fiber and subjecting the web to high-velocity water jets that entangle the fibers, forming the fabric.

Packaging depends on the fiber form and on the end use.<sup>21</sup> Filament yarn is wound onto bobbins or tubes. Staple fiber is formed into bales, and floc is packaged in bags. Depending on customer specifications, pulp may be shipped wet or dry. Dry pulp is packaged in bags and wet pulp is formed into rolls that resemble rolls of paper. Nonwovens are packaged on rolls or in bolts.

---

<sup>14</sup> Finishes are applied to the yarn to facilitate further processing of the fiber in its end-use application (e.g., adhesive finishes for rubber reinforcement applications) and to increase properties of the fiber (e.g., increased abrasion resistance for cables and ropes).

<sup>15</sup> Denier is a measure of the thickness of yarn expressed as the weight in grams of 9,000 meters of yarn. The thickness is also expressed as decitex (dtex), which is defined as the weight in grams of 10,000 meters of yarn. One denier = 0.9 dtex.

<sup>16</sup> \*\*\*

<sup>17</sup> Regular textile processing equipment, with some modification, may be used to cut staple.

<sup>18</sup> \*\*\*. Currently, DuPont subcontracts out the processing of staple to unrelated firms and Twaron further processes its own yarn at separate Twaron facilities.

<sup>19</sup> \*\*\* and promotional process materials provided by DuPont.

<sup>20</sup> Commerce's scope of the investigation includes both spunlaced and spunbonded nonwovens. According to general textile definitions, spunlaced nonwovens are produced from staple fiber and spunbonded nonwovens are produced directly from the polymer solution.

<sup>21</sup> DuPont offers different size packages or specific lengths of yarn depending on customer specifications.

## Interchangeability and Customer and Producer Perceptions

DuPont's PPD-T aramid fiber is manufactured \*\*\*. Equipment and machinery used to produce PPD-T aramid fiber \*\*\*.<sup>22</sup>

DuPont's production and related workers employed to produce PPD-T aramid fiber \*\*\*. The aramid fiber production process \*\*\*.<sup>23</sup>

DuPont states that \*\*\*.<sup>24</sup> Of 20 responding purchasers, 12 responded that they could not purchase PPD-T aramid fiber in another form for use in their production process.<sup>25</sup> \*\*\* firms indicated that they could purchase more than one form for use in their production process. \*\*\* responded that it purchases wet pulp to produce \*\*\*; however, they could purchase dry pulp for use in the same production process.<sup>26</sup> \*\*\* purchases staple to weave fabric which is then sold for \*\*\* end uses. \*\*\* responded that it could purchase the wet or dry pulp form of PPD-T aramid fiber and that competitors purchase in a different form.<sup>27</sup>

## Channels of Distribution

The majority (\*\*\* percent) of DuPont's production, after further processing, is sold directly to manufacturers of end-use application products. All forms (e.g., filament yarn, staple, floc, chopped fiber, wet and dry pulp) of domestically produced PPD-T aramid fiber follow similar channels of distribution.

## Price

Price data for selected forms of pulp, staple, yarn, and chopped fiber PPD-T aramid fiber are discussed in Part V of this report. As can be seen from the price tables in Part V, prices of PPD-T aramid fiber can vary considerably both among and within the various forms of PPD-T aramid fiber.

## U.S. MARKET PARTICIPANTS

### U.S. Producer

The sole U.S. PPD-T aramid fiber producer is DuPont, with PPD-T aramid fiber production facilities located in Richmond, VA. DuPont opposes the revocation of the antidumping duty order currently in place for PPD-T aramid fiber from the Netherlands. \*\*\*.<sup>28</sup> \*\*\*.<sup>29</sup> \*\*\*.<sup>30</sup> In 1999, these \*\*\* accounted for less than \*\*\* percent of DuPont's domestic sales of PPD-T aramid fiber.

---

<sup>22</sup> \*\*\*.

<sup>23</sup> \*\*\*. \*\*\*.

<sup>24</sup> \*\*\*.

<sup>25</sup> \*\*\*.

<sup>26</sup> \*\*\*.

<sup>27</sup> \*\*\*.

<sup>28</sup> \*\*\*.

<sup>29</sup> Ibid., p. \*\*\*.

<sup>30</sup> \*\*\*.

## U.S. Subcontractors

DuPont subcontracts the addition of certain physical finishes (e.g., twisting, winding, cutting, chopping) applied to PPD-T aramid fiber to \*\*\* independent firms. Twaron also subcontracts with \*\*\* U.S. firms for similar services.<sup>31</sup> \*\*\*. Further discussions on subcontractors appear in Parts III and IV of the report.

## U.S. Importers

Four firms were identified as U.S. importers of PPD-T aramid fiber. \*\*\*<sup>32</sup> \*\*\*<sup>33</sup> \*\*\* accounted for \*\*\* percent of PPD-T aramid fiber imports from the Netherlands in 1999 \*\*\* non-TIB imports.

\*\*\*<sup>34</sup>

\*\*\*<sup>35</sup>

\*\*\*

## U.S. Purchasers

Questionnaires were sent to 31 purchasers, of which 20 responded and 17 submitted data. The preponderance of responding purchasers is located in the eastern half of the United States, with Massachusetts, Michigan, and North Carolina each having three responding purchasers and Georgia, Ohio, Pennsylvania, and South Carolina each having two responding purchasers. Other states represented were Colorado, Kentucky, and Virginia. All purchasers were end users of PPD-T aramid fiber and accounted for \*\*\* percent of domestic purchases and \*\*\* percent of subject imports in 1999.

## APPARENT U.S. CONSUMPTION AND MARKET SHARES

Table I-3 presents apparent U.S. consumption for the review period and table I-4 presents U.S. market shares for the same period. TIB imports of PPD-T aramid fiber from the Netherlands are included in both apparent consumption and market share; however, TIB imports account for less than \*\*\* percent of annual apparent consumption in any year during the period for which data were gathered.

**Table I-3**  
**PPD-T aramid fiber: U.S. shipments of domestic product, U.S. shipments of imports, and apparent U.S. consumption, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

---

<sup>31</sup> \*\*\*.

<sup>32</sup> "Agreement on sale of Twaron Products to Teijin," Acordis press release, December 22, 2000, and "Teijin Expecting to Reach Agreement to Acquire Acordis' Twaron® Para-aramid Fiber Business," Teijin 2000 press release, October 17, 2000, \*\*\*.

<sup>33</sup> \*\*\*.

<sup>34</sup> \*\*\* and fax from \*\*\* , November 15, 2000.

<sup>35</sup> \*\*\*.

**Table I-4**  
**PPD-T aramid fiber: U.S. market shares, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

## PART II: CONDITIONS OF COMPETITION IN THE U.S. MARKET

Since the imposition of antidumping duties in 1994, Twaron has continued to supply the U.S. market as the duties have been successively reduced. DuPont and Twaron remain the world's only manufacturers of PPD-T aramid fiber, but demand from new end uses for the product has grown since the original order, especially in fiber optic cables. Currently, the U.S. market demands more PPD-T aramid fiber than DuPont and Twaron can supply, and capacity increases are inevitable, although where these increases will occur is not known.

### MARKET STRUCTURE

There are two suppliers of PPD-T aramid fiber to the U.S. market: DuPont (Kevlar®) and Twaron. Both of them sell PPD-T aramid fiber throughout the United States. In 1999, DuPont sold \*\*\* percent of total U.S. shipments and Twaron sold \*\*\* percent.

There are three potential points of competition in the PPD-T aramid fiber market: the design stage, the "drop-in" stage, and the \*\*\* stage. At the design stage, PPD-T aramid fiber competes with alternative products for design into an end-use product. This stage usually involves a PPD-T aramid fiber manufacturer working not only with its purchasers, but also with its purchasers' downstream customers. At the "drop-in" stage, one company's PPD-T aramid fiber competes only with other PPD-T aramid fiber, as most design processes cannot have alternative products simply dropped in as replacements in a process. Finally, when production of a downstream end-use product takes place overseas, then DuPont can compete by \*\*\*.

### U.S. MARKET SEGMENTS

DuPont said that after its invention of and investment in PPD-T aramid fiber in the 1960s, it was the sole supplier of PPD-T aramid fiber until the mid-1980s. \*\*\*.

\*       \*       \*       \*       \*       \*       \*

Kevlar® and Twaron® market segments are divided as follows (*in percent of each market segment's 1999 U.S. shipment volume*).

\*       \*       \*       \*       \*       \*       \*1 2

The form in which aramid fiber is sold also depends on the end-use market segment. The following tabulation shows how DuPont and Twaron sell their PPD-T aramid fiber (*in percent of each form's 1999 U.S. shipment volume*).

\*       \*       \*       \*       \*       \*       \*3

Purchasers reported that they purchase in the following forms:

\*       \*       \*       \*       \*       \*       \*

---

<sup>1</sup> \*\*\*.

<sup>2</sup> Percents may not add to 100 percent due to rounding. \*\*\*.

<sup>3</sup> Percents may not add to 100 due to rounding.

DuPont added that although many end uses are served by more than one form of PPD-T aramid fiber, each specific application within an end use must be designed around a specific form.<sup>4</sup>

DuPont stated that end uses now are similar to the end uses in 1994, but explained that final end use performance has continued to advance. It added that there have been some new applications, such as \*\*\*. Twaron listed new uses as \*\*\*. DuPont stated that \*\*\*, as it said it had done so and then lost market share to Dutch imports. Twaron stated that it is involved in ongoing efforts to develop new end uses in \*\*\*.

### CHANNELS OF DISTRIBUTION

PPD-T aramid fiber is distributed somewhat differently according to end-use market, because different end users demand different forms of PPD-T aramid fiber.

\* \* \* \* \*

### U.S. SUPPLY: DOMESTIC PRODUCTION FOR THE U.S. MARKET

\* \* \* \* \*

DuPont supplied the following data on its global volume and revenue history:

\* \* \* \* \*

One example of how DuPont has worked with purchasers came from \*\*\*. It required \*\*\*, and so it worked with DuPont in developing a \*\*\* program performed at DuPont. The program gives \*\*\* significant savings in terms of scrap reduction, less handling, and more efficient processing, and in turn \*\*\* pays a premium for these purchases (about \*\*\* percent of its total purchases of the product). It has also worked with DuPont to develop \*\*\*. \*\*\* also stated that it continually works with DuPont and its own customers to improve its end product.

Purchasers reported that both DuPont and Twaron were operating at full capacity at the end of 2000. Eight purchasers reported that PPD-T aramid fiber production limits had either just begun to affect price and availability or were about to begin. One purchaser summarized recent supply as follows: a period of excess PPD-T aramid fiber capacity from 1996 to 1997, followed by strong demand growth in 1999 to 2000, leading to supplier allocations and increased PPD-T aramid fiber prices from 2000 and going forward. One purchaser also cited recent changes in DuPont's packaging which would adversely

---

<sup>4</sup> DuPont listed the following end uses (forms used): \*\*\*. Twaron also submitted end-use and form information which was consistent with DuPont's descriptions and the purchasers' descriptions. In addition, five purchasers reported that exact specifications of the PPD-T aramid fiber they purchased varied according to the end use in which it was to be used.

Purchasers reported widely varying percentages for how much of the cost of their final product is accounted for by PPD-T aramid fiber. Percentages varied by end use, with fiber optic cable manufacturers reporting that PPD-T aramid fiber accounted for \*\*\* to \*\*\* percent of their final product cost, protective apparel and ballistic manufacturers reporting \*\*\* to \*\*\* percent, and a gasket manufacturer reporting \*\*\* percent. In addition, hose manufacturers reported between \*\*\* and \*\*\* percent, a belt manufacturer reported \*\*\* percent, a tapes and composites manufacturer reported \*\*\* percent, and a brake pad manufacturer reported \*\*\* percent. No purchasers reported any new end uses for PPD-T aramid fiber since 1997.

<sup>5</sup> Only one purchaser reported competing with his PPD-T aramid fiber suppliers.



affect its production process. \*\*\* stated that DuPont was phasing out several products which were high production and low yield, and that as a result \*\*\* was working on qualifying replacement products. \*\*\* said that there was a “worldwide aramid shortage status” and that both DuPont and Twaron were allocating supply and cutting back small or marginal users. Two purchasers anticipated that new PPD-T aramid fiber capacity would be added in the next few years.

**Capacity Utilization and Inventories**

DuPont reported end-of-period inventories of \*\*\* pounds in 1999 and \*\*\* pounds in the first three quarters of 2000, up from \*\*\* pounds in the first three quarters of 1999. Capacity utilization for PPD-T aramid fiber production was \*\*\* percent in 1999 and \*\*\* percent in the first three quarters of 2000, up from \*\*\* percent in the first three quarters of 1999.

**U.S. Alternative Markets**

DuPont said that some foreign markets have significant duties on PPD-T aramid fiber. It gave the examples of India (20 percent duty), Russia (30 percent duty), Middle Eastern countries (10 to 54 percent duties), and China. It stated that collectively, these barriers make shifting sales from domestic markets more difficult. In 1999, DuPont exported \*\*\* million pounds of Kevlar® out of its total 1999 production of \*\*\* million pounds.

**U.S. Production Alternatives**

DuPont cannot make other products on the equipment used to produce Kevlar®.

**U.S. SUPPLY: THE POTENTIAL OF SUBJECT IMPORTS TO SUPPLY THE U.S. MARKET**

\* \* \* \* \*

Twaron stated that even with capacity increases, the combination of its production and DuPont’s production will not be enough to satisfy the projected world demand increases. Twaron noted that PPD-T aramid fiber demand has been growing in all market segments and all world regions, but especially in developing markets such as \*\*\* and \*\*\*. Twaron provided estimates of world PPD-T aramid fiber demand compared with projected world Kevlar® and Twaron® production, assuming that Twaron can realize capacity increases through improved production efficiency in the short-term and additional capacity in the \*\*\* time frame (*in millions of pounds*):

\* \* \* \* \*

In response, DuPont submitted a similar analysis, assuming instead a demand growth rate of \*\*\* and greater growth in its own future production (*in millions of pounds*):

\* \* \* \* \*

Whether one accepts the DuPont or Twaron scenario depends on whether one believes DuPont’s projection of \*\*\* percent per year demand growth with a \*\*\* percent expansion in DuPont capacity by 2005, or Twaron’s projection of approximately \*\*\* percent per year demand growth with an \*\*\* percent expansion in DuPont capacity by 2005.

## Capacity Utilization and Inventories

Twaron's capacity utilization was \*\*\* percent in 1999 and \*\*\* in the first three quarters of 2000, up from \*\*\* percent in the first three quarters of 1999. Inventories decreased from \*\*\* pounds of PPD-T aramid fiber on September 30, 1999 to \*\*\* pounds of PPD-T aramid fiber on September 30, 2000, and were \*\*\* pounds on December 31, 1999. Exports directly to the United States rose from \*\*\* pounds in the first three quarters of 1999 to \*\*\* pounds in the first three quarters of 2000, more than the \*\*\* pounds for \*\*\*.

## Production Alternatives

As with DuPont's Kevlar®, there are no production alternatives for the equipment used to produce Twaron®.

## Alternative Markets

Twaron describes itself as a "global company with global commitments." Since the imposition of the AD order, Twaron's sales in all global markets have increased due to market demand. \*\*\*. In 1999, Twaron exported \*\*\* pounds of PPD-T aramid fiber to non-U.S. markets out of a total production of \*\*\* pounds.

## U.S. SUPPLY: NONSUBJECT IMPORTS

The only nonsubject production of PPD-T aramid fiber takes place at DuPont's facilities in \*\*\*. Twaron stated that \*\*\*.

## U.S. DEMAND

Because of the nature of PPD-T aramid fiber demand (multiple and varied end uses), the increase in recent PPD-T aramid fiber demand is not due to any one particular cause alone. Strong general economic conditions in developed economies, particularly in the automotive and industrial markets, have contributed to increased PPD-T aramid fiber demand, as has the increased industrialization of developing economies. DuPont supplied a list of factors that positively and negatively affect PPD-T aramid fiber demand. In protective apparel, demand has risen due to an increasing emphasis on the protection of life and worker safety. In military ballistics, regional conflicts will increase demand, just as the rapid growth in information transmission requirements is currently fueling increased PPD-T aramid fiber demand in fiber optic cable. Outside the United States, there is the continued replacement of asbestos in brake and gasket applications while in general there are increasing end-use performance requirements (i.e., hotter operating temperatures for engines, lighter weight components of transportation systems, increasing ballistic threat levels, etc.). However, DuPont added that \*\*\*.

DuPont also noted factors which can decrease demand for PPD-T aramid fiber: \*\*\*.<sup>6</sup>

Demand for Twaron® PPD-T aramid fiber \*\*\* has increased even since the imposition of the AD order. One purchaser reported reducing the amount of Twaron® it purchased as a result of the AD

---

<sup>6</sup> Fourteen purchasers said that there was no PPD-T aramid fiber business cycle. One ballistic manufacturer cited the "ups and downs of U.S. military spending," and another purchaser said that the glove (protective apparel) market has a peak in early winter and a slowdown in late fall.

order. Nine reported purchasing Twaron® before the order. Six purchasers reported that they began to purchase Twaron® after the imposition of the order.

### Demand Trends

Twelve purchasers reported that demand for their manufactured products had increased recently, with only \*\*\* and \*\*\* reporting that demand had declined due to alternate technologies. \*\*\* reported that a new product using Twaron® had increased demand for its products. It explained that this increase had led to its own increased demand for PPD-T aramid fiber, as well as its recent switch from products designed with other pulps to those designed with PPD-T aramid fiber. An \*\*\* two \*\*\* manufacturers reported that the PPD-T aramid fiber they use in their products has declined due to alternative materials or a decrease in required PPD-T aramid fiber, even though demand for their own products may have increased. All five responding fiber optic cable manufacturers were unanimous in describing increased demand for their products, as did one friction products manufacturer and one hoses/belts manufacturer. However, not all of those purchasers had increased their PPD-T aramid fiber purchases, as better utilization, reduced scrap, and re-engineering had lowered their PPD-T aramid fiber requirements. Two other friction products manufacturers, two hoses/belts manufacturers, and one protective apparel manufacturer reported no increase in either demand for their products or their demand for PPD-T aramid fiber.

No purchasers reported any changes in the types of customers for their end-use products. \*\*\* reported that \*\*\* percent of its purchases were “Buy American,” but otherwise no purchasers reported any significant “Buy American” requirements.<sup>7</sup> \*\*\* reported that these “Buy American” programs are being withdrawn.

Ten purchasers reported that there were no substitutes for their manufactured product, but six said that there were, citing \*\*\* products in ballistics, carbon fiber, polyester, nylon, and fiberglass in gaskets, and wireless communication, copper cables, and fiberglass in some fiber optic cable segments. Fourteen purchasers reported that U.S. demand for PPD-T aramid fiber had increased in at least one end-use segment since 1994. One purchaser reported being told that demand was heaviest in the fiber optic and ballistics segments. \*\*\* reported that U.S. military ballistic demand was up, while civilian ballistic demand was growing at less than 5 percent and aircraft composites were flat. \*\*\* cited increased automotive demand as a factor in increasing PPD-T aramid fiber demand. \*\*\* described increased demand for PPD-T aramid fiber as “sharp,” “heavy,” and “significant.”

\*\*\* reported that it increased purchases of Twaron® in 1998 due to competitive pricing and Kevlar® in 1999 and 2000 due to a contract with DuPont. \*\*\* started to use Twaron® in 1997, and has increased its relative use of Twaron® as it has become more comfortable with the company and product. \*\*\* reported that its volume of Twaron® purchases has increased \*\*\* percent since 1994 (from \*\*\* pounds to \*\*\* pounds in 1999) due to Twaron® being designed into a popular product, while its volume of U.S. purchases have remained relatively flat--a \*\*\*-percent increase from \*\*\* pounds in 1998 to \*\*\* pounds in 1999. Conversely, \*\*\* reported that although it started sourcing from Twaron in 1996, it has since developed a stronger relationship with DuPont and has reduced Twaron’s share of its purchases.

Few purchasers anticipated changes in current PPD-T aramid fiber demand, with most expecting either continuing stability or continued growth. \*\*\* forecast that PPD-T aramid fiber demand would grow 10 percent annually for the next 3 years in the \*\*\* market, and 30 percent in the \*\*\* market (though the \*\*\* market requires considerably less volume). \*\*\* stated that it was working to substitute

---

<sup>7</sup> \*\*\* reported that \*\*\* percent of its purchases were “Buy American.”

other products for PPD-T aramid fiber, but still expected continued growth. Only \*\*\* and \*\*\* forecast decreased purchases, with \*\*\* expecting to exit the PPD-T aramid fiber market in the next few years.

Eight purchasers foresaw no effects from the revocation of antidumping duties on PPD-T aramid fiber. One purchaser predicted slight increases in Twaron® purchases. Five purchasers cited possible lower or more competitive prices for themselves or the entire U.S. market (although one noted that its customers usually specify its source of fiber). Four others stated that revocation would allow multiple suppliers, and two added that it might encourage other market entrants in the production of PPD-T aramid fiber.

### Substitute Products

\*\*\* described substitutability between PPD-T aramid fiber and other materials as difficult because PPD-T aramid fiber tends to be concentrated in high-end market niches where specialized performance is required. Thus, direct substitution is rare and involves significant tradeoffs in terms of cost and performance. Both DuPont and Twaron provided lists of potential substitutes by end use, and these lists are summarized in appendix E.

\*\*\* added that demand for PPD-T aramid fiber is \*\*\*. However, \*\*\* stated that if the PPD-T aramid fiber shortage continues, customers will be forced to consider substituting alternative fibers.<sup>8</sup>

### SUBSTITUTABILITY ISSUES

DuPont and Twaron both stated that both Twaron® and Kevlar® can be used in the same end-use applications, but \*\*\*.

### U.S. Purchasers

Twenty purchasers responded to Commission questionnaires. Except for \*\*\*, all purchasers were concentrated in only one end use.<sup>9</sup> They ranged across the breadth of PPD-T aramid fiber demand in the following end-use segments:

\* \* \* \* \*

---

<sup>8</sup> Eleven purchasers stated that there are no substitutes for PPD-T aramid fiber in their end uses. In gaskets, \*\*\* cited mineral fibers and cellulose with product redesign, but \*\*\* noted that neither would be comparable to PPD-T aramid fiber. \*\*\* cited Teijin's Tecнора®, a new aramid with declining prices (and hence increased usage by \*\*\*). \*\*\* also uses Tecнора® for its belts, where it has higher performance than PPD-T aramid fiber. However, \*\*\* stated that Tecнора® is more expensive than PPD-T aramid fiber. \*\*\* cited Toyobo's new Zylon® PBO and UD shield products in \*\*\*. \*\*\* also noted that carbon fiber prices have declined, resulting in a market shift away from PPD-T aramid fiber in aircraft composites. In fiber optic cable, one purchaser said that buried fiber optic cable could use fiberglass and another noted that other substitutes are being evaluated. \*\*\* said that that glass, polyester, and carbon were substitutes in fiber optic cable. \*\*\* said that other fibers, fiberglass, and steel were substitutes in tapes and composites.

<sup>9</sup> \*\*\*. \*\*\* was \*\*\* percent protective apparel and \*\*\* percent hoses and belts, while \*\*\* was \*\*\* percent gaskets and seals and \*\*\* percent friction products. \*\*\* was in both \*\*\* and \*\*\*, but could not break out percentages. \*\*\* was \*\*\* percent tapes and composites and \*\*\* percent fiber optic cable. Otherwise, every purchaser was 100 percent within its own end-use category.

Some purchasers are processors who sell to further downstream customers. \*\*\* are spinners or weavers who sell fabric or spun yarn to ballistic and protective apparel manufacturers, and \*\*\* is a so-called twister and treater that sells to hose manufacturers. \*\*\* spins yarn for fiber optic cable, hoses and belts, and aircraft manufacturers.

### Factors Affecting Purchasing Decisions

\* \* \* \* \*

The definition of quality for PPD-T aramid fiber varies across end-use segments. The following tabulation shows how purchasers described what “quality” PPD-T aramid fiber means in each end-use segment:

\* \* \* \* \*

The following tabulation shows how purchasers ranked the most important factors in their purchasing decisions:

Factor	Number of times ranked first	Number of times ranked second	Number of times ranked third
Quality	10	4	1
Customer specification/pre-qualified design	5	1	1
Price/best value	3	3	5
Availability	0	6	3
Business relationship/ traditional supplier	1	0	4
Service/ technical support	0	1	2
Contract	0	1	0
Range	0	0	1

\*\*\* stated that Twaron® and Kevlar® were not one-to-one substitutes, and as a result it had not switched to Twaron® from Kevlar®. Purchasers also cited the simplicity of staying with one PPD-T aramid fiber across multiple plants, the approval of only one PPD-T aramid fiber for their particular formulation, and customers requesting a particular brand of PPD-T aramid fiber as reasons for sticking with only one PPD-T aramid fiber supplier. \*\*\* cited quality, service, and cost as reasons it stayed with Twaron®.

Fifteen purchasers stated that neither they nor their customers ever base purchasing decisions on country of origin. One cited DuPont’s \*\*\* as a reason why it purchased U.S. PPD-T aramid fiber, another cited the “Buy America” Act, and another cited delivery and lead times for purchasing U.S. PPD-T aramid fiber. Eleven purchasers said they at least “sometimes” purchase based on the producer, with seven saying that they “never” base purchasing decisions on the producer. Those purchasers who did (at least sometimes) base decisions on the producer cited reasons such as sole producer, DuPont \*\*\*,

brand name, price, fiber performance, service, support, availability, and downstream customer relationships with the producer.

\*\*\* stated that it “always” bases decisions on the producer because a specific producer is selected during the design process based on characteristics of the brand of PPD-T aramid fiber. It also stated that Twaron® and Kevlar® are not interchangeable, as a single supplier and product is qualified in each of its end use products. However, it was the only purchaser to say that imported and U.S. PPD-T aramid fiber are not used in the same applications; 14 other purchasers stated that imported and U.S. PPD-T aramid fiber are used in the same applications.

Ten purchasers said that they “sometimes” purchase the lowest priced PPD-T aramid fiber, five said that they “never” do, and four said that they “usually” do.

Sixteen purchasers said that they require certification for 100 percent of their PPD-T aramid fiber purchases, while three said that they do not require certification. Factors considered when qualifying a supplier include quality, availability, price, service, and technical support. Qualification times ranged from 4 weeks to 2 years. No purchasers reported that any PPD-T aramid fiber supplier had failed to certify, except \*\*\*.

\*\*\* stated that until January 2000, all its customers specified Kevlar®, but recently one had specifically requested Twaron®. \*\*\* stated that its customer base prefers DuPont for name recognition. \*\*\* said that its preferred source is the United States, but it developed the Netherlands as a secondary source to ensure adequate supply and establish leverage with DuPont. \*\*\* said that once a customer has qualified a product with a particular fiber, the customer usually does not want to see it changed.

Several specialty grades of PPD-T aramid fiber may be available from only one supplier. Ten purchasers said that no specialty grades unique to one producer exist, or did not know. Other purchasers stated that some specialty aramids are available from one producer or the other, with four naming Twaron’s micro filament PPD-T aramid fiber and seven naming specialty grades only available from DuPont. \*\*\* reiterated that it considered each brand different, and considered each differently for different situations.

### **Comparisons of Domestic Products and Subject Imports**

Purchasers were asked to rank purchasing factors for PPD-T aramid fiber from the United States and the Netherlands and compare Dutch and U.S. PPD-T aramid fiber on the basis of those factors. The following tabulation summarizes the responses of the 16 responding purchasers able to compare U.S. and Dutch PPD-T aramid fiber:

Purchasing factor	Average importance score <sup>1</sup>	Number of purchasers reporting		
		U.S. superior	Comparable	U.S. inferior
Availability	1.9	4	9	3
Customer relations	1.6	3	6	7
Delivery terms	1.6	0	14	2
Delivery time	1.9	3	12	1
Discounts offered	1.2	1	13	1
Dual source of supply	1.4	1	11	1
Lowest price	1.3	2	12	2
Minimum qty. requirements	1.0	0	14	2
Packaging	1.5	2	10	4
Product consistency	1.9	1	13	2
Product quality	1.9	1	13	2
Product range	1.3	3	12	1
Reliability of supply	1.9	3	11	2
Technical support/service	1.8	5	7	4
U.S. transportation network	1.4	3	12	1
U.S. transportation costs	1.1	1	13	0

<sup>1</sup> 2 = very important, 1 = somewhat important, 0 = not important. Not every purchaser answered for every factor, so non-answers were not counted toward the calculation. One purchaser marked "dual source of supply" as not important but described it as "critical during design phase," so staff changed that answer to "very important."

### Lead times

DuPont stated that lead times vary from \*\*\* to \*\*\*, depending on the product, but that the average lead time is about \*\*\*. Twaron said that the average lead time is \*\*\* if the product is in inventory in Conyers, Georgia or Canada, but can be about \*\*\* for product in inventory in the Netherlands. It added that due to current shortages, its lead times are \*\*\* if the product is not already in inventory.

### MODELING ESTIMATES

This section discusses the elasticity estimates that are used in the economic modeling analysis presented in appendix F.

## **U.S. Supply Elasticity**

The domestic supply elasticity for PPD-T aramid fiber measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price for PPD-T aramid fiber. The elasticity of supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced PPD-T aramid fiber. U.S. PPD-T aramid fiber supply is tight, and other world markets are often subject to tariff barriers. Thus staff estimates that the U.S. industry could only fractionally increase or decrease shipments to the U.S. market within a 1-year time frame; staff estimates that the elasticity of supply is in the range of 0 to 2.

Dutch PPD-T aramid fiber supply is also tight, and Twaron has commitments to other global markets that would make shifting sales to the United States difficult. There is no other source of PPD-T aramid fiber other than DuPont's plants \*\*\*. Staff estimates that Dutch and the rest-of-world elasticities of supply are also in the range of 0 to 2.

## **U.S. Demand Elasticity**

The U.S. demand elasticity for PPD-T aramid fiber measures the sensitivity of the overall quantity demanded to a change in the U.S. market price for PPD-T aramid fiber. This estimate depends on the factors discussed earlier such as the existence, availability, and commercial viability of substitute products. There are substitutes for PPD-T aramid fiber, but in most cases these substitutes would involve major re-designs of end-use products, a process which would take more than a year. In the meantime, staff concludes that most PPD-T aramid fiber purchasers will not have much flexibility in their PPD-T aramid fiber purchases over the next year. Staff originally estimated demand elasticity to be in the -0.5 to -1.5 range. After the hearing, and Twaron's more in-depth discussion of competition from potential substitutes, staff has raised the upper limit on the range, estimating demand elasticity to be in the -0.5 to -2.5 range.

## **Substitution Elasticity**

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products. Product differentiation, in turn, depends upon such factors as quality and conditions of sale. Both DuPont and Twaron regard each others' products as essential equivalents, with a few minor exceptions. Despite the need of purchasers to qualify new suppliers, most purchasers were familiar with both U.S. and Dutch PPD-T aramid fiber. Only one purchaser indicated that there would be any difficulty in using one PPD-T aramid fiber over the other. Staff originally estimated the elasticity of substitution to be between 5 and 10. \*\*\*. After considering Twaron's additional information, staff believes that brand differences may be slightly more significant, but that the purchasers remain familiar with both products and ready to use both. Staff estimates the elasticity of substitution to be between 4 and 8.

## **Exogenous Growth in Demand and Supply**

U.S. producers, importers, and purchasers agree that PPD-T aramid fiber demand is affected by demand in a myriad of industries, including fiber optic cable, automotive, and ballistics. With such varied end uses and some current backlogs, staff believes that strong demand for PPD-T aramid fiber will continue for the near future. Even if the United States experiences an economic slowdown over the next year, demand for PPD-T aramid fiber could remain strong based on acyclical demand in ballistics



and possibly fiber optic cable. Based on available information, staff originally estimated that exogenous growth in demand is likely to be in the range of 1 to 5 percent per year. Twaron disputed this assessment and predicted that demand would grow on the order of \*\*\* percent per year. Staff has run three variations on the model, at 1, 5, and \*\*\* percent demand growth.

While both DuPont and Twaron have plans for \*\*\*, it is doubtful that those \*\*\*. Production improvements over the next year could result in minor capacity increases. Staff estimates that U.S., Dutch, and nonsubject supply will grow at 0 to 1.5 percent.

## MODEL FINDINGS AND DISCUSSION

This analysis uses a nonlinear partial equilibrium model that assumes that domestic and imported products are less than perfect substitutes. Such models, also known as Armington models, are relatively standard in applied trade policy analysis and are used extensively for the analysis of trade policy changes both in partial and general equilibrium. Based on the discussion contained in Part II of this report, the staff selects a range of estimates that represent price-supply, price-demand, and product substitution relationships (i.e., supply elasticity, demand elasticity, and substitution elasticity) in the U.S. PPD-T aramid fiber market. The model uses these estimates with data on market shares (from table I-4), Commerce's estimated margin of dumping, transportation costs, demand growth, and current tariffs to analyze the likely effect of dumping that will recur or continue.

The analysis uses the most recent one-year period, October 1999 to September 2000, as the base year. The model results suggest the possible effects of revocation of the AD order on the domestic PPD-T aramid fiber industry over a one-year time period only, i.e., from October 2000 through September 2001. The possible effects over a longer time period are not part of this modeling exercise. Finally, the model does not assume that all of the dumping margin will be passed forward to U.S. prices of the subject imports.

The results examine potential changes in price, quantity, and market shares for various products under the range of different elasticity scenarios. Estimated effects of the recurrence costs of dumping on the U.S. PPD-T aramid fiber industry are as follows:

\* \* \* \* \*

The positive estimates for most of the ranges above reflect the low AD margin, which does not allow much room for price falls, more than the low elasticity of supply.<sup>10</sup> More detailed effects of the dumping and the modeling assumptions used for the range of scenarios are shown in appendix F.

---

<sup>10</sup> A Netherlands' supply elasticity of zero would reflect a situation much like what Twaron describes, where it would be effectively impossible for Twaron to shift sales to the United States. While the other limit of 2 is also low, staff believes it reflects the tight world supply situation, which includes both DuPont and Twaron putting some or all customers on allocation. However, even if one were to use a much higher supply elasticity for the Netherlands, it would not fundamentally change the modeling results much due to the low antidumping duty. Staff ran an additional model with a Netherlands' supply elasticity of 10 (as an intellectual exercise rather than a belief that this number is correct) and found that the U.S. PPD-T aramid fiber industry would face, in the low demand scenario, price increases from \*\*\* percent, quantity increases from \*\*\* percent, and revenue increases from \*\*\*. These estimates are not hugely different from the low demand estimates with a Netherlands' supply elasticity of 2.

It should be noted that the model does not address DuPont's contention that anticipated Twaron capacity expansions several years in the future, combined with revocation of the duty, would lead to future dumping by Twaron.



## PART III: CONDITION OF THE U.S. INDUSTRY

Information in this section is based on the questionnaire response of one producer, DuPont, that accounted for all U.S. PPD-T aramid fiber production during the period for which data were collected. In addition, salient information is presented separately on subcontractors of DuPont. Since DuPont is the only marketer of domestically-produced PPD-T aramid fiber, to aggregate its data with those of the subcontractors would generally result in double-counting.

### U.S. PRODUCER'S CAPACITY, PRODUCTION, AND CAPACITY UTILIZATION

In response to \*\*\* since 1994, DuPont \*\*\*. During 1995, the PPD-T aramid fiber \*\*\*.<sup>1</sup> In 1996, DuPont \*\*\* of aramid pulp production \*\*\*.<sup>2</sup> Annual business R&D expenditures \*\*\*. Additional \*\*\* also occurred during the 1993-2000 period.<sup>3</sup>

DuPont's PPD-T aramid fiber production capacity \*\*\*.<sup>4</sup>

Data concerning DuPont's PPD-T aramid fiber production capacity, production, and capacity utilization are shown in table III-1. DuPont's PPD-T aramid fiber production increased steadily from 1997 to 1999 and between the January-September interim periods of 1999 and 2000. As DuPont's production capacity remained unchanged from 1997 through January-September 2000, capacity utilization increased in conjunction with the increase in production, rising from \*\*\* percent in 1997 to \*\*\* percent in interim 2000.

**Table III-1**

**PPD-T aramid fiber: U.S. producer's capacity, production, and capacity utilization, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

\*\*\*.<sup>5</sup>

### U.S. PRODUCER'S COMMERCIAL U.S. SHIPMENTS, COMPANY TRANSFERS, AND EXPORT SHIPMENTS

DuPont produces PPD-T aramid fiber strictly for sale to unrelated third parties. Its U.S. shipments therefore consist almost entirely of commercial or open-market sales. The bulk of its sales are to end-user firms that produce a variety of end-use application products. Based on data supplied in its response to the Commission's producer questionnaire, internal consumption accounted for less than \*\*\* percent of its domestic shipments during the period for which information was gathered.

Data on DuPont's shipments of PPD-T aramid fiber are presented in table III-2. The quantity and value of DuPont's U.S. shipments decreased by \*\*\* percent and \*\*\* percent, respectively, from

---

<sup>1</sup> \*\*\*.

<sup>2</sup> DuPont's subcontractors are more fully discussed later in this part of the report.

<sup>3</sup> \*\*\*.

<sup>4</sup> Ibid., p. \*\*\*.

<sup>5</sup> Ibid., pp. \*\*\*. \*\*\*.

1997 to 1998, then rose by \*\*\* percent and \*\*\* percent, respectively, between 1998 and 1999, and by \*\*\* percent and \*\*\* percent, respectively, between interim 1999 and interim 2000.

Overall, DuPont's commercial U.S. shipments between 1997 and 1999 increased by \*\*\* percent on the basis of quantity and decreased by \*\*\* percent on the basis of value. In terms of unit value, the average unit value of DuPont's commercial U.S. shipments decreased irregularly from 1997 to interim 2000, decreasing by \*\*\* percent, or by \*\*\* per pound, over the period.

The quantity of DuPont's export shipments rose steadily while the value increased irregularly during the period for which information was gathered. DuPont's exports of PPD-T aramid fiber rose irregularly from \*\*\* percent of its total shipments value in 1997 to \*\*\* percent during interim 2000. \*\*\* are DuPont's most important export markets. Between 1997 and 1999, such exports rose by \*\*\* percent on the basis of quantity and \*\*\* percent on the basis of value.

**Table III-2**  
**PPD-T aramid fiber: U.S. producer's shipments, by types, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

DuPont ships PPD-T aramid fiber to U.S. producers of end-use application products listed in table III-3. While no one end-use application dominates DuPont's U.S. shipments of PPD-T aramid fiber, \*\*\* consistently led both the quantity and value of PPD-T aramid fiber shipments during the period for which data were gathered. \*\*\* was the second most significant end-use application over the period, with a \*\*\* increase of \*\*\* percent in shipment quantity and \*\*\* percent in shipment value between 1997 and 1999. \*\*\* was the third most significant application over the period.

**Table III-3**  
**PPD-T aramid fiber: U.S. producer's commercial U.S. shipments, by end uses, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

**U.S. PRODUCER'S INVENTORIES**

The volume of inventories held by DuPont was \*\*\* percent lower at year-end 1998 than at year-end 1997 and \*\*\* percent lower at year-end 1999 than at year-end 1998 (table III-4). Between the interim periods, inventories increased by \*\*\* percent. The ratio of DuPont's end-of-period inventories to its U.S. production decreased by \*\*\* percentage points from \*\*\* percent in 1997 to \*\*\* percent in 1999. Relative to its U.S. shipments, the ratio of inventories declined during the period for which data were gathered, falling by \*\*\* percentage points from 1997 to 1999 and by \*\*\* percentage points between the 1999 and 2000 interim periods.

**Table III-4**  
**PPD-T aramid fiber: U.S. producer's end-of-period inventories, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

## U.S. PRODUCER'S EMPLOYMENT, WAGES, AND PRODUCTIVITY

DuPont's PPD-T aramid fiber is produced in dedicated, stand-alone facilities utilizing workers dedicated solely to its production. Employment data pertaining to DuPont's PPD-T aramid fiber operations are shown in table III-5. The number of DuPont's production-and-related workers (PRWs) producing PPD-T aramid fiber increased steadily over the period for which data were gathered.<sup>6</sup> These PRWs worked \*\*\* percent more hours and the firm had \*\*\* percent greater productivity in 1999 than in 1997. Interim hours worked and productivity rose by \*\*\* and \*\*\* percent, respectively. Total wages paid rose steadily over the period, increasing by \*\*\* percent from 1997 to 1999, and by \*\*\* percent between the interim periods.

**Table III-5**

**PPD-T aramid fiber: Average number of production and related workers, hours worked, wages paid to such employees, hourly wages, productivity, and unit labor costs, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

## SUBCONTRACTORS' CAPACITY, PRODUCTION, AND CAPACITY UTILIZATION

DuPont has a close working relationship with the independent subcontractor firms that add physical finishes (\*\*\*) to DuPont's PPD-T aramid fiber at a cost below the cost DuPont would incur if the function was performed internally.<sup>7</sup> In all cases, DuPont maintains ownership of the PPD-T aramid fiber inventory during processing and pays the subcontractor a conversion fee for services rendered. Therefore, subcontractors are toll producers. Subcontractors are \*\*\*. Although individual subcontractors may change over time \*\*\*, DuPont characterizes its relationship with subcontractors as \*\*\*.<sup>8</sup> The largest single contracted task \*\*\*. All other contracted tasks were \*\*\*.<sup>9</sup>

The Commission sent subcontractors' questionnaires to \*\*\* subcontractor firms identified by DuPont, of which \*\*\* responded. Of those that responded, \*\*\* submitted data.<sup>10</sup> Of these subcontractor responses, \*\*\* revocation of the AD order. Processing equipment is owned by \*\*\* subcontractors and \*\*\*.<sup>11</sup> \*\*\* subcontractors' equipment \*\*\* to process PPD-T aramid fiber, while \*\*\* process \*\*\* PPD-T aramid fiber. \*\*\* subcontractors reported PRWs \*\*\* to process PPD-T aramid fiber and \*\*\* reported that \*\*\*. Subcontractors reported services provided to DuPont that include \*\*\* PPD-T aramid fiber. Reported constraints on subcontractor capacity \*\*\*. Subcontractors \*\*\* on the level of technical expertise required to perform process functions. One subcontractor reports that \*\*\*, others that \*\*\*.<sup>12</sup>

DuPont subcontractors' PPD-T aramid fiber processing capacity, toll processing, and capacity utilization are shown in table III-6. In general, subcontractor processing capacity increased \*\*\* from

---

<sup>6</sup> Data include DuPont's PRWs only. Independent subcontractors' PRW data are presented separately in table III-9.

<sup>7</sup> \*\*\*.

<sup>8</sup> Ibid., p. \*\*\*.

<sup>9</sup> Ibid., p. \*\*\*.

<sup>10</sup> \*\*\*.

<sup>11</sup> \*\*\*.

<sup>12</sup> Ibid., pp. \*\*\* and \*\*\*.

1997 to 1999, then increased \*\*\* from interim 1999 to interim 2000. Both toll processing and capacity utilization have fallen \*\*\* since 1997.

**Table III-6**  
**PPD-T aramid fiber: Subcontractors' toll-processing capacity, toll-processing, and capacity utilization, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

**SUBCONTRACTORS' SHIPMENTS**

Subcontractors' return shipments of processed PPD-T aramid fiber to DuPont decreased \*\*\* in quantity, increased in value, and increased \*\*\* in unit value from 1997 to 1999 before all rose between the interim periods (table III-7).<sup>13</sup>

**Table III-7**  
**PPD-T aramid fiber: Subcontractors' toll-processed shipments, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

**SUBCONTRACTORS' INVENTORIES**

By the nature of their processing arrangements, whereby all PPD-T aramid fiber is owned by DuPont, subcontractors hold little inventory (table III-8). Fiber under process at the end of the period becomes inventory.

**Table III-8**  
**PPD-T aramid fiber: Subcontractors' end-of-period inventories, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

**SUBCONTRACTORS' EMPLOYMENT, WAGES, AND PRODUCTIVITY**

Employment data pertaining to DuPont's PPD-T aramid fiber subcontracting operations are shown in table III-9. The number of PPD-T aramid fiber subcontractor PRWs,<sup>14</sup> hours worked, and unit labor costs rose over the period for which data were gathered, while wages paid and hourly wages increased from 1997 to 1999 and from interim 1999 to interim 2000.

**Table III-9**  
**PPD-T aramid fiber: Average number of subcontractor production and related workers, hours worked, wages paid to such employees, hourly wages, productivity, and unit labor costs, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

---

<sup>13</sup> \*\*\*.

<sup>14</sup> Data for independent subcontractor PRWs are reported separately in table III-9, and are not included in DuPont PRW data reported in table III-5.

## U.S. PRODUCER'S FINANCIAL CONDITION AND EXPERIENCE

### Background

DuPont, the only domestic PPD-T aramid fiber producer, supplied financial data on its PPD-T aramid fiber operations.<sup>15</sup> Its plant is located in Richmond, VA, and its Kevlar® process uses \*\*\*. Its PPD-T aramid fiber operations are included in its specialty fibers division and Kevlar® is one of DuPont's "advanced fibers."<sup>16</sup> The specialty fibers division is one of nine reporting business segments of the DuPont Corporation. Some comments about PPD-T aramid fiber (Kevlar®) from its public financial reports follow:

"Advanced fibers are Kevlar® brand fiber, Nomex brand fiber and paper, and Teflon brand fluoropolymer fiber. Advanced Fiber Systems is growing in already strong market categories and expanding into new end uses. . .Adoption by the U.S. military of vests containing advanced Kevlar® technology for reoutfitting the Marine Corps reflected the continuing leadership of Kevlar® in life protection. Aracon metal clad Kevlar® was introduced, targeting shielding and conductive applications in the aerospace, automotive and consumer industries. Nomex continued to expand its global presence in protection apparel applications requiring essential thermal conditions."<sup>17</sup>

"Specialty Fibers segment earnings increased 11 percent reflecting significantly higher sales volumes for Lycra spandex and Advanced Fiber Systems, particularly Kevlar® fiber, that more than offset price weakness in Europe due to currency."<sup>18</sup>

"Specialty Fibers - Segment earnings increased 4 percent based on 8 percent higher volumes. Volumes were particularly strong in Lycra elastane, Kevlar® brand fiber, and Tyvek flexible sheet products. . .Advanced Fiber Systems earnings were strong, reflecting significant growth in the Life Protection and Protective Apparel markets."<sup>19</sup>

"Specialty Fibers - Segment earnings were 12 percent lower as increased earnings from Kevlar® fiber and Nomex fiber and paper were more than offset by lower Lycra elastane earnings."<sup>20</sup>

### Operations on PPD-T Aramid Fiber

The results of operations for DuPont are presented in table III-10. \*\*\*.

\*\*\*<sup>21</sup>

---

<sup>15</sup> Kevlar® sales are approximately \*\*\* percent of DuPont's full year sales of \$26.9 billion in its 1999 annual report \*\*\*. Net sales of U.S. produced PPD-T aramid fiber are approximately \*\*\* percent of DuPont's 1999 total sales.

<sup>16</sup> \*\*\*.

<sup>17</sup> DuPont 1999 10-K, fiscal year ending December 31, p. 54 ([www.sec.gov/archives/edgar/data/30554](http://www.sec.gov/archives/edgar/data/30554)).

<sup>18</sup> DuPont 10-Q, three months ending March 31, 2000, p. 15 ([www.sec.gov/archives/edgar/data/30554](http://www.sec.gov/archives/edgar/data/30554)).

<sup>19</sup> DuPont 10-Q, three months ending June 30, 2000, pp. 18-19 ([www.sec.gov/archives/edgar/data/30554](http://www.sec.gov/archives/edgar/data/30554)).

<sup>20</sup> DuPont 10-Q, three months ending September 30, 2000, p. 20 ([www.sec.gov/archives/edgar/data/30554](http://www.sec.gov/archives/edgar/data/30554)).

<sup>21</sup> \*\*\*.

**Table III-10**

**Results of operations of DuPont in the production of PPD-T aramid fiber, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

A summary of selected cost data is shown in table III-11. \*\*\*.

**Table III-11**

**Summary of selected cost data of DuPont in the production of PPD-T aramid fiber, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

In its questionnaire response DuPont stated the following about its contractors (subcontractors):

“\*\*\*.”

A summary of financial data for the reporting subcontractors<sup>22</sup> is presented in table III-12.<sup>23</sup>

**Table III-12**

**Selected data for the reporting subcontractors of DuPont in the production of PPD-T aramid fiber, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

The results of operations on a dollars-per-pound basis are presented in table III-13. \*\*\*.

**Table III-13**

**Results of operations (on a dollars per-pound basis) of DuPont in the production of PPD-T aramid fiber, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

A variance analysis showing the effects of prices and volume on DuPont’s net sales of PPD-T aramid fiber and of costs and volume on its total costs is shown in table III-14. The variance analysis shows that \*\*\*.

---

<sup>22</sup> The fees to the reporting subcontractors expressed as a ratio of DuPont’s combined cost of goods sold and SG&A expenses were \*\*\* percent in 1997, \*\*\* percent in 1998, and \*\*\* percent in 1999, interim 1999, and interim 2000. These percents approximate the value added by the combined subcontractors to DuPont’s production of PPD-T aramid fiber.

<sup>23</sup> If the operations of the reporting subcontractors were to be combined with the operations of DuPont, DuPont’s operating income margin would be \*\*\* percent in 1997, \*\*\* percent in 1998, \*\*\* percent in 1999, \*\*\* percent in interim 1999, and \*\*\* percent in interim 2000 (a change of \*\*\* in all periods).



**Table III-14**

**Variance analysis for PPD-T aramid fiber operations, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

**Investment in Productive Facilities, Capital Expenditures,  
and Research and Development Expenses**

The value of fixed assets (property, plant, and equipment), capital expenditures, and research and development expenses for PPD-T aramid fiber are shown in table III-15. \*\*\*.

**Table III-15**

**Value of assets, capital expenditures, and research and development expenses of DuPont on its PPD-T aramid fiber operations, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*



## PART IV: U.S. IMPORTS AND THE FOREIGN INDUSTRY

### U.S. IMPORTS

The Commission sent importers' questionnaires to 4 firms, all of which responded. All firms indicated that they did import PPD-T aramid fiber during the period for which data were gathered and supplied information on such U.S. imports. \*\*\* of the 4 firms imported the subject merchandise from the Netherlands, with a portion of those imports entered under temporary importation bond (TIB) provisions. The 4 firms accounted for the great bulk of U.S. imports of PPD-T aramid fiber during the period for which data were gathered in the investigation.

\*\*\* is one of the 4 firms that imported PPD-T aramid fiber during the period for which data were gathered. All such imports \*\*\*. \*\*\* explains that it imported these products \*\*\*.<sup>1</sup> The volume of \*\*\* U.S. imports did not exceed \*\*\* percent of \*\*\* in any year during the period examined.

As all imports of PPD-T aramid fiber enter the United States as part of HTS "basket" subheadings 5402.10.30 (synthetic filament, high tenacity, single yarn of nylon or other polyamides), 5402.10.60 (synthetic filament, high tenacity, multiple (folded) or cabled yarn of nylon or other polyamides), 5503.10.90 (other synthetic staple fibers of nylon or other polyamides), 5601.30.00 (textile floc), and 5603.14.90 (other nonwoven man-made filament), import data in table IV-1 were compiled from data submitted in response to Commission questionnaires. As shown in the table, the quantity of U.S. imports from the Netherlands declined by \*\*\* percent from 1997 to 1998 and by \*\*\* percent from 1998 to 1999, and rose by \*\*\* percent between interim 1999 and interim 2000. The corresponding values of U.S. imports of PPD-T aramid fiber from the Netherlands decreased irregularly by \*\*\* percent from 1997 to 1999, then rose by \*\*\* percent over the interim 1999-2000 periods. With the exception of \*\*\*, unit values of U.S. imports from the Netherlands were \*\*\* those for U.S. imports from all other sources. The "other sources" of imports were from \*\*\*.

**Table IV-1**

**PPD-T aramid fiber: U.S. imports, by sources, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

Table IV-2 presents official Commerce import statistics from the Netherlands, based on "basket" HTS subheadings under which PPD-T aramid fiber is imported.

---

<sup>1</sup> \*\*\*.

**Table IV-2**

**PPD-T aramid fiber: U.S. imports from the Netherlands under HTS basket subheadings,<sup>1</sup> 1997-99, January-September 1999, and January-September 2000**

Netherlands	Calendar year			January-September	
	1997	1998	1999	1999	2000
Quantity (1,000 pounds)	4,711	3,849	4,142	3,336	3,408
Value (1,000 dollars) <sup>2</sup>	34,793	29,604	31,928	25,280	27,602
Unit value (per pound)	\$7.39	\$7.69	\$7.71	\$7.58	\$8.10
<sup>1</sup> The data shown are for the following "basket" subheadings: 5402.10.30, 5402.10.60, 5503.10.90, 5601.30.00, and 5603.14.90. <sup>2</sup> Landed, duty-paid.					
Source: Compiled from official Commerce statistics.					

Table IV-3 presents U.S. importers' commercial U.S. shipments of PPD-T aramid fiber imported from all sources, by end-use application.

**Table IV-3**

**PPD-T aramid fiber: U.S. importers' commercial U.S. shipments from all sources, by end uses, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

### U.S. IMPORTERS' INVENTORIES

By definition, imports under TIB provisions mandate the re-export of imported materials, therefore virtually no TIB inventory is held by importers.<sup>2</sup> U.S. non-TIB importers of PPD-T aramid fiber from the Netherlands maintained irregularly increasing levels of inventories of the non-TIB imported Netherlands product during the period for which data were gathered. As shown in table IV-4, the ratio of non-TIB inventories to non-TIB imports from the Netherlands stood at \*\*\* percent in 1999, the same as in 1997. The ratio of non-TIB inventories to U.S. shipments of imports from the Netherlands rose \*\*\* by \*\*\* percentage points between 1997 and 1999.

**Table IV-4**

**PPD-T aramid fiber: U.S. importers' end-of-period inventories of non-TIB imports, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

### PRODUCER IN THE NETHERLANDS

Twaron Products BV, located in Arnhem, the Netherlands, is the sole producer of PPD-T aramid fiber in the Netherlands, and Twaron Products V.o.F. is the only exporter of the subject merchandise

---

<sup>2</sup> \*\*\*.

from the Netherlands.<sup>3</sup> As such, these companies account for 100 percent of PPD-T aramid fiber production in and export from the Netherlands, respectively.<sup>4</sup> Other than the United States, the principal export markets for Twaron-produced PPD-T aramid fiber include \*\*\*.

Twaron \*\*\* PPD-T aramid fiber. There are no quantitative barriers to the importation of PPD-T aramid fiber into countries other than the United States. Although duties vary from country to country, few constitute significant barriers to importation.<sup>5</sup> Further, because there are only two global manufacturers of PPD-T aramid fiber (DuPont and Twaron), \*\*\*, no country bars or restricts importation of either company's product.

**CAPACITY, PRODUCTION, CAPACITY UTILIZATION, DOMESTIC SHIPMENTS,  
EXPORT SHIPMENTS, AND INVENTORIES IN THE NETHERLANDS**

Data for production of PPD-T aramid fiber in the Netherlands are presented in table IV-5. The data show that from 1997 to 1999 production capacity increased by \*\*\* percent, production rose by \*\*\* percent, total exports increased by \*\*\* percent, and exports to the United States fluctuated downward by \*\*\* percent. Between the interim 1999 and 2000 periods, capacity \*\*\*, production increased by \*\*\* percent, total exports increased by \*\*\* percent, and exports to the United States increased by \*\*\* percent.

These trends may be explained by the following events. During 1995, Twaron completed an \*\*\*. In April 1997, \*\*\*.<sup>6</sup>

During 1997, Twaron implemented \*\*\* material for pulp production. Use of this \*\*\* effectively increased Twaron's \*\*\*.<sup>7</sup>

**Table IV-5**  
**PPD-T aramid fiber: Data for the producer in the Netherlands, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

---

<sup>3</sup> \*\*\*.

Teijin Limited, a leading maker of synthetic fibers headquartered in Osaka, Japan, announced on October 17, 2000, that it was negotiating with Acordis to acquire Twaron Products BV's PPD-T aramid fiber business. Teijin is seeking to acquire from Acordis all shares in Twaron Products (Netherlands) and Twaron Products' sales company in Germany, as well as PPD-T aramid fiber-related activities in the United States and Brazil and sales and marketing activities worldwide. Upon completion of the acquisition, Twaron Products would become a Teijin subsidiary named Teijin Twaron BV and would continue its business as part of Teijin's global fibers organization.

As of December 22, 2000, Acordis signed a contract to sell its aramid fiber business, Twaron Products, to Teijin Limited. The new company name is Teijin Twaron BV. Teijin press release, "Teijin Expecting to Reach Agreement to Acquire Acordis' Twaron® Para-aramid Fiber Business," October 17, 2000, p. 1 \*\*\*, and Acordis press release, "Acordis and Teijin expect to reach agreement about Twaron Products," October 17, 2000, \*\*\*.

\*\*\*.

<sup>4</sup> \*\*\*.

<sup>5</sup> \*\*\*.

<sup>6</sup> \*\*\*.

<sup>7</sup> Ibid.

Twaron subcontracts the addition of certain physical finishes (e.g., twisting, winding, cutting, chopping, washing, sewing, etc.) applied to PPD-T aramid fiber \*\*\*.<sup>8</sup>

\*\*\* during this period include the \*\*\*.<sup>9</sup> Beginning in 1995, Twaron began \*\*\*. \*\*\* production and related workers \*\*\*; however, \*\*\* of Twaron's production and sales.<sup>10</sup>

Twaron's production capacity is constrained by \*\*\*. The \*\*\* affects capacity because different \*\*\* result in different production efficiencies. For example, a spinning line would produce \*\*\*.<sup>11</sup>

\*\*\* also affect production capacity. Required \*\*\* at the polymer production facility last approximately \*\*\* and occur every \*\*\*, while \*\*\* at spinning and pulp facilities occurs \*\*\* basis with \*\*\*.<sup>12</sup>

Twaron's export sales increased in all export markets, including the United States, because of an increase in market demand. For example, Twaron's sales to Asia (excluding Japan) increased more than \*\*\* from 1995 to 2000, and, with anticipated significant market growth anticipated, Twaron expects to increase exports to \*\*\* by another \*\*\* percent by 2003. Exports to \*\*\* increased by approximately \*\*\* percent from \*\*\* pounds in 1995 to over \*\*\* pounds in 2000, and are expected to increase by another \*\*\* percent to almost \*\*\* pounds by 2003.<sup>13</sup>

---

<sup>8</sup> \*\*\*.

<sup>9</sup> \*\*\*.

<sup>10</sup> Ibid.

<sup>11</sup> \*\*\*.

<sup>12</sup> Ibid., insert to p. \*\*\*.

<sup>13</sup> Ibid., insert to p. \*\*\*.

## PART V: PRICING AND RELATED INFORMATION

### CHARACTERISTICS OF LIKELY DUMPING

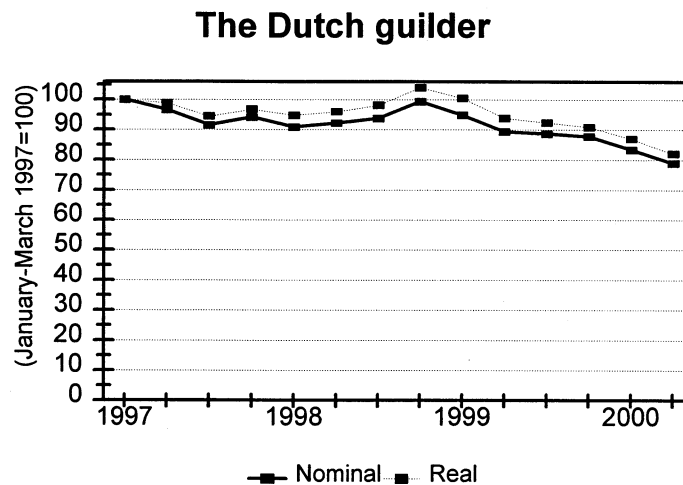
The level of antidumping duties has fallen since the imposition of the order, with Twaron's duty currently at 3.2 percent. Imports of PPD-T aramid fiber from the Netherlands fell from \*\*\* percent of apparent U.S. consumption of PPD-T aramid fiber in 1993 to \*\*\* percent of apparent U.S. consumption in 1999. U.S. apparent consumption rose from \*\*\* pounds in 1993 to \*\*\* pounds in 1999.

### EXCHANGE RATES

Exchange rate changes from the first quarter of 1997 until the second quarter of 2000 are graphed in figure V-1, and from 1994 until 1999 in figure V-2. The exchange rates are all normalized so that the first quarter of 1997 in figure V-1 and the year 1994 in figure V-2 both equal 100.

**Figure V-1**

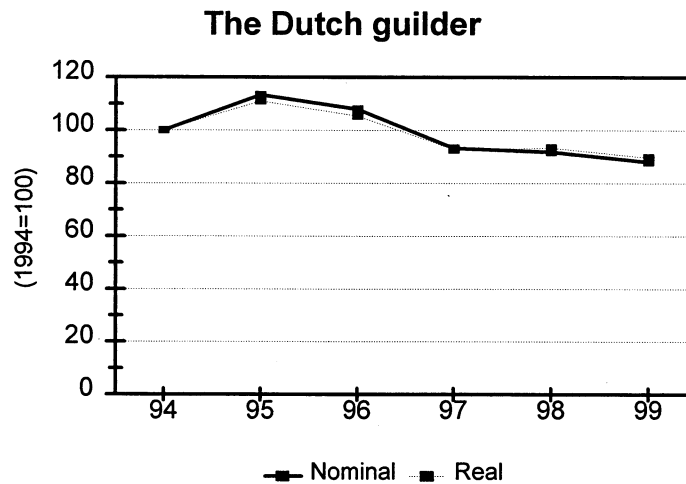
**Exchange rates: Indices of the nominal and real exchange rates of the Dutch guilder in relation to the U.S. dollar, by quarters, January 1997 through June 2000**



Source: International Monetary Fund, *International Monetary Statistics*, October 2000.

**Figure V-2**

**Exchange rates: Indices of the nominal and real exchange rates of the Dutch guilder in relation to the U.S. dollar, 1994-99**



Source: International Monetary Fund, *International Monetary Statistics*, 2000 Yearbook.

### **Transportation Costs to the U.S. Market**

Transportation costs from the Netherlands to the United States are estimated to be 1.2 percent of the October 1999 through September 2000 c.i.f. value:<sup>1</sup>

### **U.S. Inland Transportation Costs**

DuPont stated that its transportation costs are \*\*\* percent of total delivered cost, and that \*\*\*, \*\*\*, percent of whom are within 1,000 miles. Twaron also \*\*\*, stating that transportation costs are about \*\*\* percent of total delivered cost, and that \*\*\* percent of its customers are within 1,000 miles. U.S. purchasers confirmed that U.S. inland transportation costs ranged between \*\*\* and \*\*\* percent.

### **PRICING PRACTICES**

Neither DuPont nor Twaron maintains price lists; both rather negotiate with customers individually to reach “value-in-use” pricing. DuPont explained that value is determined by \*\*\*.

\* \* \* \* \*

Both DuPont and Twaron sell on a delivered basis. DuPont reported that \*\*\* percent of its sales are on a contract basis and \*\*\* percent are spot. Twaron reported that \*\*\* percent of its sales are on a contract basis and \*\*\* percent are spot. Both reported that typical contracts are 1 year, but some contracts have different lengths. \*\*\*.

---

<sup>1</sup> Calculated from Customs data (customs value and c.i.f. value) for the HTS categories in the investigation.



Most purchasers reported consistent purchases year-round, although the frequency varied from weekly to monthly to quarterly. While volumes for some purchasers have increased since 1994, none reported that the frequency of purchases had changed. Seven purchasers reported contacting only one supplier, with the others contacting two or basing their contacts on customer specifications.

Thirteen purchasers reported at least some negotiations on purchases, though some reported that these negotiations were limited by DuPont's "monopoly" or customer requirements. Six other purchasers reported no negotiations. Nineteen purchasers said that they do not vary purchases based on price, either due to loyalty or customer requirements. Most purchasers said that they change suppliers rarely or never, but \*\*\* reported adding Twaron; \*\*\* reported dropping Twaron due to insufficient supply; and \*\*\* reported replacing Twaron with DuPont due to price negotiations.

Most purchasers stated that price changed infrequently. Those that gave specific intervals usually gave periods ranging from 1 to 10 years. \*\*\* cited a \*\*\*-percent price reduction in 1996 due to competition from fiberglass and a \*\*\*-percent increase on January 1, 2001. \*\*\* also cited three price increases in 2000.

\* \* \* \* \*

Purchasers characterized the Twaron-DuPont competition differently. \*\*\* saw aggressive market share competition between DuPont and Twaron leading to lower fiber prices. \*\*\* and \*\*\* stated that Twaron's entry into the market had stabilized prices, and \*\*\* said that Twaron had given them the leverage to reduce DuPont prices steadily since 1994. However, \*\*\* felt that DuPont's limited competition allowed DuPont to be a price leader, and \*\*\* stated that DuPont had led a \*\*\*-percent price increase in \*\*\* that Twaron had followed. \*\*\* said that DuPont kept U.S. prices high due to the AD order while reducing prices in Europe to deter reinvestment. \*\*\* said that either DuPont or Twaron could exercise price leadership due to the limited market.

Six purchasers said that U.S.-produced PPD-T aramid fiber is higher priced than Dutch-produced PPD-T aramid fiber, eight purchasers said that U.S. and Dutch PPD-T aramid fiber prices are the same, and two purchasers said that U.S.- produced PPD-T aramid fiber is lower priced than Dutch-produced PPD-T aramid fiber. One additional purchaser noted that while U.S. prices are lower now, Dutch PPD-T aramid fiber prices were lower in 1998, when that purchaser signed its current contract.

Purchasers do purchase more expensive PPD-T aramid fiber when less expensive PPD-T aramid fiber is available, and cited customer qualifications, supplier rebates to \*\*\*, and dual sourcing as reasons.<sup>2</sup>

DuPont characterized Twaron as underselling DuPont by \*\*\* to \*\*\* percent worldwide in order to gain market share. DuPont supplied average Kevlar® pricing history for the United States, Europe, and the world (*in dollars per pound*):

\* \* \* \* \*

DuPont also reported its estimates of Twaron® and Kevlar® average prices by region:<sup>3</sup>

\* \* \* \* \*

---

<sup>2</sup> One purchaser, \*\*\*, cited maintenance of dual sourcing as a reason for purchasing more expensive PPD-T aramid fiber.

<sup>3</sup> \*\*\*.

Furthermore, DuPont supplied its estimates of European versus U.S. PPD-T aramid fiber prices according to end use segment. Those estimates are contained in appendix G.

\* \* \* \* \*

### PRICE DATA

The Commission asked for quarterly price and quantity data for the U.S. producer's and importers' sales and their customers' purchases of the following 12 products during January 1997-September 2000:<sup>4</sup>

**Product 1.**-PPD-T aramid fiber in pulp form, sold to the automatic transmission paper market, Kevlar® type 979 wet or Twaron type 1092 wet.

**Product 2.**-PPD-T aramid fiber in pulp form, sold to the automatic transmission paper market, Twaron® type 1097.

**Product 3.**-PPD-T aramid fiber in pulp form, sold to the gasket market (e.g., Kevlar® type 979 wet or Twaron® types 1092 wet, 1094 wet, or 1097 wet).

**Product 4.**-PPD-T aramid fiber in pulp form, sold to the gasket market (e.g., Kevlar® type 979 dry or Twaron® types 1095 dry or 1099 dry).

**Product 5.**-PPD-T aramid fiber in pulp form, sold to the dry friction (brakes) market (e.g., Kevlar® type 979 dry or Twaron® types 1095 dry or 1099 dry).

**Product 6.**-PPD-T aramid fiber in staple form, sold to the protective apparel market (e.g., Kevlar® type 970 or Twaron® type 1070).

**Product 7.**-PPD-T aramid fiber in yarn form, regular/standard modulus (1680 dtex or 1500 denier), sold to the hoses/belts market (e.g., Kevlar® type 956 or Twaron® types 1000 or 1008).

**Product 8.**-PPD-T aramid fiber in yarn form, 1500 denier, sold to the hoses/belts market (e.g., Kevlar® type 956C or Twaron® type 2000).

**Product 9.**-PPD-T aramid fiber in yarn form, high modulus (3220 dtex or 2840 denier), sold to the fiber optic cable market (e.g., Kevlar® 49 yarn type 989 or Twaron® type 1055).

**Product 10.**-PPD-T aramid fiber in yarn form, high modulus (3220 dtex or 2840 denier), sold to the fiber optic cable market (e.g., Twaron® type 2200).

**Product 11.**-PPD-T aramid fiber in yarn form, 930 dtex or 840 denier, sold to the non-military ballistic applications (e.g., Kevlar® 129 type 964C or Twaron® type 2040).

**Product 12.**-PPD-T aramid fiber in chopped fiber form, sold to the gasket market (e.g., Twaron® types 1080 and 1083 and Kevlar® chopped product).

---

<sup>4</sup> Purchasers were asked to provide data from January 1998 to September 2000.

The weighted-average delivered prices and quantities of sales of domestic and imported PPD-T aramid fiber, as reported by DuPont and Twaron, are presented in tables V-1 through V-11 and figures V-3 through V-22.

**Table V-1**

**PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 1 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000**

\* \* \* \* \*

**Table V-2**

**PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 3 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000**

\* \* \* \* \*

**Table V-3**

**PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic product 4 reported by DuPont, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Table V-4**

**PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 5 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000**

\* \* \* \* \*

**Table V-5**

**PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 6 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000**

\* \* \* \* \*

**Table V-6**

**PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 7 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000**

\* \* \* \* \*

**Table V-7**

**PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic product 8 reported by DuPont, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Table V-8**

**PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 9 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000**

\* \* \* \* \*

**Table V-9**

**PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic product 9 reported by DuPont and imported product 10 reported by Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000**

\* \* \* \* \*

**Table V-10**

**PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 11 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000**

\* \* \* \* \*

**Table V-11**

**PPD-T aramid fiber: Weighted-average delivered prices and quantities of domestic and imported product 12 reported by DuPont and Twaron and margins of underselling/(overselling), by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-3**

**PPD-T aramid fiber: Weighted-average delivered prices of product 1 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-4**

**PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 1 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-5**

**PPD-T aramid fiber: Weighted-average delivered prices of product 3 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-6**

**PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 3 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-7**

**PPD-T aramid fiber: Weighted-average delivered prices of product 4 reported by DuPont, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-8**

**PPD-T aramid fiber: Weighted-average delivered prices of product 5 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-9**

**PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 5 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-10**

**PPD-T aramid fiber: Weighted-average delivered prices of product 6 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-11**

**PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 6 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-12**

**PPD-T aramid fiber: Weighted-average delivered prices of product 7 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-13**

**PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 7 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-14**

**PPD-T aramid fiber: Weighted-average delivered prices of product 8 reported by DuPont, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-15**

**PPD-T aramid fiber: Weighted-average delivered prices of product 9 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-16**

**PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 9 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-17**

**PPD-T aramid fiber: Weighted-average delivered prices of product 9 reported by DuPont and product 10 reported by Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-18**

**PPD-T aramid fiber: Percent margins of underselling/(overselling) of DuPont product 9 and Twaron product 10 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-19**

**PPD-T aramid fiber: Weighted-average delivered prices of product 11 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-20**

**PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 11 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-21**

**PPD-T aramid fiber: Weighted-average delivered prices of product 12 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Figure V-22**

**PPD-T aramid fiber: Percent margins of underselling/(overselling) of product 12 reported by DuPont and Twaron, by quarters, January 1997-September 2000**

\* \* \* \* \*

**Price Comparisons**

The pricing data received by the Commission are fairly comprehensive, representing \*\*\* percent of DuPont's U.S. shipments in 1999 and \*\*\* percent in the first three quarters of 2000, and representing \*\*\* percent of Twaron's U.S. shipments in 1999 and \*\*\* percent in the first three quarters of 2000. Average unit values (AUVs) for the pricing data as a whole have Twaron overselling DuPont by \*\*\* percent in 1999 and underselling DuPont by \*\*\* percent in the first three quarters of 2000, and average unit values from overall U.S. shipments data have Twaron underselling DuPont by \*\*\* percent in 1999 and by \*\*\* percent in the first three quarters of 2000.

\*\*\*<sup>5</sup> \*\*\*

\* \* \* \* \*

\*\*\*<sup>6</sup> \*\*\*

\*\*\*<sup>7</sup> \*\*\*

\* \* \* \* \*

Overall, DuPont tended to have higher prices on products \*\*\* while Twaron tended to have higher prices on products \*\*\*. Product \*\*\* prices were generally close, and products \*\*\* depend on the comparison one does. \*\*\*. The data also show increased volumes in some products, especially fiber optic cable, and stable or decreasing prices in several products, with products 3, 4, 9, 10, 11, and 12 all generally showing decreases from 1997 to 2000.

Purchaser pricing data are supplied in appendix H. Purchaser data were often greater than producer and importer data by volume and product, due to purchasers not being able to break out their pricing data at a finer level. This phenomenon was especially true of the fiber optic products 9 and 10. Due to the less specific nature of the purchaser data, these data should be regarded as less reliable than the producer and importer data.

---

<sup>5</sup> Neither DuPont nor Twaron reported any shipments of product 2.

<sup>6</sup> \*\*\*.

<sup>7</sup> Staff conversation with \*\*\*.





**APPENDIX A**

***FEDERAL REGISTER* NOTICES  
AND THE COMMISSION'S  
STATEMENT ON ADEQUACY**



below to the Commission;<sup>1</sup> to be assured of consideration, the deadline for responses is January 20, 2000. Comments on the adequacy of responses may be filed with the Commission by February 11, 2000.

For further information concerning the conduct of this review and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A, D, E, and F (19 CFR part 207). Recent amendments to the Rules of Practice and Procedure pertinent to five-year reviews, including the text of subpart F of part 207, are published at 63 FR 30599, June 5, 1998, and may be downloaded from the Commission's World Wide Web site at <http://www.usitc.gov/rules.htm>.

**EFFECTIVE DATE:** December 1, 1999.

**FOR FURTHER INFORMATION CONTACT:** Mary Messer (202-205-3193) or Vera Libeau (202-205-3176), Office of Investigations, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-205-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000. General information concerning the Commission may also be obtained by accessing its internet server (<http://www.usitc.gov>).

**SUPPLEMENTARY INFORMATION:**

**Background**

On June 24, 1994, the Department of Commerce issued an antidumping duty order on imports of aramid fiber from the Netherlands (59 FR 32678). The Commission is conducting a review to determine whether revocation of the order would be likely to lead to continuation or recurrence of material injury to the domestic industry within a reasonably foreseeable time. It will assess the adequacy of interested party responses to this notice of institution to determine whether to conduct a full review or an expedited review. The Commission's determination in any

<sup>1</sup> No response to this request for information is required if a currently valid Office of Management and Budget (OMB) number is not displayed; the OMB number is 3117-0016/USITC No. 99-5-044, expiration date July 31, 2002. Public reporting burden for the request is estimated to average 7 hours per response. Please send comments regarding the accuracy of this burden estimate to the Office of Investigations, U.S. International Trade Commission, 500 E Street, SW, Washington, DC 20436.

expedited review will be based on the facts available, which may include information provided in response to this notice.

**Definitions**

The following definitions apply to this review:

(1) Subject Merchandise is the class or kind of merchandise that is within the scope of the five-year review, as defined by the Department of Commerce.

(2) The Subject Country in this review is the Netherlands.

(3) The Domestic Like Product is the domestically produced product or products which are like, or in the absence of like, most similar in characteristics and uses with, the Subject Merchandise. In its original determination, the Commission found one Domestic Like Product: all aramid fiber formed of poly para-phenylene terephthalamide.

(4) The Domestic Industry is the U.S. producers as a whole of the Domestic Like Product, or those producers whose collective output of the Domestic Like Product constitutes a major proportion of the total domestic production of the product. In its original determination, the Commission found one Domestic Industry: producers of all aramid fiber formed of poly para-phenylene terephthalamide. The Commission included the subcontractors of E.I. DuPont de Nemours & Co. as part of the Domestic Industry.

(5) The Order Date is the date that the antidumping duty order under review became effective. In this review, the Order Date is June 24, 1994.

(6) An Importer is any person or firm engaged, either directly or through a parent company or subsidiary, in importing the Subject Merchandise into the United States from a foreign manufacturer or through its selling agent.

**Participation in the Review and Public Service List**

Persons, including industrial users of the Subject Merchandise and, if the merchandise is sold at the retail level, representative consumer organizations, wishing to participate in the review as parties must file an entry of appearance with the Secretary to the Commission, as provided in section 201.11(b)(4) of the Commission's rules, no later than 21 days after publication of this notice in the *Federal Register*. The Secretary will maintain a public service list containing the names and addresses of all persons, or their representatives, who are parties to the review.

Former Commission employees who are seeking to appear in Commission

**INTERNATIONAL TRADE COMMISSION**

[Investigation No. 731-TA-652 (Review)]

**Aramid Fiber From The Netherlands**

**AGENCY:** United States International Trade Commission.

**ACTION:** Institution of a five-year review concerning the antidumping duty order on aramid fiber from the Netherlands.

**SUMMARY:** The Commission hereby gives notice that it has instituted a review pursuant to section 751(c) of the Tariff Act of 1930 (19 U.S.C. 1675(c)) (the Act) to determine whether revocation of the antidumping duty order on aramid fiber from the Netherlands would be likely to lead to continuation or recurrence of material injury. Pursuant to section 751(c)(2) of the Act, interested parties are requested to respond to this notice by submitting the information specified

five-year reviews are reminded that they are required, pursuant to 19 CFR 201.15, to seek Commission approval if the matter in which they are seeking to appear was pending in any manner or form during their Commission employment. The Commission's designated agency ethics official has advised that a five-year review is the "same particular matter" as the underlying original investigation for purposes of 19 CFR 201.15 and 18 U.S.C. 207, the post employment statute for Federal employees. Former employees may seek informal advice from Commission ethics officials with respect to this and the related issue of whether the employee's participation was "personal and substantial." However, any informal consultation will not relieve former employees of the obligation to seek approval to appear from the Commission under its rule 201.15. For ethics advice, contact Carol McCue Verratti, Deputy Agency Ethics Official, at 202-205-3088.

**Limited Disclosure of Business Proprietary Information (BPI) Under an Administrative Protective Order (APO) and APO Service List**

Pursuant to section 207.7(a) of the Commission's rules, the Secretary will make BPI submitted in this review available to authorized applicants under the APO issued in the review, provided that the application is made no later than 21 days after publication of this notice in the *Federal Register*. Authorized applicants must represent interested parties, as defined in 19 U.S.C. 1677(9), who are parties to the review. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

**Certification**

Pursuant to section 207.3 of the Commission's rules, any person submitting information to the Commission in connection with this review must certify that the information is accurate and complete to the best of the submitter's knowledge. In making the certification, the submitter will be deemed to consent, unless otherwise specified, for the Commission, its employees, and contract personnel to use the information provided in any other reviews or investigations of the same or comparable products which the Commission conducts under Title VII of the Act, or in internal audits and investigations relating to the programs and operations of the Commission pursuant to 5 U.S.C. Appendix 3.

**Written Submissions**

Pursuant to section 207.61 of the Commission's rules, each interested party response to this notice must provide the information specified below. The deadline for filing such responses is January 20, 2000. Pursuant to section 207.62(b) of the Commission's rules, eligible parties (as specified in Commission rule 207.62(b)(1)) may also file comments concerning the adequacy of responses to the notice of institution and whether the Commission should conduct an expedited or full review. The deadline for filing such comments is February 11, 2000. All written submissions must conform with the provisions of sections 201.8 and 207.3 of the Commission's rules and any submissions that contain BPI must also conform with the requirements of sections 201.6 and 207.7 of the Commission's rules. The Commission's rules do not authorize filing of submissions with the Secretary by facsimile or electronic means. Also, in accordance with sections 201.16(c) and 207.3 of the Commission's rules, each document filed by a party to the review (as identified by either the public or APO service list as appropriate), and a certificate of service must accompany the document (if you are not a party to the review you do not need to serve your response).

**Inability To Provide Requested Information**

Pursuant to section 207.61(c) of the Commission's rules, any interested party that cannot furnish the information requested by this notice in the requested form and manner shall notify the Commission at the earliest possible time, provide a full explanation of why it cannot provide the requested information, and indicate alternative forms in which it can provide equivalent information. If an interested party does not provide this notification (or the Commission finds the explanation provided in the notification inadequate) and fails to provide a complete response to this notice, the Commission may take an adverse inference against the party pursuant to section 776(b) of the Act in making its determination in the review.

**Information To Be Provided in Response to This Notice of Institution**

As used below, the term "firm" includes any related firms.

(1) The name and address of your firm or entity (including World Wide Web address if available) and name,

telephone number, fax number, and E-mail address of the certifying official.

(2) A statement indicating whether your firm/entity is a U.S. producer of the Domestic Like Product, a U.S. union or worker group, a U.S. importer of the Subject Merchandise, a foreign producer or exporter of the Subject Merchandise, a U.S. or foreign trade or business association, or another interested party (including an explanation). If you are a union/worker group or trade/business association, identify the firms in which your workers are employed or which are members of your association.

(3) A statement indicating whether your firm/entity is willing to participate in this review by providing information requested by the Commission.

(4) A statement of the likely effects of the revocation of the antidumping duty order on the Domestic Industry in general and/or your firm/entity specifically. In your response, please discuss the various factors specified in section 752(a) of the Act (19 U.S.C. 1675a(a)) including the likely volume of subject imports, likely price effects of subject imports, and likely impact of imports of Subject Merchandise on the Domestic Industry.

(5) A list of all known and currently operating U.S. producers of the Domestic Like Product. Identify any known related parties and the nature of the relationship as defined in section 771(4)(B) of the Act (19 U.S.C. 1677(4)(B)).

(6) A list of all known and currently operating U.S. importers of the Subject Merchandise and producers of the Subject Merchandise in the Subject Country that currently export or have exported Subject Merchandise to the United States or other countries since 1993.

(7) If you are a U.S. producer of the Domestic Like Product, provide the following information on your firm's operations on that product during calendar year 1998 (report quantity data in pounds and value data in thousands of U.S. dollars, f.o.b. plant). If you are a union/worker group or trade/business association, provide the information, on an aggregate basis, for the firms in which your workers are employed/which are members of your association.

(a) Production (quantity) and, if known, an estimate of the percentage of total U.S. production of the Domestic Like Product accounted for by your firm's(s') production;

(b) The quantity and value of U.S. commercial shipments of the Domestic Like Product produced in your U.S. plant(s); and

(c) The quantity and value of U.S. internal consumption/company

transfers of the Domestic Like Product produced in your U.S. plant(s).

(8) If you are a U.S. importer or a trade/business association of U.S. importers of the Subject Merchandise from the Subject Country, provide the following information on your firm's(s') operations on that product during calendar year 1998 (report quantity data in pounds and value data in thousands of U.S. dollars). If you are a trade/business association, provide the information, on an aggregate basis, for the firms which are members of your association.

(a) The quantity and value (landed, duty-paid but not including antidumping or countervailing duties) of U.S. imports and, if known, an estimate of the percentage of total U.S. imports of Subject Merchandise from the Subject Country accounted for by your firm's(s') imports;

(b) The quantity and value (f.o.b. U.S. port, including antidumping and/or countervailing duties) of U.S. commercial shipments of Subject Merchandise imported from the Subject Country; and

(c) The quantity and value (f.o.b. U.S. port, including antidumping and/or countervailing duties) of U.S. internal consumption/company transfers of Subject Merchandise imported from the Subject Country.

(9) If you are a producer, an exporter, or a trade/business association of producers or exporters of the Subject Merchandise in the Subject Country, provide the following information on your firm's(s') operations on that product during calendar year 1998 (report quantity data in pounds and value data in thousands of U.S. dollars, landed and duty-paid at the U.S. port but not including antidumping or countervailing duties). If you are a trade/business association, provide the information, on an aggregate basis, for the firms which are members of your association.

(a) Production (quantity) and, if known, an estimate of the percentage of total production of Subject Merchandise in the Subject Country accounted for by your firm's(s') production; and

(b) The quantity and value of your firm's(s') exports to the United States of Subject Merchandise and, if known, an estimate of the percentage of total exports to the United States of Subject Merchandise from the Subject Country accounted for by your firm's(s') exports.

(10) Identify significant changes, if any, in the supply and demand conditions or business cycle for the Domestic Like Product that have occurred in the United States or in the market for the Subject Merchandise in

the Subject Country since the Order Date, and significant changes, if any, that are likely to occur within a reasonably foreseeable time. Supply conditions to consider include technology; production methods; development efforts; ability to increase production (including the shift of production facilities used for other products and the use, cost, or availability of major inputs into production); and factors related to the ability to shift supply among different national markets (including barriers to importation in foreign markets or changes in market demand abroad). Demand conditions to consider include end uses and applications; the existence and availability of substitute products; and the level of competition among the Domestic Like Product produced in the United States, Subject Merchandise produced in the Subject Country, and such merchandise from other countries.

(11) (OPTIONAL) A statement of whether you agree with the above definitions of the Domestic Like Product and Domestic Industry; if you disagree with either or both of these definitions, please explain why and provide alternative definitions.

**Authority:** This review is being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.61 of the Commission's rules.

Issued: November 24, 1999.

By order of the Commission.

**Donna R. Koehnke,**  
*Secretary.*

[FR Doc. 99-31219 Filed 11-30-99; 8:45 am]

BILLING CODE 7020-02-P

---

**INTERNATIONAL TRADE  
COMMISSION****[Investigation No. 731-TA-652 (Review)]****Aramid Fiber From The Netherlands****AGENCY:** United States International Trade Commission.**ACTION:** Notice of Commission determination to conduct a full five-year review concerning the antidumping duty order on aramid fiber from the Netherlands.

---

**SUMMARY:** The Commission hereby gives notice that it will proceed with a full review pursuant to section 751(c)(5) of the Tariff Act of 1930 (19 U.S.C. 1675(c)(5)) to determine whether revocation of the antidumping duty order on aramid fiber from the Netherlands would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time. The Commission will exercise its authority to extend the review period by up to 90 days pursuant to 19 U.S.C. 1675(c)(5)(B), if necessary. A schedule for the review will be established and announced at a later date. For further information concerning the conduct of this review and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A, D, E, and F (19 CFR part 207).**EFFECTIVE DATE:** March 3, 2000.**FOR FURTHER INFORMATION CONTACT:** George Deyman (202-205-3197), Office

of Investigations, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-205-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000. General information concerning the Commission may also be obtained by accessing its internet server (<http://www.usitc.gov>).

**SUPPLEMENTARY INFORMATION:** On March 3, 2000, the Commission determined that it should proceed to a full review in the subject five-year review pursuant to section 751(c)(5) of the Act. The Commission found that both the domestic and respondent interested party group responses to its notice of institution (64 FR 67302, December 1, 1999) were adequate.

A record of the Commissioners' votes, the Commission's statement on adequacy, and any individual Commissioner's statements will be available from the Office of the Secretary and at the Commission's web site.

**Authority:** This review is being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.62 of the Commission's rules.

Issued: March 9, 2000.

By order of the Commission.

Donna R. Koehnke,

Secretary.

[FR Doc. 00-6404 Filed 3-14-00; 8:45 am]

BILLING CODE 7020-02-U

**INTERNATIONAL TRADE  
COMMISSION**
**[Investigation No. 731-TA-652  
(Review)]**
**Aramid Fiber Formed of Poly Para-  
Phenylene Terephthalamide From the  
Netherlands**
**AGENCY:** United States International  
Trade Commission.

**ACTION:** Scheduling of a full five-year  
review concerning the antidumping  
duty order investigation on Aramid  
Fiber Formed of Poly Para-Phenylene  
Terephthalamide from the Netherlands.

**SUMMARY:** The Commission hereby gives notice of the scheduling of a full review pursuant to section 751(c)(5) of the Tariff Act of 1930 (19 U.S.C. 1675(c)(5)) (the Act) to determine whether revocation of the antidumping duty order on Aramid Fiber Formed of Poly Para-Phenylene Terephthalamide from the Netherlands would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time. The Commission has determined to exercise its authority to extend the review period by up to 90 days pursuant to 19 U.S.C. 1675(c)(5)(B). For further information concerning the conduct of this review and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A, D, E, and F (19 CFR part 207).

**EFFECTIVE DATE:** August 10, 2000.

**FOR FURTHER INFORMATION CONTACT:** Cynthia Trainor (202-205-3354), Office of Investigations, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-205-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000. General information concerning the Commission may also be obtained by accessing its internet server (<http://www.usitc.gov>).

**SUPPLEMENTARY INFORMATION:**

**Background.**—On March 3, 2000, the Commission determined that responses to its notice of institution of the subject five-year review were such that a full review pursuant to section 751(c)(5) of the Act should proceed (65 FR 13988, March 15, 2000). A record of the Commissioners' votes, the Commission's statement on adequacy, and any individual Commissioner's

statements are available from the Office of the Secretary and at the Commission's web site.

**Participation in the review and public service list.**—Persons, including industrial users of the subject merchandise and, if the merchandise is sold at the retail level, representative consumer organizations, wishing to participate in this review as parties must file an entry of appearance with the Secretary to the Commission, as provided in § 201.11 of the Commission's rules, by 45 days after publication of this notice. A party that filed a notice of appearance following publication of the Commission's notice of institution of the review need not file an additional notice of appearance. The Secretary will maintain a public service list containing the names and addresses of all persons, or their representatives, who are parties to the review.

**Limited disclosure of business proprietary information (BPI) under an administrative protective order (APO) and BPI service list.**—Pursuant to § 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in this review available to authorized applicants under the APO issued in the review, provided that the application is made by 45 days after publication of this notice. Authorized applicants must represent interested parties, as defined by 19 U.S.C. 1677(9), who are parties to the review. A party granted access to BPI following publication of the Commission's notice of institution of the review need not reapply for such access. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

**Staff report.**—The prehearing staff report in the review will be placed in the nonpublic record on December 12, 2000, and a public version will be issued thereafter, pursuant to § 207.64 of the Commission's rules.

**Hearing.**—The Commission will hold a hearing in connection with the review beginning at 9:30 a.m. on January 9, 2001, at the U.S. International Trade Commission Building. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission on or before December 29, 2000. A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the hearing. All parties and nonparties desiring to appear at the hearing and make oral presentations should attend a prehearing conference to be held at 9:30 a.m. on January 4, 2001, at the U.S. International Trade Commission Building. Oral testimony and written

materials to be submitted at the public hearing are governed by §§ 201.6(b)(2), 201.13(f), 207.24, and 207.66 of the Commission's rules. Parties must submit any request to present a portion of their hearing testimony *in camera* no later than 7 days prior to the date of the hearing.

**Written submissions.**—Each party to the review may submit a prehearing brief to the Commission. Prehearing briefs must conform with the provisions of § 207.65 of the Commission's rules; the deadline for filing is December 21, 2000. Parties may also file written testimony in connection with their presentation at the hearing, as provided in § 207.24 of the Commission's rules, and posthearing briefs, which must conform with the provisions of § 207.67 of the Commission's rules. The deadline for filing posthearing briefs is January 18, 2001; witness testimony must be filed no later than three days before the hearing. In addition, any person who has not entered an appearance as a party to the review may submit a written statement of information pertinent to the subject of the review on or before January 18, 2001. On January 31, 2001, the Commission will make available to parties all information on which they have not had an opportunity to comment. Parties may submit final comments on this information on or before February 2, 2001, but such final comments must not contain new factual information and must otherwise comply with § 207.68 of the Commission's rules. All written submissions must conform with the provisions of § 201.8 of the Commission's rules; any submissions that contain BPI must also conform with the requirements of §§ 201.6, 207.3, and 207.7 of the Commission's rules. The Commission's rules do not authorize filing of submissions with the Secretary by facsimile or electronic means.

In accordance with §§ 201.16(c) and 207.3 of the Commission's rules, each document filed by a party to the review must be served on all other parties to the review (as identified by either the public or BPI service list), and a certificate of service must be timely filed. The Secretary will not accept a document for filing without a certificate of service.

**Authority:** This review is being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to § 207.62 of the Commission's rules.

Issued: August 16, 2000.

By order of the Commission.

Donna R. Koehnke,  
Secretary.

[FR Doc. 00-21231 Filed 8-18-00; 8:45 am]  
BILLING CODE 7020-02-P A-8



## DEPARTMENT OF COMMERCE

## International Trade Administration

[A-421-805]

**Final Results of Full Sunset Review: Aramid Fiber Formed of Poly Para-Phenylene Terephthalamide From the Netherlands**

**AGENCY:** Import Administration, International Trade Administration, Department of Commerce.

**ACTION:** Notice of Final Results of Expedited Sunset Review: Aramid Fiber formed of Poly Para-Phenylene Terephthalamide from the Netherlands.

**SUMMARY:** On June 23, 2000, the Department of Commerce ("the Department") published a notice of preliminary results of the full sunset review of the antidumping duty order on aramid fiber formed of poly para-phenylene terephthalamide ("aramid fiber") from the Netherlands (64 FR 39124) pursuant to section 751(c) of the Tariff Act of 1930, as amended ("the Act"). We provided interested parties an opportunity to comment on our preliminary results. We received comments from both domestic and respondent interested parties. No public hearing was requested by the parties. As a result of this review, the Department finds that revocation of the antidumping order would likely lead to continuation or recurrence of dumping at the levels indicated in the Final Results of Review section of this notice.

*Effective Date:* November 1, 2000.

**FOR FURTHER INFORMATION CONTACT:** Martha V. Douthit or James P. Maeder, Office of Policy for Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW, Washington, DC 20230; telephone: (202) 482-5050 or (202) 482-3330, respectively.

**SUPPLEMENTAL INFORMATION:****The Applicable Statute and Regulations**

This review is being conducted pursuant to sections 751(c) and 752 of the Act. The Department's procedures for the conduct of sunset reviews are set forth in *Procedures for Conducting Five-year ("Sunset") Reviews of Antidumping and Countervailing Duty Orders*, 63 FR 13516 (March 20, 1998) ("*Sunset Regulations*") and in 19 CFR Part 351 (2000) in general. Guidance on methodological or analytical issues relevant to the Department's conduct of sunset reviews is set forth in the Department's Policy Bulletin 98:3—*Policies Regarding the Conduct of Five-year ("Sunset") Reviews of*

*Antidumping and Countervailing Duty Orders; Policy Bulletin*, 63 FR 18871 (April 16, 1998) ("*Sunset Policy Bulletin*").

**Background**

On June 23, 2000, the Department published in the *Federal Register* a notice of preliminary results of the full sunset review of the antidumping order on aramid fiber from the Netherlands (65 FR 39124), pursuant to section 751(c) of the Act. In our preliminary results, we found that revocation of the order would likely result in continuation or recurrence of dumping with weighted-average dumping margins of 2.90 percent for Azko and 66.92 percent for all other Dutch producers and exporters of the subject merchandise.

On August 7, 2000, the domestic interested party, E.I. Dupont de Nemours & Company ("DuPont"), submitted a case brief within the deadline specified in 19 CFR 351.309(c)(1)(i). On August 14, 2000, the respondent interested party, Twaron Products V.o.F. and Twaron Products, Inc. (formerly, Azko) (collectively, "Twaron"), submitted rebuttal briefs within the deadline specified in 19 CFR 351.309(c)(1)(i). The Department provided interested parties an opportunity to request a public hearing, in accordance with 19 CFR 351.310. In this sunset review, no public hearing was requested or held.

**Scope of Review**

The products covered by this review are all forms of aramid fiber from the Netherlands. These consist of aramid fiber in the form of filament yarn (including single and corded), staple fiber, pulp (wet or dry), spun-laced and spun-bonded nonwovens, chopped fiber, and floc. Tire cord is excluded from the class or kind of merchandise under review. This merchandise is currently classifiable under the Harmonized Tariff Schedule of the United States ("HTSUS") item numbers 5402.10.3020, 5402.10.3040, 5402.10.6000, 5503.10.1000, 5503.10.9000, 5601.30.0000, and 5603.00.9000. The HTSUS item numbers are provided for convenience and Customs purposes. The written description of the scope remains dispositive.

**Analysis of Comments Received**

All issues raised in the case and rebuttal briefs by parties to this sunset review are addressed in the "Issues and Decision Memorandum" ("Decision Memo") from Jeffrey A. May, Director, Office of Policy, Import Administration,

to Troy H. Cribb, Assistant Secretary for Import Administration, dated October 26, 2000, which is hereby adopted by this notice. The issues discussed in the Decision Memo include the likelihood of continuation or recurrence of dumping and the magnitude of the margin likely to prevail were the order revoked. Parties can find a complete discussion of all issues raised in this review and the corresponding recommendations in this public memorandum, which is on file in room B-099 of the main Commerce Building. In addition, a complete version of the Decision Memorandum can be accessed directly on the Web at <http://ia.ita.doc.gov>. The paper copy and electronic version of the Decision Memo are identical in content.

**Final Results of Review**

We determine that revocation of the antidumping duty order on aramid fiber from the Netherlands would be likely to lead to continuation or recurrence of dumping at the percentage weighted-average margins listed below:

Manufacturer/exporter	Margin (percent)
Azko .....	2.90
All Others .....	66.92

This notice serves as the only reminder to parties subject to administrative protective order (APO) of their responsibility concerning the disposition of proprietary information disclosed under APO in accordance with 19 CFR 351.305 of the Department's regulations. Timely notification of return/destruction of APO materials or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and the terms of an APO is a sanctionable violation.

This five-year ("sunset") review and notice are in accordance with sections 751(c), 752, and 777(i)(1) of the Act.

Dated: October 26, 2000.

Troy H. Cribb,  
Assistant Secretary for Import  
Administration.

[FR Doc. 00-28042 Filed 10-31-00; 8:45 am]

BILLING CODE 3510-DS-P

Commission has determined that the seven-day advance notice of the change to a meeting was not possible. See Commission rule 201.35(a), (c)(1) (19 CFR 201.35(a), (c)(1)).

**FOR FURTHER INFORMATION CONTACT:** Karen V. Driscoll, Office of General Counsel, U.S. International Trade Commission, telephone 202-205-3092, e-mail [kdriscoll@usitc.gov](mailto:kdriscoll@usitc.gov). Hearing-impaired individuals are advised that information on this matter may be obtained by contacting the Commission's TDD terminal on 202-205-3105.

**SUPPLEMENTARY INFORMATION:** The Commission believes that Twaron has justified the need for a closed session. In this review, significant data for both the foreign and domestic industries are business proprietary. Twaron seeks a closed session in order to fully address the issues before the Commission without referring to business proprietary information. In making this decision, the Commission nevertheless reaffirms its belief that whenever possible its business should be conducted in public.

The hearing will begin with public presentations by E.I. DuPont de Nemours & Company ("DuPont"), domestic producer opposing revocation of the antidumping duty order, followed by foreign respondent Twaron in support of revocation. During the public session, the Commission may question the parties following their respective presentations. Next, the hearing will include a 20-minute *in camera* session for a confidential presentation by Twaron and for questions from the Commission relating to the BPI, followed by a 20-minute *in camera* rebuttal presentation by DuPont and questions from the Commission relating to the BPI. For any *in camera* session the room will be cleared of all persons except those who have been granted access to BPI under a Commission administrative protective order (APO) and are included on the Commission's APO service list in these investigations. See 19 CFR 201.35(b)(1), (2). The time for the parties' presentations and rebuttals in the *in camera* session will be taken from their respective overall time allotments for the hearing. All persons planning to attend the *in camera* portions of the hearing should be prepared to present proper identification.

**Authority:** The Assistant General Counsel for Antidumping and Countervailing Duty Investigations, acting for the General Counsel, has certified, pursuant to Commission Rule 201.39 (19 CFR 201.39) that a portion of the Commission's hearing in Aramid Fiber Formed of Poly Para-Phenylene Terephthalamide from the Netherlands, Inv.

---



---

#### INTERNATIONAL TRADE COMMISSION

[Investigation No. 731-TA-652 (Review)]

#### In the Matter of Aramid Fiber Formed of Poly Para-Phenylene Terephthalamide From The Netherlands; Notice of Commission Determination To Conduct a Portion of The Hearing In Camera

**AGENCY:** U.S. International Trade Commission.

**ACTION:** Closure of a portion of a Commission hearing.

**SUMMARY:** Upon request of foreign producer Twaron Products bv and importer Twaron Products, Inc. ("Twaron"), the Commission has determined to conduct a portion of its hearing in the above-captioned investigation scheduled for January 9, 2001, *in camera*. See Commission rules 207.24(d), 201.13(m) and 201.36(b)(4) (19 CFR 207.24(d), 201.13(m) and 201.36(b)(4)). The remainder of the hearing will be open to the public. The

---

No. 731-TA-652 (Review), may be closed to the public to prevent the disclosure of BPI.

By order of the Commission.

Issued: January 8, 2001.

**Donna R. Koehnke,**

*Secretary.*

[FR Doc. 01-1221 Filed 1-12-01; 8:45 am]

BILLING CODE 7020-02-P

---

**EXPLANATION OF COMMISSION DETERMINATION ON ADEQUACY**  
**in**  
*Aramid Fiber from the Netherlands*  
**Inv. No. 731-TA-652 (Review)**

On March 3, 2000, the Commission determined that it should proceed to a full review in the subject five-year review pursuant to section 751(c)(5) of the Tariff Act of 1930, as amended, 19 U.S.C. § 1675(c)(5). The Commission received an adequate response from E.I. DuPont de Nemours & Company, the sole domestic producer of aramid fiber. Therefore, the Commission determined that the domestic interested party group response was adequate. The Commission also received an adequate joint response, with company-specific data, from Twaron Products V.o.F. and Twaron Products, Inc., which are, respectively, the sole producer of aramid fiber in the Netherlands and the sole U.S. importer of the subject merchandise. Therefore, the Commission determined that the respondent interested party group response was adequate. Accordingly, the Commission determined to proceed to a full review.

**APPENDIX B**  
**CALENDAR OF THE PUBLIC HEARING**



## CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject: Aramid Fiber Formed of Poly Para-Phenylene  
Terephthalamide from The Netherlands

Inv. No.: 731-TA-652 (Review)

Date and Time: January 9, 2001 - 9:30 a.m.

Sessions were held in connection with this investigation in the Main Hearing Room, 500 E Street, SW, Washington, DC.

### **In Support of the Continuation of the Order:**

Wilmer, Cutler & Pickering  
Washington, DC  
on behalf of

E.I. DuPont de Nemours and Company (DuPont)

**William J. Harvey**, Global Business Director - Kevlar, Advanced Fiber Systems, DuPont  
**Marcelo Van-De-Kamp**, Global Product Manager - Kevlar, Advanced Fiber Systems, DuPont

**John D. Greenwald** )  
**Ronald I. Meltzer** ) -OF COUNSEL

### **In Support of the Revocation of the Order:**

Adduci, Mastriani & Schaumberg, L.L.P.  
Washington, DC  
on behalf of

Teijin Twaron BV and Teijing Twaron USA, Inc.

**Eiso Alberda van Ekenstein**, Advisor and former General Manager, Teijin Twaron BV  
**Gert Frederiks**, Sales and Technical Marketing Director, Worldwide, Teijin Twaron BV  
**Elma van Gessel**, Marketing Consultant, Teijin Twaron BV  
**Patrick Murphy**, Sales and Technical Manager, Linear Tension Member Applications,  
Teijin Twaron USA, Inc.  
**Stuart Flaxman**, Controller, Teijin Twaron USA, Inc.  
**Richard D. Boltuck**, Vice President, Charles River Associates  
**Michael A. Mordecai**, Senior Associate, Charles River Associates

**Barbara A. Murphy** )  
**Thomas M. Schaumberg** ) -OF COUNSEL





**APPENDIX C**  
**SUMMARY TABLES**



**Table C-1**

**PPD-T aramid fiber: Summary data concerning the U.S. market, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*

**Table C-2**

**PPD-T aramid fiber: Summary data concerning the U.S. market, including subcontractors' data, 1997-99, January-September 1999, and January-September 2000**

\* \* \* \* \*



**APPENDIX D**

**U.S. PRODUCER'S, U.S. SUBCONTRACTORS', U.S. IMPORTERS',  
U.S. PURCHASERS', AND FOREIGN PRODUCER'S COMMENTS  
REGARDING EFFECTS OF THE ORDER AND THE  
LIKELY EFFECTS OF REVOCATION**



**U.S. PRODUCER'S COMMENTS REGARDING THE EFFECTS OF THE ORDER  
AND THE LIKELY EFFECTS OF REVOCATION**

**Anticipated Operational/Organizational Changes If the Order Were to Be Revoked  
(Question II-4)**

The Commission requested the U.S. producer to describe any anticipated changes in the character of its operations or organization relating to the production of PPD-T aramid fiber in the future if the antidumping duty (AD) order on imports of PPD-T aramid fiber from the Netherlands were revoked. Its response follows.

**DuPont**—“\*\*\*.”

**Significance of Existing Order in Terms of Trade and Related Data  
(Question II-17)**

The Commission requested the U.S. producer to describe the significance of the existing AD order on imports of PPD-T aramid fiber from the Netherlands in terms of the effect of the firm's production capacity, production, U.S. shipments, inventories, purchases, and employment. Its response follows.

**DuPont**—“\*\*\*.”

**Anticipated Changes in Trade and Related Data if the Order Were Revoked  
(Question II-18)**

The Commission requested the U.S. producer to describe any anticipated changes in its production capacity, production, U.S. shipments, inventories, purchases, and employment relating to the production of PPD-T aramid fiber in the future if the AD order on PPD-T aramid fiber from the Netherlands were to be revoked. Its response is as follows.

**DuPont**—“\*\*\*.”

**Significance of Existing Order in Terms of Financial Data (Question III-10)**

The Commission requested the U.S. producer to describe the significance of the existing AD order on imports of PPD-T aramid fiber from the Netherlands in terms of the effect on the firm's revenues, costs, profits, cash flow, capital expenditures, research and development expenditures, and asset values. Its response follows.

**DuPont**—“\*\*\*.”

**Anticipated Changes in Financial Data If the Order Were Revoked (Question III-11)**

The Commission requested the U.S. producer to describe any anticipated changes in its revenues, costs, products, cash flow, capital expenditures, research and development expenditures, or asset value relating to the production of PPD-T aramid fiber in the future if the AD order on imports of PPD-T aramid fiber from the Netherlands were to be revoked. Its response follows.

**DuPont**—“\*\*\*.”

**U.S. SUBCONTRACTORS’ COMMENTS REGARDING THE EFFECTS OF THE ORDER AND THE LIKELY EFFECTS OF REVOCATION**

**Anticipated Operational/Organizational Changes if the Order Were to Be Revoked (Question II-6)**

The Commission asked the U.S. subcontractors to describe any anticipated changes in the character of their operations or organization relating to the processing of PPD-T aramid fiber in the future if the AD order on PPD-T aramid fiber from the Netherlands were to be revoked. Their responses are as follows.

\* \* \* \* \*

**Anticipated Changes in Trade and Related Data if the Order Were Revoked (Question II-15)**

The Commission requested the U.S. subcontractors to describe any anticipated changes in their processing capacity, processing, U.S. shipments, inventories, purchases, and employment relating to the processing of PPD-T aramid fiber in the future if the AD order on PPD-T aramid fiber from the Netherlands were to be revoked. Their responses are as follows.

\* \* \* \* \*

**Significance of Existing Order in Terms of Financial Data (Question III-4)**

The Commission requested the U.S. subcontractors to describe the significance of the existing AD order on imports of PPD-T aramid fiber from the Netherlands in terms of the effect on their revenues, costs, profits, cash flow, capital expenditures, research and development expenditures, and asset values. Their responses follow.

\* \* \* \* \*

**Significance of Existing Order in Terms of Financial Data (Question III-5)**

The Commission requested the U.S. subcontractors to describe the significance of the existing AD order on imports of PPD-T aramid fiber from the Netherlands in terms of the effect on their



revenues, costs, profits, cash flow, capital expenditures, research and development expenditures, and asset values. Their responses follow.

\* \* \* \* \*

**U.S. IMPORTERS' COMMENTS REGARDING THE EFFECTS OF THE ORDER  
AND THE LIKELY EFFECTS OF REVOCATION**

**Anticipated Operational/Organizational Changes if the Order Were to be Revoked  
(Question II-4)**

The Commission requested the U.S. importers to describe any anticipated changes in the character of their operations or organizations relating to the importation of PPD-T aramid fiber in the future if the relevant AD order on imports of PPD-T aramid fiber from the Netherlands were revoked. Their responses follow.

\* \* \* \* \*

**Anticipated Future Imports from the Netherlands (Question II-5)**

The Commission asked the U.S. importers if they had imported or arranged for the importation of PPD-T aramid fiber from the Netherlands for delivery after September 30, 2000. Their responses are as follows.

\* \* \* \* \*

**Significance of Existing Order in Terms of Trade and Related Data  
(Question II-9)**

The Commission requested the U.S. importers to describe the significance of the existing AD order on imports of PPD-T aramid fiber from the Netherlands in terms of the effect of their imports, U.S. shipments of imports, and inventories. Their responses follow.

\* \* \* \* \*

**Anticipated Changes in Trade and Related Data if the Order Were Revoked  
(Question II-10)**

The Commission requested the U.S. importers to describe any anticipated changes in their imports, U.S. shipments of imports, or inventories of PPD-T aramid fiber in the future if the AD order on PPD-T aramid fiber from the Netherlands were to be revoked. Their responses are as follows.

\* \* \* \* \*

**U.S. PURCHASERS' COMMENTS REGARDING THE EFFECTS OF THE ORDER  
AND THE LIKELY EFFECTS OF REVOCATION**

**Effects of Revocation on Future Activities of the Firms and the U.S. Market as a Whole  
(Question III-12)**

The Commission requested U.S. purchasers to comment on the likely effects of revocation of the AD order on imports of PPD-T aramid fiber from the Netherlands on (1) the future activities of their firms and (2) the U.S. market as a whole. Their responses follow.

\*\*\*-"(1) In the current market shortage, I would expect no significant impact to our firm if the antidumping duty order was revoked. The shortage should continue through 2002. (2) With the current market shortage, revocation of the antidumping order should not have any effect until after 2002."

\*\*\*-"(1) & (2) Due to ever increasing demand of automakers to reduce costs, lower cost materials would likely be used."

\*\*\*-"(1) & (2) Slight increase in product from Netherlands."

\*\*\*-"(1) Not sure at this time. (2) It is not healthy to have only one supplier in any market!"

\*\*\*-"(1) & (2) None."

\*\*\*-"(1) & (2) No duties should be imposed due to the current world wide aramid shortage. Duties would only allow DuPont the leeway to further increase prices."

\*\*\*-"(1) & (2) No change."

\*\*\*-"(1) & (2) Provide \*\*\* (and U.S. market) with the global, competitive market price."

\*\*\*-"(1) None. (2) Our market - none."

\*\*\*-"(1) & (2) None."

\*\*\*-"(1) & (2) It should help to develop a more competitive aramid yarn market in the next 5 years. This would help us to meet automotive cost reduction goals."

\*\*\*-"(1) & (2) None."

\*\*\*-"(1) In most cases, our customers specify source of fiber, due to downstream rebate by fiber suppliers. (2) Potential for increased end use price competition."

\*\*\*-"(1) No change in plans. (2) Unknown."

\*\*\*-"(1) Our decision on aramid fiber source is based on product characteristics and performance in end item, not on price. (2) Revocation would foster increased competition in the

market. If industry capacity is maximized, this may motivate new entries into the markets, or increases in capacity at existing manufacturers.”

\*\*\*-(1) & (2) no answer.

\*\*\*-“(1) None. (2) Not known.”

\*\*\*-“(1) If price were lower, we could compete more favorably with other types of \*\*\* products. (2) Not known.”

## **FOREIGN PRODUCER’S COMMENTS REGARDING THE EFFECTS OF THE ORDER AND THE LIKELY EFFECTS OF REVOCATION**

### **Anticipated Operational/Organizational Changes if the Order Were to be Revoked (Question II-2)**

The Commission requested the foreign producer to describe any anticipated changes in the character of its operations or organization relating to the production of PPD-T aramid fiber in the future if the AD order on imports of PPD-T aramid fiber from the Netherlands were revoked. Its response follows.

Twaron-“\*\*\*.”

### **Significance of Existing Order in Terms of Trade and Related Data (Question II-16)**

The Commission requested the foreign producer to describe the significance of the existing AD order on its production capacity, production, home market shipments, exports to the United States and other markets, and inventories. Its response follows.

Twaron-“\*\*\*.”

### **Anticipated Changes in Trade and Related Data if the Order Were Revoked (Question II-10)**

The Commission requested the foreign producer to describe any anticipated changes in its production capacity, production, home market shipments, exports to the United States and other markets, or inventories relating to the production of PPD-T aramid fiber in the future if the AD order on PPD-T aramid fiber from the Netherlands were to be revoked. Its response is as follows.

Twaron-“\*\*\*.”



**APPENDIX E**  
**SUBSTITUTE PRODUCTS**



The following products may be used as substitutes for Kevlar®, but with varying degrees of effectiveness.

**Table E-1**  
**Alternatives to Kevlar®, by end use**

\* \* \* \* \*

In addition, Twaron listed the following potential substitutes for PPD-T aramid fiber, but stressed that there are numerous tradeoffs involving effectiveness in the given application, ease of use in the application, maintenance requirements, and the duration of use.

**Table E-2**  
**Potential substitutes for PPD-T aramid fiber, by end use**

\* \* \* \* \*





**APPENDIX F**  
**COMPAS PRESENTATION**



## ASSUMPTIONS

The COMPAS model is a supply and demand model that assumes that domestic and imported products are less than perfect substitutes. Such models, also known as Armington models, are relatively standard in applied trade policy analysis and are used extensively for the analysis of trade policy changes both in partial and general equilibrium. Based on the discussion contained in Part II of this report, the staff selects a range of estimates that represent price-supply, price-demand, and product-substitution relationships (i.e., supply elasticity, demand elasticity, and substitution elasticity) in the U.S. PPD-T aramid fiber market. The model uses these estimates with data on market shares, Commerce's estimated margins of dumping, transportation costs, and current tariffs to analyze the likely effect of unfair pricing of subject imports on the U.S. domestic like product industry.

## FINDINGS<sup>1</sup>

Estimated effects of the recurrence costs of dumping on the U.S. PPD-T aramid fiber industry are as follows:

Scenario	Percent increase		
	Quantity	Price	Revenue
High demand growth (10 percent)	***	***	***
Moderate demand growth (5 percent)	***	***	***
Low demand growth (1 percent)	***	***	***

Complete results and model specifications are shown on the following pages.

\* \* \* \* \*

---

<sup>1</sup> Estimates are based on October 1999 through September 2000 data.



**APPENDIX G**

**PPD-T ARAMID FIBER PRICES IN  
THE UNITED STATES AND EUROPE  
ACCORDING TO DUPONT**



DuPont supplied the following estimates of U.S. and European PPD-T aramid fiber prices.

**Table G-1**  
**PPD-T aramid fiber prices in the United States and Europe, according to DuPont**

\* \* \* \* \*





**APPENDIX H**  
**PURCHASER PRICE DATA**



**Table H-1**

**PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000**

\* \* \* \* \*

**Table H-2**

**PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000**

\* \* \* \* \*

**Table H-3**

**PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 5 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000**

\* \* \* \* \*

**Table H-4**

**PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 6 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000**

\* \* \* \* \*

**Table H-5**

**PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 7 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000**

\* \* \* \* \*

**Table H-6**

**PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 9 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000**

\* \* \* \* \*

**Table H-7**

**PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 11 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000**

\* \* \* \* \*

**Table H-8**

**PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic and imported product 12 and margins of underselling/(overselling), reported by end users, by quarters, January 1998-September 2000**

\* \* \* \* \*

**Table H-9**

**PPD-T aramid fiber: Weighted-average delivered purchase prices and quantities of domestic products 4 and 8 and imported product 10, reported by end users, by quarters, January 1998-September 2000**

\* \* \* \* \*



