

UNITED STATES INTERNATIONAL TRADE COMMISSION

BUTADIENE ACRYLONITRILE RUBBER FROM JAPAN

Determination of No Injury or Likelihood Thereof
in Investigation No. AA1921-151 Under the
Antidumping Act, 1921, as Amended
Together with the Information
Obtained in the Investigation



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UNITED STATES INTERNATIONAL TRADE COMMISSION

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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

[AA1921-151]

BUTADIENE ACRYLONITRILE RUBBER FROM JAPAN
Determination of No Injury or Likelihood Thereof

On December 29, 1975, the United States International Trade Commission received advice from the Department of the Treasury that butadiene acrylonitrile rubber from Japan is being, or is likely to be, sold in the United States at less than fair value within the meaning of the Antidumping Act, 1921, as amended (19 U.S.C. 160(a)). Accordingly, on January 5, 1976, the Commission instituted investigation No. AA1921-151 under section 201(a) of said act to determine whether an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of such merchandise into the United States.

Notice of the institution of the investigation and of the public hearing was published in the Federal Register of January 19, 1976 (41 F.R. 2694).

In arriving at its determination, the Commission gave due consideration to written submissions from interested parties, evidence adduced at the hearing, and all factual information obtained by the Commission's staff from questionnaires, personal interviews, and other sources.

The United States International Trade Commission has unanimously determined that an industry in the United States is not being and is not likely to be injured, and is not prevented from being established, by reason of the importation of butadiene acrylonitrile rubber from Japan that is being, or is likely to be, sold at less than fair value within the meaning of the Antidumping Act, 1921, as amended.

By order of the Commission.

Statement of Reasons

On December 29, 1975, the United States International Trade Commission received advice from the Department of the Treasury (Treasury) that it had determined that imports of butadiene acrylonitrile rubber from Japan are being, or are likely to be, sold at less than fair value (LTFV) within the meaning of the Antidumping Act, 1921, as amended. On January 5, 1976, the Commission instituted investigation No. AA1921-151 under said act to determine whether an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of such merchandise into the United States.

The Commission received advice from the Treasury on March 24, 1975, that an antidumping investigation was being initiated with respect to butadiene acrylonitrile rubber from Japan, and that, pursuant to section 201(c) of the act, as amended by the Trade Act of 1974, information developed during the summary investigation had led to the conclusion that there was substantial doubt whether an industry in the United States was being or was likely to be injured, or was prevented from being established, by reason of the importation of such merchandise into the United States. Accordingly, on March 28, 1975, the Commission instituted its first inquiry, No. AA1921-Inq.-1, under section 201(c)(2) of the act to determine whether "there is no reasonable indication that an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of such merchandise into the United States." On the basis of its inquiry, the Commission on April 23, 1975, did not determine that there was³ no reasonable indication that an industry in the United States is being or

is likely to be injured, or is prevented from being established, by reason of the importation of such merchandise into the United States." The negative determination in No. AA1921-Inq.-1 permitted the Treasury proceeding to continue. 1/

On the basis of the subject investigation, we determine that an industry in the United States is not being and is not likely to be injured, and is not prevented from being established, 2/ by reason of the importation of butadiene acrylonitrile rubber from Japan being sold or likely to be sold at LTFV.

U.S. industry

The U.S. industry most likely to be adversely affected by imports of butadiene acrylonitrile rubber sold at LTFV consists of the facilities in the United States devoted to the production of butadiene acrylonitrile rubber, a synthetic product produced by the copolymerization of butadiene and acrylonitrile, which are both derivatives of petroleum. No evidence showing that any other industry in the United States was possibly adversely affected by the subject imports was presented or discovered during the investigation. Butadiene acrylonitrile rubber (hereinafter nitrile rubber) is a special-purpose rubber. Its greatest economic significance is that the vulcanized product retains its rubberlike characteristic after sustained contact with petroleum. Nitrile rubber is produced in two basic forms, dry and latex. The dry form, which is the form in which the product is imported from Japan, is produced in the United

1/ See "Statement of Reasons" of Chairman Bedell, Vice Chairman Parker, and Commissioner Leonard in Butadiene Acrylonitrile Rubber from Japan . . . Inquiry No. AA1921-Inq.-1 . . . ITC Publication 727, 1975, p. 4.

2/ Prevention of the establishment of an industry is not an issue in 4 the instant investigation and will not be discussed further.

States by five major synthetic rubber producers, four of which are among the world's largest tire producers. A sixth company produces nitrile rubber in only the latex form. The processes used in producing nitrile rubber are basically the same for the various producers.

No injury by reason of LTFV imports

Import penetration.--Total imports from Japan accounted for only about 1 percent of domestic consumption of nitrile rubber in each year during 1973-75. Since the Treasury found that LTFV sales existed for only 77 percent of nitrile rubber imports from Japan during the period investigated, it is clear that LTFV imports amounted to no more than 1 percent of domestic consumption. In light of such a low import penetration, it is difficult, absent unusual circumstances, to tie LTFV imports to any injury which may be occurring in the industry in question. Such circumstances are not present here.

Moreover, the import penetration occurred largely in a period of actual or threatened scarcity and allocation of sales by domestic producers. During the period of petrochemical shortages, some customers of the domestic industry sought alternate suppliers, including foreign sources, in an effort to assure themselves of a continuous source of supply.

Prices.--Nippon Zeon Co., Ltd., the source of all imports of nitrile rubber from Japan during the period under investigation, undersold the comparable domestic product during 1974 and 1975 and November 1, 1974, to April 30, 1975, the period of Treasury's investigation, by average margins of 10, 10, and 13 percent, respectively. However, no price depression is apparent in the price trends for nitrile rubber, and a

comparison with price trends in the overall synthetic rubber industry indicates no significant difference in the rates of price increases.

Profitability of domestic industry.--The nitrile rubber industry in the United States was highly profitable during the period 1971-74, with net profits ranging from 23 to 30 percent of net sales. Although the ratio of net profits to net sales declined to 5 percent in 1975, no discernible difference in the profit pattern for nitrile rubber compared with that of the overall operations of the domestic producers was observed, indicating that any injury experienced by the nitrile rubber industry was not by reason of LTFV imports but rather as a result of the general economic conditions and the sluggish demand for automobiles, the principal user of nitrile rubber.

Employment.--The trend in employment for the nitrile rubber industry during 1973-75 was similar to that experienced by the overall establishment operations of companies producing nitrile rubber. Thus, the decline in employment, which occurred between 1974 and 1975, could not be attributed to imports from Japan.

Likelihood of injury

Although the Japanese nitrile rubber industry had substantial unused capacity in 1975, there is no reason to expect a sudden increase in import penetration. The unused capacity figures for Japan are similar to those for the United States, and it is anticipated that economic recovery will result in greater utilization of capacity in both countries. There has been no indication of any plans by the Japanese to expand capacity, and substantial lead time from instituting construction plans to actual operations is necessary in this capital-intensive industry. 6

Structural factors in the domestic industry indicate that imports will face difficulties in capturing a larger share of the domestic market. The domestic competitors are large corporations with long-established economic relationships with the U.S. automotive industry. In addition, the large companies maintain manufacturing divisions that use nitrile rubber as a raw material, making it difficult for the imports to compete with this vertical marketing structure.

Conclusion

We conclude that an industry in the United States is not being and is not likely to be injured by reason of the importation of nitrile rubber from Japan that is being, or is likely to be, sold at LTFV within the meaning of the Antidumping Act, 1921, as amended.

INFORMATION OBTAINED IN THE INVESTIGATION

Introduction

On December 29, 1975, the United States International Trade Commission received advice from the Treasury Department that butadiene acrylonitrile rubber, commonly known as nitrile rubber, from Japan is being, or is likely to be, sold at less than fair value (LTFV) within the meaning of the Antidumping Act of 1921, as amended (19 U.S.C. 160(a)). Accordingly, the Commission on January 5, 1976, instituted investigation No. AA1921-151 under section 201(a) of the act, to determine whether an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of such merchandise into the United States. The statute directs the Commission to make its determination by March 28, 1976.

A public hearing was held on February 11, 1976. Public notice of the institution of the investigation and hearing was duly given by posting copies of the notice at the Secretary's office in the Commission in Washington, D.C., and at the Commission's office in New York City, and by publishing the original notice in the Federal Register of January 19, 1976 (41 F.R. 2694).

The Treasury Department instituted its investigation after receiving a complaint on February 26, 1975, from Uniroyal, Inc., of Naugatuck, Conn. Treasury's notice of the antidumping proceeding was published in the Federal Register of March 27, 1975 (40 F.R. 13532).

On April 23, 1975, on the basis of its inquiry (AA1921-Inq.-1, instituted on March 28, 1975) with respect to imports of butadiene acrylonitrile rubber from Japan apparently sold at less than fair value, the Commission did not determine that there was no reasonable indication that an industry in

the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of such merchandise into the United States. Following the Commission's inquiry, the Treasury Department resumed its investigation.

The Product

Description

Butadiene acrylonitrile rubber is a synthetic, or chemically produced, rubber known alternately as acrylonitrile butadiene rubber, nitrile rubber, NBR, or N-type rubber. The product is produced by the copolymerization of its basic constituents--butadiene and acrylonitrile, both derivatives of petroleum. The rubber formed--a copolymer--has a complex structure and, in addition to characteristics commonly associated with rubbers, has the special characteristic of unusual resistance to attack by animal, vegetable, or petroleum oils. Its greatest economic significance is that the vulcanized product retains its rubberlike characteristics after sustained contact with petroleum. This capability places nitrile rubber in a broad category of "special purpose" rubbers, so named because of some special function they perform. Such rubbers are not used to make tires and tubes, as are those which are designated "general purpose" rubbers (e.g., styrene-butadiene rubber). The degree of oil resistance of nitrile rubber is determined primarily by the acrylonitrile content of the rubber, which may be varied in the range of about 18 to 50 percent of the total rubber content (the remainder consisting of butadiene). Such variability has resulted in the marketing of nitrile rubber with several grades of oil resistance, and since grades produced by a particular company may be somewhat different from those produced by another, about 300 grades are listed for 28 world producers. Nitrile rubber is available in several physical forms, including sheet, slab, crumb, powder, and latex--the latter a water-based colloidal dispersion of the rubber. The other forms^{A-3} mentioned

are the principal forms of dry rubber (i.e., excluding latex), of which sheets and slabs are the forms most widely used.

Prior to conversion into an end product, the basic nitrile rubber is formulated with various additives, which include pigments, fillers, plasticizers, antioxidants, vulcanizing agents, and other rubber-processing chemicals. This formulation and the subsequent vulcanization process are usually performed by the manufacturer of the rubber products (e.g., oil seals, hoses, and so forth). Intermediate formulations are often prepared by custom compounding firms.

Uses

Grades of nitrile rubber which have a higher-than-average acrylonitrile content are used for products requiring high resistance to oil, such as oil-well parts, fuel cell liners, oil seals, and fuel hoses. Increased acrylonitrile content also tends to increase tensile strength, hardness, abrasion resistance, and heat resistance. Grades with a lower-than-average acrylonitrile content are used where low-temperature flexibility is more important than oil resistance. Grades with a medium range acrylonitrile content (about 31 to 35 percent) are used where a moderate combination of properties is required. It is from this range that materials used in the automobile industry are principally obtained. Uses in the automobile industry are mainly confined to such items as oil seals and hoses; however, they account for a sizable part of nitrile rubber consumption. Other uses for nitrile rubber include adhesives, wire and cable covers, footwear, printing blankets and rolls, and industrial belts. Because of its excellent processing characteristics, nitrile rubber is used extensively in making injection-molded products. Nitrile latex is used largely in foams requiring oil and solvent resistance.

U.S. tariff treatment

Butadiene acrylonitrile (nitrile) rubber is dutiable under item 446.1520 of the Tariff Schedules of the United States Annotated (TSUSA); the rate of duty is 3 percent ad valorem.

Nitrile rubber, as a kind of synthetic rubber, was originally classified under paragraph 1558 of the Tariff Act of 1930, as amended, as a semimanufactured article, not elsewhere provided for. The rate of duty for synthetic rubber under paragraph 1558 was reduced from 20 percent ad valorem to 6.5 percent ad valorem as the result of concessions granted under the General Agreement on Tariffs and Trade (GATT) in 1948, 1956, and 1961.

With the adoption of the Tariff Schedules of the United States (TSUS) on August 31, 1963, synthetic rubber was classified separately as item 446.15. The rate of duty for this item was subsequently reduced in the Kennedy Round from 6.5 percent to 3 percent ad valorem in five annual stages, effective January 1 of each year 1968 through 1972. The TSUSA provision for nitrile rubber was established effective January 1, 1971.

Treasury Finding of Sales at Less Than Fair Value

Summary

The U.S. Treasury Department, investigating U.S. imports of butadiene acrylonitrile (nitrile) rubber from Japan during the period November 1, 1974, to April 30, 1975, found that sales at less than fair value existed for 77 percent of all such sales made during the period at margins ranging from 7 to 12 percent. The weighted average margin of all sales was found to be 5.2 percent. 1/ All the Japanese nitrile rubber sold in the U.S. market during the period of investigation was produced by Nippon Zeon Co., Ltd., Chiyoda-Ku, Tokyo, Japan, and total sales approximated \$200,000.

Sales of Zeon nitrile rubber in the home market during the representative period accounted for * * * percent of total sales, thus establishing such sales as a reasonable basis for fair value calculations. Four grades of Zeon rubber--* * *--were found to constitute the Japanese exports to the United States during the period of investigation and were used as the basis of fair value comparisons. * * *.

* * * * *

1/

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Home market price

Since no preponderant price exists, a weighted average price per kilo for the representative period of investigation was constructed by Treasury. Certain adjustments were made to arrive at the home market price used for fair value comparison, as follows:

- (a) Deduction of a percentage representing cost of credit resulting from selling by acceptance of 90-day promissory notes which are discounted at an interest rate of 9.5 percent per annum; 1/
- (b) Deduction of an average transportation expense for the merchandise sold to distributors;
- (c) Deduction of an allowance for technical services which are directly related to sales, such as travel expenses, salaries, bonuses, and fringe benefits of the technical employees; and
- (d) Addition of a differential between export packing and packing for home market.

1/ Cost of credit was arrived at by using the following formula:

$$\frac{\text{Interest rate} \times 90 \text{ days}}{365} = 2.3425 \text{ percent}$$

A representative home-market price calculation is shown below:

Type ***		
Weighted average price		***
Less: Interest	***	
Transportation	***	
Technical assistance	***	

Plus:		
Packing cost differential		***
Home market price per kilo packed (adj. weighted average)		***
Converted @ 1 yen=US \$0.003354	US \$	***

Purchase price

The export sales price is f.o.b. Japanese port. The nitrile rubber destined for the United States is sold to the Mitsubishi Corp., or Nichimen Co., Ltd., New York, N.Y., which resells the product to purchasers in the United States. Prices paid by these two Japanese trading companies were considered to be the purchase prices. Export market price is determined by Zeon in a manner similar to home market price to distributors in that all transactions are outright sales negotiated without distinction as to class of purchasers or without granting discounts. Quantity, according to Zeon, can be a factor in determining export price, but no correlation was found by Treasury between prices and export quantities; hence, Treasury made no allowance for differences in quantities. Transportation charges incurred between factory and port (f.o.b.) were allowed and deducted from purchase price since these expenses are included in export price.

A representative purchase price calculation is shown below:

Type ***		
Purchase price		***
Less transportation		***
Purchase price per kilo packed		***
Converted @ 1 Yen=US \$0.003354	US\$	***

The Domestic Industry

U.S. producers

Butadiene acrylonitrile (nitrile) rubber is produced in the United States by five major synthetic rubber producers, four of which are among the world's largest tire producers, and a sixth company that produces nitrile rubber only in the latex form. These companies, their headquarters locations, and the location of their nitrile (NBR) rubber-producing facilities are as follows:

<u>Company</u>	<u>Headquarters</u>	<u>NBR facilities</u>
Goodyear Tire & Rubber Co.	Akron, Ohio	Houston, Tex. Akron, Ohio
Firestone Synthetic Rubber and Latex Co.	Akron, Ohio	Akron, Ohio
Uniroyal, Inc.	Naugatuck, Conn.	Baton Rouge, La. Painesville, Ohio
B. F. Goodrich Chemical Co.	Cleveland, Ohio	Akron, Ohio Louisville, Ky.
Copolymer Rubber & Chemical Corp.	Baton Rouge, La.	Baton Rouge, La.
Standard Brands Chemical Industries, Inc.	Dover, Del.	Cheswold, Del. Kensington, Ga.

The first four companies listed above are major tire producers as well as synthetic rubber producers. Copolymer produces rubber and other chemicals, but not tires. Standard Brands produces synthetic rubber latex, including the nitrile type.

Basis of industry examination

In dealing with the nitrile rubber industry in this investigation, the Commission examined the industry at several levels. For example, in considering the effect of imports at less than fair value on the industry, as the Commission is charged to do, the Commission examined the total in-

dustry which produces nitrile rubber in both the dry (sheets, slabs, etc.) and latex forms. However, inasmuch as imports from Japan were solely of the dry type, the Commission primarily examined the effect on those U.S. producers of the dry product, and, in establishing a valid basis for price comparison between the imported and domestic product, collected and examined price data on the most abundantly produced U.S. grades (i.e., those with an acrylonitrile content of 32-33 percent), which were also the grades imported in the greatest quantity from Japan.

Capacity

Total U.S. annual capacity for the production of nitrile rubber is reported by industry sources to have been about 250 million pounds during 1974 and 1975. Such capacity accounted for about 33 percent of free-world nitrile rubber capacity and about 4 percent of total U.S. synthetic rubber capacity. Of the total U.S. annual nitrile rubber capacity in 1975, about 190 million pounds, or 76 percent, was allocated to the production of dry nitrile rubber. Such capacity had increased from about 165 million pounds in 1971. The approximate U.S. capacity for production of dry nitrile rubber, U.S. production of dry nitrile rubber, and the utilization of dry nitrile rubber capacity for the years 1971, 1973, and 1975, and for the period of the Treasury investigation are shown below:

<u>Period</u>	<u>Capacity</u> <u>(million pounds)</u>	<u>Production</u> <u>(million pounds)</u>	<u>Utilization</u> <u>(percent)</u>
1971-----	165	116.2	70
1973-----	175	153.2	88
1975-----	190	96.8	51
Nov. 1, 1974 to Apr. 30, 1975---	95	42.4	45

By far the greater part of U.S. nitrile rubber capacity (as well

as dry nitrile rubber capacity) is held by three producers-- Goodrich, Goodyear, and Uniroyal. ***

Plant operations

The five producers of dry nitrile rubber operate eight plants for such production at locations listed on page 9. About one-fourth the capacity of these producers consists of plants first placed into operation or extensively modernized between 1961 and 1968. The remainder consists of plants built during 1938-49 and range from those that are obsolete and may soon be replaced to those that have been partially modernized and expanded.

* * * * *

Nitrile rubber in the dry form is produced by a fairly standardized process involving polymerization (emulsion polymerization) of the butadiene and acrylonitrile, coagulation of the polymerized product, and washing and drying of the coagulated product. The latex form is stabilized after polymerization and withdrawn from the process at that point. The process is basically the same process employed since the decade prior to World War II, when nitrile rubber was first produced in the United States.

Consideration of Injury

U.S. consumption, production, domestic sales, and foreign trade

U.S. consumption of butadiene acrylonitrile (nitrile) rubber increased in each year during 1971-74, from 119 million pounds, valued at \$57 million, to 175 million pounds, valued at \$90 million. Consumption decreased substantially in 1975, to 110 million pounds, valued at \$65 million (table 1. p. A-13). During the period April 1974 to April 1975, industrial production in the United States declined by 12 percent and production of rubber and plastics products declined by 20 percent. Recovery in industrial production began in May 1975, but in December of that year the output of rubber and plastics products was still 10 percent below the peak of 1974.

U.S. production of nitrile rubber was greater than consumption in each year during 1971-75, increasing from 141 million pounds in 1971 to 206 million pounds in 1974, then decreasing to 22 million pounds in 1975. The value of production increased from \$65 million to \$102 million during 1971-74 and decreased to \$69 million in 1975 (table 1, p. A-13).

U.S. production of dry nitrile rubber has accounted for nearly 80 percent of total nitrile rubber production in recent years. Production of the dry product amounted to 153 million pounds in 1973 and 161 million pounds in 1974, then declined to 97 million pounds in 1975. U.S. production and sales of dry nitrile rubber by U.S. producers are shown for 1973-75 and for November 1, 1973, to April 30, 1974, and November 1, 1974, to April 30, 1975 (the latter the period of the Treasury investigation), in table 2 (p. A-14).

Table 1.--Butadiene acrylonitrile rubber: U.S. production, exports, imports, and apparent consumption, 1971-75

Year	Production ^{1/}	Exports	Imports	Apparent consumption	Ratio (percent) of imports to consumption
Quantity (1,000 pounds)					
1971-----	141,370	26,102	3,396	118,664	2.9
1972-----	159,745	21,064	7,087	145,768	4.9
1973-----	193,156	35,250	15,068	172,974	8.7
1974-----	206,401	48,427	16,995	174,969	9.7
1975-----	121,835	22,130	10,760	110,465	9.7
Value (1,000 dollars)					
1971-----	64,750	9,492	1,621	56,879	2.8
1972-----	70,500	7,828	3,139	65,811	4.8
1973-----	85,250	12,795	6,429	78,884	8.1
1974-----	102,364	20,503	8,092	89,953	9.0
1975-----	69,422	9,550	5,511	65,383	8.4

^{1/} Value of production for 1971-75 based on unit value of sales.

Source: Production for 1971-74, U.S. International Trade Commission, Synthetic Organic Chemicals, United States Production and Sales; production for 1975, Rubber Manufacturers Association; exports and imports, official statistics of the U.S. Department of Commerce.

Table 2.--Butadiene acrylonitrile rubber (excluding latex): Production and domestic and export sales, by U.S. producers, 1973-75, Nov. 1, 1973-Apr. 30, 1974, and Nov. 1, 1974-Apr. 30, 1975

Period and producer	Production (quantity)	Domestic sales			Export sales		
		Quantity	Value	Unit value	Quantity	Value	Unit value
		<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>dollars</u>	<u>Per</u> <u>pound</u>	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>dollars</u>
1973, total or average----	153,242	115,773	51,104	\$0.44	28,502	11,374	\$0.40
Copolymer----	***	***	***	***	***	***	***
Firestone----	***	***	***	***	***	***	***
Goodrich----	***	***	***	***	***	***	***
Goodyear----	***	***	***	***	***	***	***
Uniroyal----	***	***	***	***	***	***	***
1974, total or average----	161,406	113,151	58,327	.52	27,504	14,170	.52
Copolymer----	***	***	***	***	***	***	***
Firestone----	***	***	***	***	***	***	***
Goodrich----	***	***	***	***	***	***	***
Goodyear----	***	***	***	***	***	***	***
Uniroyal----	***	***	***	***	***	***	***
1975, total or average----	96,759	83,638	48,799	.58	***	***	***
Copolymer----	***	***	***	***	***	***	***
Firestone----	***	***	***	***	***	***	***
Goodrich----	***	***	***	***	***	***	***
Goodyear----	***	***	***	***	***	***	***
Uniroyal----	***	***	***	***	***	***	***
Nov. 1, 1973-Apr. 30, 1974, total or average----	80,678	63,362	29,983	.47	14,439	6,570	.46
Copolymer----	***	***	***	***	***	***	***
Firestone----	***	***	***	***	***	***	***
Goodrich----	***	***	***	***	***	***	***
Goodyear----	***	***	***	***	***	***	***
Uniroyal----	***	***	***	***	***	***	***
Nov. 1, 1974-Apr. 30, 1975, total or average----	42,420	34,514	19,906	.58	***	***	***
Copolymer----	***	***	***	***	***	***	***
Firestone----	***	***	***	***	***	***	***
Goodrich----	***	***	***	***	***	***	***
Goodyear----	***	***	***	***	***	***	***
Uniroyal----	***	***	***	***	***	***	***

Source: Data submitted in response to questionnaires of the U.S. International Trade Commission.

Domestic sales of dry nitrile rubber by U.S. producers in recent years have probably accounted for 80 percent or more of total sales of nitrile rubber by U.S. producers. The quantity of such domestic sales amounted to 116 million pounds in 1973, decreasing to 113 million pounds in 1974, and to 84 million pounds in 1975. The value of these sales increased from \$51 million in 1973 to \$58 million in 1974, then decreased to \$49 million in 1975 (table 2; p. A-14).

U. S. exports of nitrile rubber in 1974 amounted to 48 million pounds, nearly twice the amount exported in 1971; the value of exports in 1974 was \$21 million, more than twice the value in 1971. Exports in 1975 were less than half of those in 1974 in both quantity and value. Canada, the Netherlands, Brazil, the United Kingdom, and Japan have been the principal markets for U.S. exports of nitrile rubber in recent years; the Canadian market accounted for a substantially increased share in 1974 and 1975. Exports are shown by principal markets in table 3 (p. A-17).

Exports of dry nitrile rubber by U.S. producers amounted to about 28 million pounds annually in 1973 and 1974; they decreased to * * * pounds in 1975 (table 2).

U.S. imports of nitrile rubber increased from 3 million pounds in 1971 to 17 million pounds in 1974, then decreased to 11 million pounds in 1975 (table 1). The value of imports increased from less than \$2 million in 1971 to \$8 million in 1974, then decreased to less than \$6 million in 1975. Imports from Canada accounted for 70 percent or more of total imports of nitrile rubber during 1971-75. Japan, the next leading source of imports in recent years, accounted for about 10 to 15 percent of total nitrile rubber imports during 1973-75. Canada was the only important source prior to 1973.

The ratio of imports to consumption (based on quantity) of total nitrile rubber during 1971-75 increased from about 3 percent in 1971 to nearly 10 percent in 1974 and 1975 (table 1).

Table 3.--Butadiene acrylonitrile rubber: U.S. exports, by principal markets, 1971-75

Market	1971	1972	1973	1974	1975
Quantity (1,000 pounds)					
Canada-----	4,288	4,532	5,456	18,660	12,250
Netherlands-----	5,961	3,383	8,430	7,159	2,106
Brazil-----	1,705	1,682	2,373	3,852	509
United Kingdom-----	2,137	900	2,668	3,538	1,500
Japan-----	1,766	1,847	2,493	1,764	1,165
All other-----	10,245	8,720	13,830	13,454	4,600
Total-----	26,102	21,064	35,250	48,427	22,130
Value (1,000 dollars)					
Canada-----	1,382	1,602	1,862	5,914	4,148
Netherlands-----	2,172	1,174	2,758	3,813	1,123
Brazil-----	663	611	877	1,895	226
United Kingdom-----	650	286	862	1,561	711
Japan-----	846	893	1,228	1,040	762
All other-----	3,779	3,262	5,208	6,280	2,580
Total-----	9,492	7,828	12,795	20,503	9,550
Unit value (per pound) ^{1/}					
Canada-----	\$0.32	\$0.35	\$0.34	\$0.32	\$0.34
Netherlands-----	.36	.35	.33	.53	.53
Brazil-----	.39	.36	.37	.49	.44
United Kingdom-----	.30	.32	.32	.44	.47
Japan-----	.48	.48	.49	.59	.65
All other-----	.37	.37	.38	.47	.56
Average-----	.36	.37	.36	.42	.43

^{1/} The unit values for U.S. exports are lower than those shown in table 2 since exports in this table include latex (a product lower in unit value). Furthermore, the data in this table are supplied by the U.S. Bureau of Census while the data in table 2 are supplied by the U.S. producers and represent only exports by producers.

Source: Official statistics of the U.S. Department of Commerce.

The Japanese industry

According to industry data published in 1974, three firms produce butadiene acrylonitrile (nitrile) rubber in Japan. Two of the firms-- Japan Synthetic Rubber Co., Ltd., and Nippon Zeon Co., Ltd.--produce the rubber in the dry form. Nippon Zeon has been virtually the only source of U.S. imports of butadiene acrylonitrile rubber from Japan in recent years. The third Japanese producer of butadiene acrylonitrile rubber is Dainippon Ink & Chemicals, Inc., which produces the product only in the latex form.

Total Japanese capacity for the production of nitrile rubber is not available; however, Nippon Zeon accounts for a substantial portion of such capacity. 1/ Utilization of its capacity in recent years is reported by Nippon Zeon as follows:

* * * * *

Total Japanese production of nitrile rubber in recent years has been reported in Japanese trade publications as follows: 1973, 69,108,000 pounds, and 1974, 65,860,000 pounds. Production in 1975, based on partial data, is estimated at between 40 million and 50 million pounds.

<u>1/</u>	*	*	*	*	*	*	*
<u>2/</u>	*	*	*	*	*	*	*

Nippon Zeon accounted for a substantial part of total Japanese production of nitrile rubber during 1973-75. Data on Nippon Zeon's production, domestic sales, and export sales of total nitrile rubber and dry nitrile rubber are shown in table 4, below.

Table 4.--Butadiene acrylonitrile (nitrile) rubber: Nippon Zeon (Japan) production and domestic and export sales, total and dry rubber, 1973-75, Nov. 1, 1973-Apr. 30, 1974, and Nov. 1, 1974-Apr. 30, 1975

Item	1973	1974	1975	Nov. 1, 1973- Apr. 30, 1974	Nov. 1, 1974- Apr. 30, 1975
Total nitrile rubber:					
Production					
1,000 pounds--:	***	***	***	***	***
Domestic sales: <u>1/</u>					
Quantity					
1,000 pounds--:	***	***	***	***	***
Value--1,000 dollars--:	***	***	***	***	***
Export sales:					
Quantity					
1,000 pounds--:	***	***	***	***	***
Value--1,000 dollars--:	***	***	***	***	***
Dry nitrile rubber:					
Production					
1,000 pounds--:	***	***	***	***	***
Domestic sales: <u>1/</u>					
Quantity					
1,000 pounds--:	***	***	***	***	***
Value--1,000 dollars--:	***	***	***	***	***
Export sales:					
Quantity					
1,000 pounds--:	***	***	***	***	***
Value--1,000 dollars--:	***	***	***	***	***

1/ Data do not include intracompany consumption or transfers.

Source: Data furnished to the U.S. International Trade Commission by Nippon Zeon of America, Inc.

Market penetration of LTFV sales

Ratio of imports to consumption -- U.S. imports of nitrile rubber from Japan, all consisting of dry rubber, increased from none in 1971 to 2.2 million pounds, valued at \$922,000, in 1974; then decreased to 1.1 million pounds, valued at \$535,000, in 1975. ^{1/} Treasury found that during the period of its LTFV sales investigation--November 1974 through April 1975--77 percent of imports from Japan were sold at less than fair value.

The following tabulation shows U.S. imports from Japan (all dry rubber), total U.S. consumption (actual), and the ratio of imports from Japan to total U.S. consumption of nitrile rubber including latex for the years 1973-75.

<u>Year</u>	<u>U.S. imports from Japan</u> (1,000 pounds)	<u>Actual U.S. consumption</u> ^{2/} (1,000 pounds)	<u>Ratio of imports to consumption</u> (percent)
1973	1,973	138,799	1.4
1974	2,153	149,395	1.4
1975	1,127	88,557	1.3

In view of the fact that Treasury found that only 77 percent of imports of nitrile rubber from Japan were made at less than fair value, the actual ratios of LTFV sales to U.S. consumption would probably be about three-fourths of the ratios shown above.

Ratio of imports to production and sales of dry nitrile rubber-- The ratio of imports from Japan to U.S. production of dry nitrile rubber in 1974 and 1975 was 1.3 and 1.2 percent, respectively, based on quantity. If such imports are compared with domestic open market sales by U.S. producers, the corresponding ratios are 1.9 and 1.3 percent, respectively, based on quantity. The ratios based on value

^{1/} Import data supplied to the U.S. International Trade Commission by the importers. Import data reported by the U.S. Bureau of Census were reported on a somewhat different basis.

^{2/} Reported by the Rubber Manufacturers' Association.

Table 5.--Butadiene acrylonitrile rubber (dry): U.S. imports from Japan, U.S. production, domestic sales, and ratios of imports to production and domestic sales 1/, 1973-75, Nov. 1, 1973-Apr. 30, 1974, and Nov. 1, 1974-Apr. 30, 1975

Item	1973	1974	1975	Nov. 1, 1973 to Apr. 30, 1974	Nov. 1, 1974 to Apr. 30, 1975
Quantity (1,000 pounds)					
U.S. imports from Japan <u>2/</u> -----	1,973	2,153	1,127	<u>3/</u> 1,047	691
U.S. production-----	153,242	161,406	96,759	80,678	42,420
Domestic sales <u>1/</u> ----	115,773	113,151	83,638	63,477	34,514
Ratio based on quantity (percent)					
Imports to production	1.3	1.3	1.2	<u>3/</u> 1.3	1.6
Imports to domestic sales-----	1.7	1.9	1.3	<u>3/</u> 1.6	2.0
Value (1,000 dollars)					
U.S. imports from Japan <u>2/</u> -----	787	922	535	<u>3/</u> 440	314
U.S. production <u>4/</u> ----	67,643	83,200	56,454	39,422	24,465
Domestic sales <u>1/</u> ----	51,104	58,327	48,799	31,018	19,906
Ratio based on value (percent)					
Imports to production	1.2	1.1	0.9	<u>3/</u> 1.1	1.3
Imports to domestic sales-----	1.5	1.6	1.1	<u>3/</u> 1.4	1.6

1/ Domestic sales by U.S. producers.

2/ As reported by importers. Such imports were slightly higher than those reported by the Bureau of Census. Only 77 percent of these import sales were found by Treasury for the period of its investigation to be at less than fair value.

3/ Estimated.

4/ Calculated from unit value of domestic sales.

Source: Compiled from data furnished to the U.S. International Trade Commission by importers and by U.S. producers.

are somewhat lower than those based on quantity. Ratios based on LTFV imports would probably be about three-fourths of the foregoing ratios.

The ratios of imports from Japan to U.S. production and domestic sales of dry nitrile rubber, based both on quantity and value, are shown in table 5 (p. A-21).

Ratio of imports to total production and total sales of nitrile rubber--

The ratios of imports from Japan to total U.S. production and to domestic sales of nitrile rubber would be still lower than those shown in table 5. For example, the ratio of imports to total U.S. production of nitrile rubber in 1975 is 0.9 percent, compared to the 1.2 percent ratio in 1975 between imports and U.S. production of dry nitrile rubber. If 77 percent of imports are assumed to have been sold at LTFV during 1975, the ratios would then be 0.7 and 0.9 percent, respectively.

Employment

U.S. producers of nitrile rubber (NBR) employed about 600 production and related workers in their overall nitrile-rubber-producing operations in both 1973 and 1974. This number declined to about 500 in 1975.

The following tabulation shows man-hours reported for the industry, the percent ratio of nitrile rubber production man-hours to total production man-hours for the plants in which NBR production took place, and the average productivity (pounds per man-hour) for the industry in 1973-75, November 1973-April 1974, and November 1974-April 1975:

<u>Period</u>	<u>Total man-hours for NBR production (1,000 man-hours)</u>	<u>Ratio of NBR man- hours to total man-hours (percent)</u>	<u>Average productivity (pounds per man-hour)</u>
1973-----	1,220	20.4	158
1974-----	1,220	20.8	169
1975-----	1,040	20.2	117
Nov. 1973- Apr. 1974-----	500	19.1	<u>1/</u>
Nov. 1974- Apr. 1975-----	440	19.0	<u>1/</u>

1/ Not available.

In response to a Commission request (in its questionnaire) to estimate the proportion of any decline in employment attributable to imports of nitrile rubber from Japan, two * * * producers indicated that there was no decline attributable to this cause; one * * * producer indicated a negligible decline; and * * * two * * * producers were not able to attribute any decline to this cause.

The ratios of man-hours spent on NBR production to those spent on total plant production tend to show that employment experience for NBR during the 1973-75 period was similar to that for other products produced at the same plants, or that the effect of Japanese imports on employment was so small as to be indistinguishable from other effects operative at the time. The substantial fluctuation in productivity from year to year reflects the fact that the industry is not a labor-intensive one and greater consistency in productivity is achieved at higher rates of operation. The low productivity shown for 1975 specifically reflects the inflexibility of the size of the labor force below a certain level of production, as well as the probable A-23 reluctance of producers to lay off experienced chemical operators.

Evidence of loss of sales by domestic producers to imports

* * * domestic producers, have
 claimed losses of nitrile rubber sales * * *
 through displacement by sales of Nippon Zeon.

* * * areas of lost
 sales, were surveyed by the Commission. The tabulated results, shown
 in table 6 (p. A-25), give the total purchases of nitrile rubber and
 of grades containing 32 to 33 percent acrylonitrile (ACN) for each of the
 *** customers during 1973-75, the period of LTFV sales (November 1, 1974-
 April 30, 1975), and the corresponding period a year earlier, as well as
 purchases of each from Nippon Zeon and the * * * U.S. suppliers.

Data * * *
 show that, as the portion of purchases from * * * of all nitrile
 grades, as well as 32 to 33 percent ACN grades, increased, the portion from
 *** decreased over the entire period. Data * * *

show that as the proportion of purchases
 from * * * increased, that from * * * decreased or ceased.
 Data from * * * show * * * being
 eliminated as suppliers as * * * gradually acquired 100 percent
 of the sales. * * * claimed no lost sales as the result of imports
 from Japan, and * * * did not know of any losses from
 that cause. Many of the purchases made by the above mentioned and other
 customers occurred in a period of actual or threatened allocation of ni-
 trile sales by U.S. producers. Some customers gave this condition as a
 reason for commencing or increasing purchases of Nippon Zeon nitrile rubber.
 Other customers claimed that the Japanese product was more suitable for
 their purposes. (See section of Factors other than price).

Table 6.--Butadiene acrylonitrile (nitrile) rubber: Purchases of nitrile rubber from Nippon Zeon and principal U.S. producers, by selected customers, total and for grades containing 32 to 33 percent acrylonitrile, 1973-75, Nov. 1, 1973-April 30, 1974, and Nov. 1, 1974-April 30, 1975

* * * * *

Source: Compiled from data submitted to the U.S. International Trade Commission by purchasers.

Prices

General economic conditions in the U.S. rubber industry.--During the 1973-75, the period under review, the rubber industry was affected by both the general economic conditions--mainly price inflation and sluggish demand--and by problems related more specifically to the rubber industry. The more specific problems included actual and threatened shortages of raw materials as a result of reduced petroleum imports, but, more important, the industry faced a reduced market for its products because of the decline in the demand for automobiles and tire replacements. About 60 percent of the synthetic rubber produced, consisting mainly of styrene-butadiene rubber (SBR), supplies the demand for tire and tire related products. An additional quantity of rubber, including a large part of the nitrile rubber supply, is consumed in other automotive uses. The demand for automobiles and replacement tires decreased with shortages of gasoline and higher gasoline prices. By the end of 1974, the demand for tire rubbers, such as SBR, was down by about one-third from its high level of 1973. The demand for nitrile rubber was down by more than half.

The automobile industry started a slow recovery in early 1975, triggering the beginning of an upward trend for the rubber industry. A substantial degree of recovery was achieved by the rubber industry--including the nitrile rubber industry--by the end of 1975, but because of the exceedingly low demand in early 1975, annual consumption for that year was down substantially from what it had been in 1973 and 1974. Nitrile rubber consumption in 1975 was below that in 1974 by a third or more.

Pricing practices.--Nippon Zeon (Japan) sells its nitrile rubber to two U.S. importers: Mitsubishi International Corp. and Nichimen Co., Inc. (both headquartered in New York). Nichimen, which has been the principal importer, sells mainly in the eastern United States, while Mitsubishi operates branches in Chicago and Los Angeles. Neither, however, restricts its operations to a geographic area, and neither publishes price lists. Prices are established by negotiation and apparently with the assistance of Nippon Zeon of America (New York). Sales by Nippon Zeon (Japan) to Mitsubishi and Nichimen are outright sales made on an f.o.b. basis.

All domestic producers sell f.o.b. plant or from warehouses in various locations around the country. Most producers allow minimum freight east of the Rocky Mountains on not less than standard units which average about 2,000 pounds. Since May 1, 1974, Copolymer has quoted separate prices on standard units from its plant (Baton Rouge) and its warehouses in Chicago and certain eastern cities. Since early 1974, most producers have charged 2 cents per pound above the list price for shipments west of the Rocky Mountains. Prior to that time, the west coast differential was only 1 cent per pound. The lowest list prices are offered for truckloads (24,000 to 33,000 pounds) or carloads (80,000 pounds) with increases of 1 to 3 cents per pound for smaller quantities and as much as 10 cents per pound for shipments of less than standard units.

List prices per pound of 32 to 33 percent acrylonitrile grades of nitrile rubber in truckload quantities for four domestic producers ^{1/} in 1969-71, 1974, and 1975 are shown below:

Year	Goodrich		Uniroyal		Goodyear		Firestone	
	Price	Effective date	Price	Effective date	Price	Effective date	Price	Effective date
	Cents per lb.		Cents per lb.		Cents per lb.		Cents per lb.	
1969-----	-						50	Jan. 1
1970-----	-		50	Dec. 1	50	Apr. 1		
1971-----	50	Dec. 1	-		-			
1974-----	55	May 1	55	Apr. 1	55	June 1	55-58	June 3
	58	Sept. 1	58	Sept. 9	58	Sept. 16	58-61	Sept. 3
1975-----	63	Nov. 1	63	Nov. 10	63	Nov. 15	<u>1/</u>	

^{1/} Not available.

Prices as reported by sellers.--The average unit values of U.S. market sales of nitrile rubber with 32 to 33 percent acrylonitrile content for Nippon Zeon and the four U.S. producers on an annual basis during 1973-75 and for the period of the Treasury investigation (Nov. 1, 1974, to Apr. 30, 1975) are shown in table 7 (p. A-29)

* * * * *

^{1/} The fifth U.S. producer of nitrile rubber--Copolymer--does not produce any grade of nitrile rubber in the 32 to 33 percent acrylonitrile range.

Table 7.--Butadiene acrylonitrile rubber: Sales of grades with 32 to 33 per cent acrylonitrile content in the U.S. market by Nippon Zeon and U.S. producers, 1973-75, Nov. 1, 1973-Apr. 30, 1974, and Nov. 1, 1974-Apr. 30, 1975

Supplier	1973	1974	1975	Nov. 1, 1973- Apr. 30, 1974	Nov. 1, 1974- Apr. 30, 1975
Quantity (1,000 pounds)					
Nippon Zeon-----	***	***	***	<u>1/</u> ***	***
Firestone-----	***	***	***	***	***
Goodrich-----	***	***	***	***	***
Goodyear-----	***	***	***	***	***
Uniroyal-----	***	***	***	***	***
Value (1,000 dollars)					
Nippon Zeon-----	***	***	***	<u>1/</u> ***	***
Firestone-----	***	***	***	***	***
Goodrich-----	***	***	***	***	***
Goodyear-----	***	***	***	***	***
Uniroyal-----	***	***	***	***	***
Unit value (per pounds)					
Nippon Zeon-----	***	***	***	<u>1/</u> ***	***
Firestone-----	***	***	***	***	***
Goodrich-----	***	***	***	***	***
Goodyear-----	***	***	***	***	***
Uniroyal-----	***	***	***	***	***

1/ Estimated.

Source: Compiled from data furnished to the U.S. International Trade Commission by the importers and the U.S. producers.

Unit values increased for each of the suppliers in each year from 1973 to 1975. The percentage increases in NBR unit values shown in table 7 for sales by Nippon Zeon and the four U.S. producers in the U.S. market between selected periods are shown in the following tabulation:

Producer	Percentage increase--			
	1973	1974	Nov. 1, 1973-	Apr. 30, 1974,
	to	to	to	
1974	1975	Nov. 1, 1974-	Apr. 30, 1973	
Nippon Zeon-----	* * *	* * *		* * *
Firestone-----	* * *	* * *		* * *
Goodrich-----	* * *	* * *		* * *
Goodyear-----	* * *	* * *		* * *
Uniroyal-----	* * *	* * *		* * *

The data tabulated above show that Nippon Zeon unit values increased on the average substantially more from 1973 to 1974 than for the three major U.S. producers, but that from 1974 to 1975 Nippon Zeon's unit values did not increase much more than those of Goodyear and Uniroyal and less than those of Goodrich. Nippon Zeon's percentage increases during the period of LTFV sales over the same period a year earlier far exceeded those of all others except Goodrich.

The average annual unit value (weighted) of sales of dry nitrile rubber 1/ (shown in table 7) by domestic producers and by Nippon Zeon, and the percent margin by which the Japanese unit values were below the domestic unit values during 1973-75, the period of Treasury investigation and the comparable six-month period a year earlier, are as follows:

1/ Nitrile rubber of 32-33 percent acrylonitrile content.

Period	Average unit values of sales by:		Margin of Zeon unit values below domestic (percent)
	Domestic producers (cents per pound)	Nippon Zeon (cents per pound)	
1973-----	44		
1974-----	52		
1975-----	58		
Nov. 1973-			
Apr. 1974---	47		
Nov. 1974-			
Apr. 1975---	56		

Quarterly average sales prices reported by the principal suppliers are compiled in table 8 (p. A-32) and plotted in charts A and B (pp. A-33 and A-34). Chart A shows the trends in prices of Mitsubishi and Nichimen together with those of the two leading U.S. producers, Goodrich and Uniroyal * * *. Prices of the four suppliers showed an upward trend starting in the first quarter of 1974. Goodrich and Uniroyal prices were consistently higher than those of the two Japanese importers. Chart B depicts the trend in prices of the four domestic suppliers-- Firestone, Goodrich, Uniroyal, and Goodyear--and the importers Mitsubishi and Nichimen. This chart shows a pronounced increase in prices for Firestone, Goodrich, and Uniroyal starting in the first quarter 1974 and for Goodyear starting in the second quarter of 1974. Goodrich prices were generally lower than those of the other domestic producers during 1974-75. The chart further shows that Goodrich and Uniroyal have similar price patterns, while Firestone's price pattern shows sharp fluctuations, and that the Japanese importers' prices were lower over the whole period 1973-75 than those of all domestic producers.

Table 8.--Sales prices (f.o.b. 1/) of grades of butadiene acrylonitrile rubber with 32 to 33 percent acrylonitrile content to principal purchasers by importers of Nippon Zeon rubber and U.S. producers, by quarters, 1973-75

* * * * *

1/ F.o.b. plant, warehouse, or dock.

Source: Compiled from data supplied the U.S. International Trade Commission by importers and U.S. producers.

Chart A.--Quarterly average prices of nitrile rubber with 32 to 33 percent acrylonitrile content to principal purchasers by Nippon Zeon, Goodrich, and Uniroyal, 1973-75

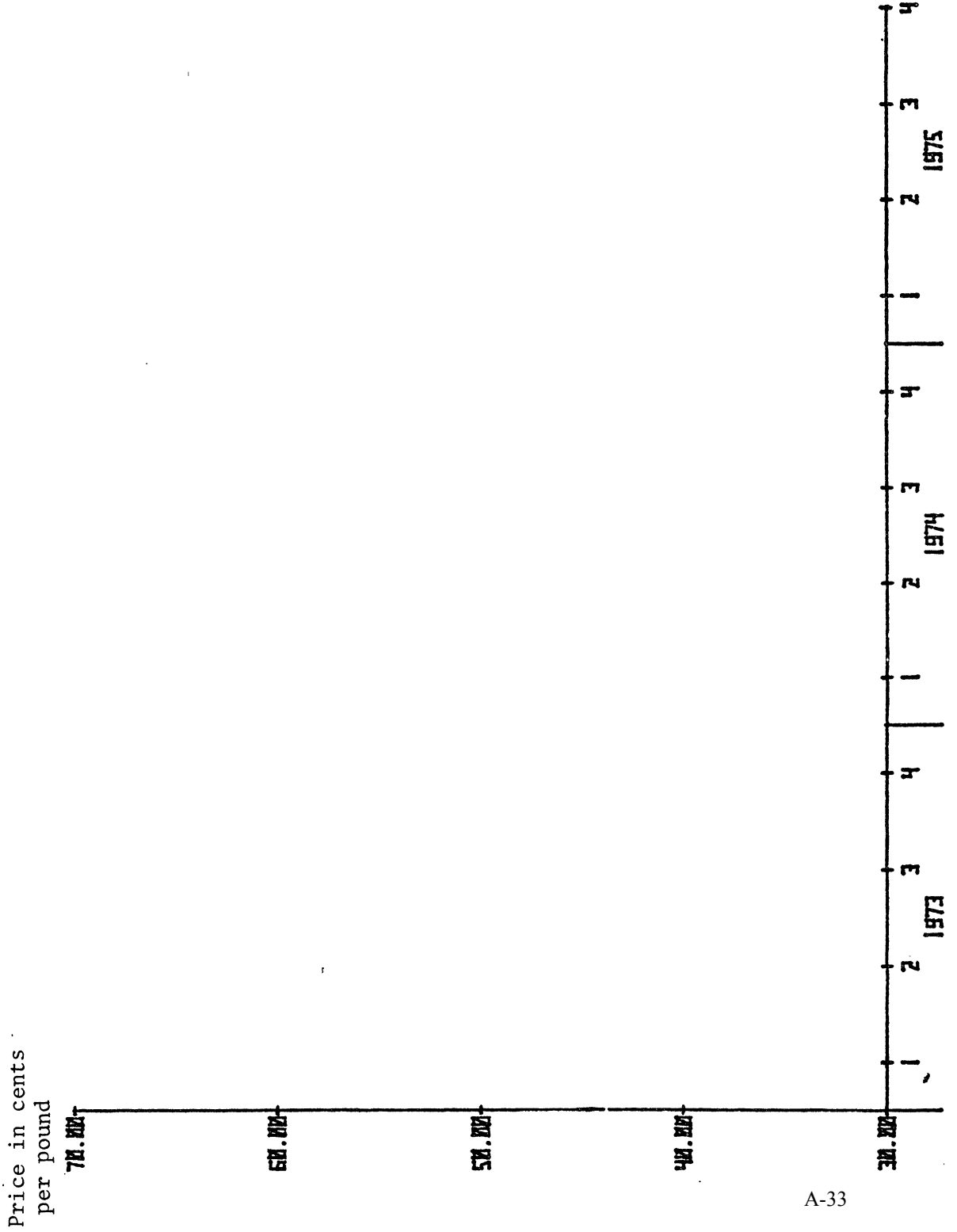
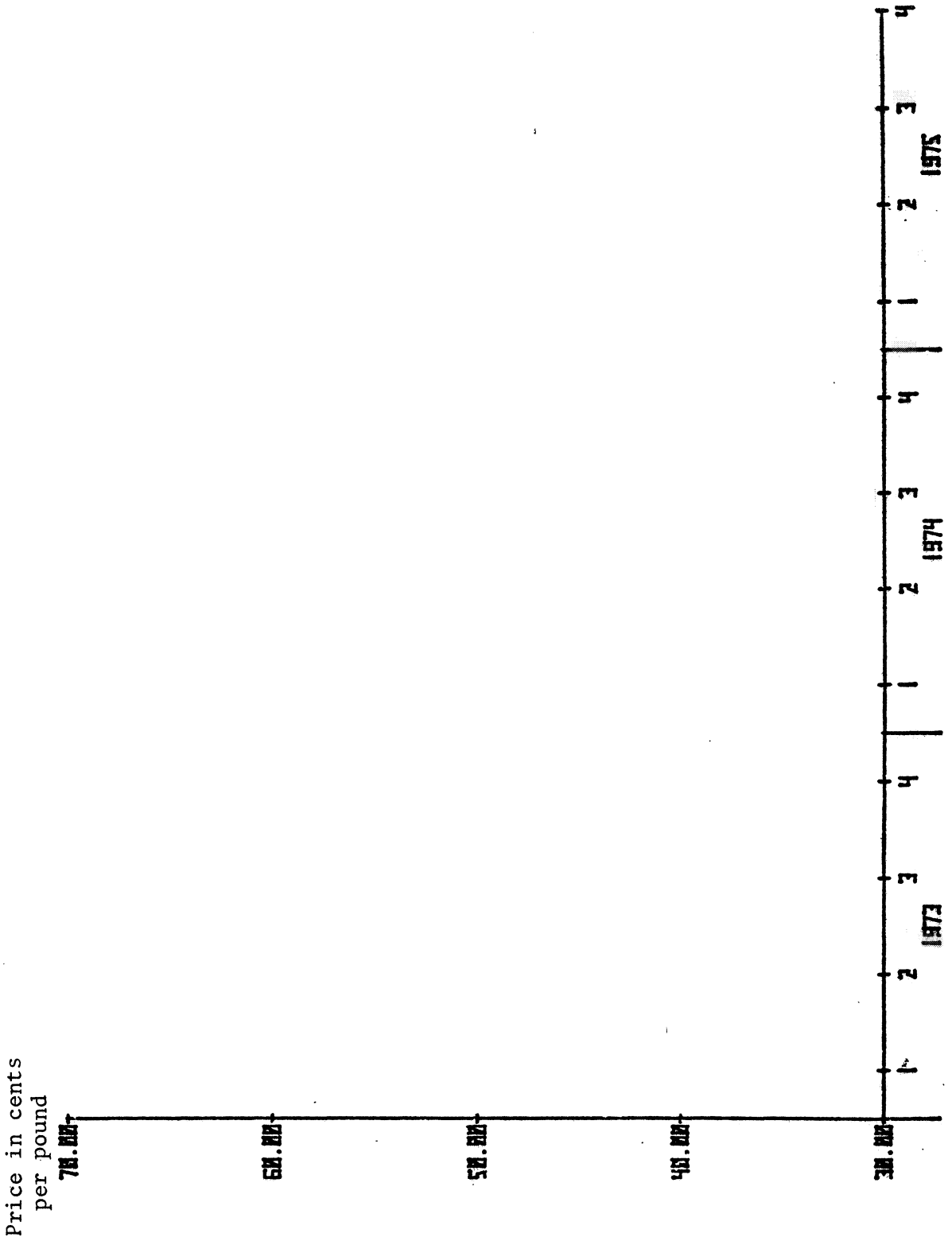


Chart B.--Quarterly average prices of grades of nitrile rubber with 32 to 33 percent acrylonitrile content to principal purchasers by Nippon Zeon and domestic producers, 1973-75



Prices as reported by purchasers.--F.o.b. prices reported by 12 purchasers (table 9, p. A-36) show that prices paid by different purchasers to the same suppliers differed by as much as 13 cents in 1973, 20 cents in 1974, and 11 cents in 1975, differences which apparently reflect concessions to meet competition as well as inflationary trends. There is no clear line of demarcation between the prices of one supplier and those of another, except that those of Nippon Zeon are, on balance, lowest. * * *.

Price depression and/or suppression.--It was stated by Uniroyal in its testimony that the low prices of Nippon Zeon are causing suppression of Uniroyal's sales price. A margin of 5 percent was cited as the competitive price differential at which domestic producers can sell over offshore producers and remain in business. It was further stated that Zeon is selling at margins of 7 to 12 percent and thus taking an increasing market share. Data provided by U.S. purchasers and compiled in table 9 show that sales price ranges of Nippon Zeon and Uniroyal compare as follows:

Year	Price range		Margin by which Zeon's prices are below Uniroyal's prices
	Nippon Zeon	Uniroyal	
	Cents per pound	Cents per pound	Percent
1973-----	* * *	* * *	* * *
1974-----	* * *	* * *	* * *
1975-----	* * *	* * *	* * *

Table 9.--Prices (f.o.b.) of grades of butadiene acrylonitrile rubber with 32 to 33 percent acrylonitrile content 1/ reported by U.S. customers of Nippon Zeon and principal U.S. producers, by months, 1973-75

* * * * *

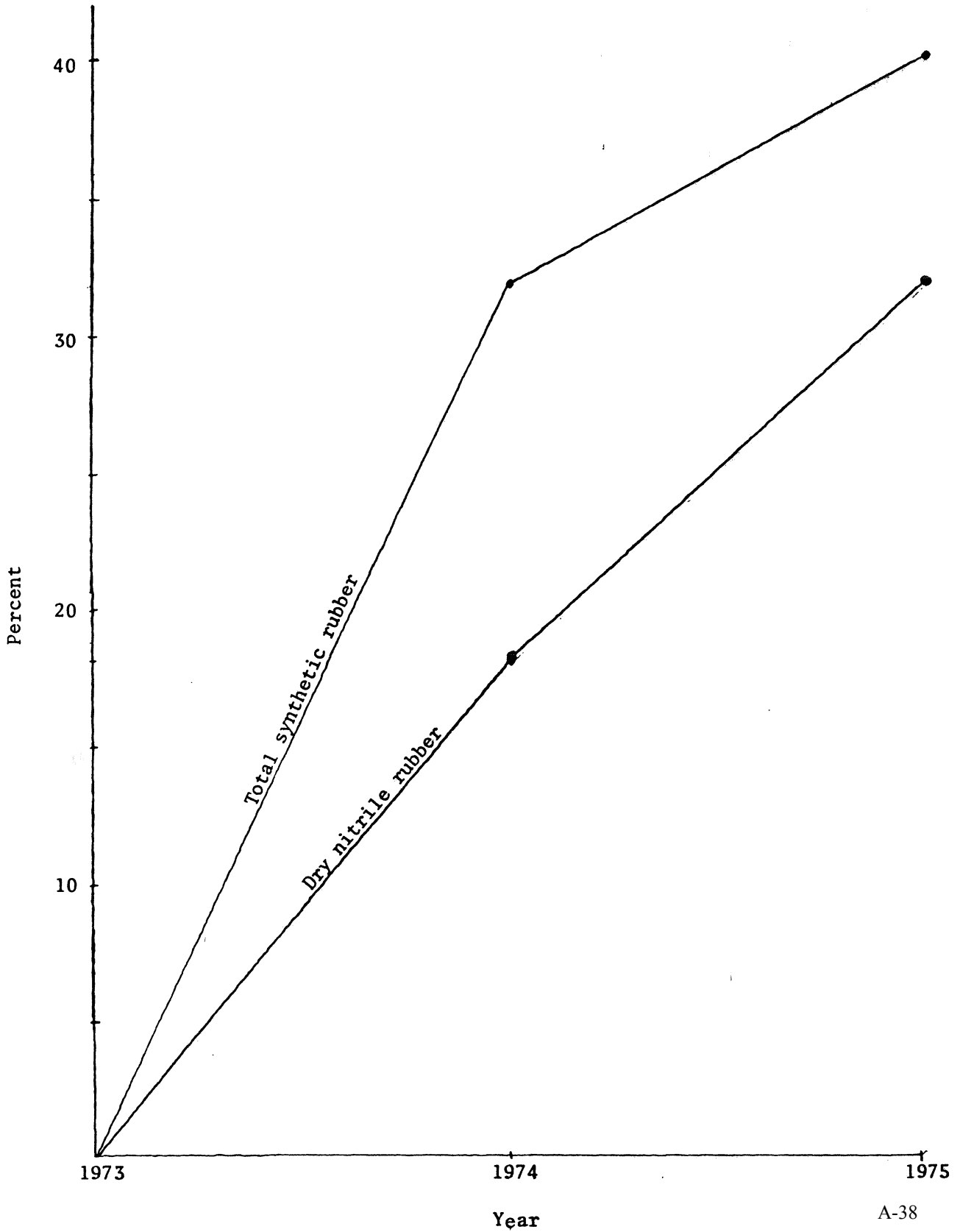
1/ Grades in this acrylonitrile content range are sold in the greatest volume in the U.S. market. * * *

Source: Compiled from data supplied the U.S. International Trade Commission by purchasers.

In 1973, Nippon Zeon was underselling Uniroyal by margins as wide as * * * percent, at the lower end of the price range and * * * percent at the higher end. These percentages, however, changed by 1975 to * * * percent at the lower end and * * * percent at the higher end.

No price depression is apparent in the graphs of price trends (charts A and B), since market prices in general started rising in the first quarter of 1974. They rose steeply during the rest of 1974, more or less stabilized in the first three quarters of 1975, and then rose slightly in the final quarter of 1975. Moreover, the trend in prices of dry nitrile rubber compared to that of all synthetic rubber shows an upward trend for both over the period from 1973 to 1975. This comparison further indicates that, while the price trend for synthetic rubber increased somewhat more sharply (by 8 percentage points over the 2-year period), the margin was not substantial, and that the rate of increase for dry nitrile rubber between 1974 and 1975 was greater than for all synthetic rubber (chart C).

Chart C: Percent increase in average annual unit values of total U.S. sales of synthetic rubber and of total domestic sales of dry nitrile rubber



Factors other than price

In testimony before the Commission, the attorney for Nippon Zeon stated:

Customer decisions to purchase nitrile rubber are heavily predicated upon specifications of the product and anticipated availability during eras of scarcity... . The slight advance that Zeon has made into the market came primarily at a time of actual or threatened scarcities and allocations of nitrile rubber... .

Purchasers surveyed by the Commission in conducting this investigation were asked to comment on quality and suitability differences of nitrile rubber purchases made by them from domestic sources and from Nippon Zeon. Out of eight pertinent responses--

Two users found no differences between sources and found products generally interchangeable;

Two purchasers used NBR according to customer specification, thus source was not the principal concern;

One user rated Goodrich NBR as the best in quality, with the Goodyear product second; and Nippon Zeon and Uniroyal NBR equivalent in quality, following that of Goodrich and Goodyear; and

Three users favored Nippon Zeon NBR, two of them finding it more desirable from a quality standpoint than NBR from other sources and the other finding Nippon Zeon grades more suitable for its specific uses.

One domestic producer acknowledged placing customers on allocation during periods of 1973 and 1974 and being forced to abandon some customers as a result of shortage of raw material (acrylonitrile). At

least two purchasers indicated that they began purchasing from Nippon Zeon to insure an adequate supply of nitrile rubber. A letter from one of these purchasers to this effect is included in the appendix along with correspondence from a second domestic producer indicating its inability to meet many customer orders.

Profit-and loss experience of domestic producers

The data reported in this section represent the financial experience of five producers that accounted for all of the dry nitrile rubber produced in the United States during the period 1971-75. The five producers are Copolymer Rubber & Chemical Corp. (Copolymer), Firestone Synthetic Rubber & Latex Co. (Firestone), B. F. Goodrich Chemical Co. (Goodrich), Goodyear Tire & Rubber Co. (Goodyear), and Uniroyal Chemical Division (Uniroyal). The accounting year for Copolymer and Firestone ended October 31, and that for Goodrich, Goodyear, and Uniroyal ended December 31.

Overall operations of the establishments in which nitrile rubber is produced.--The five producers were requested to submit profit-and-loss data on their overall operations of the establishment(s) in which nitrile rubber is produced. One company, * * * was unable to submit the data requested. * * *. Aggregate net sales for the other four producers increased steadily from \$321.8 million in 1971 to a 5-year high of \$455.5 million in 1974, and then declined to \$427.9 million in 1975 (table 10). Net operating profit, following a trend similar to that of net sales, increased steadily from \$63.9 million in 1971 to \$81.1 million in 1974, then declined sharply to \$37.7 million in 1975. As a share of net sales, net operating profit averaged 19.9 percent in 1971, 21.0 percent in 1972, 20.7 percent in 1973, 17.8 percent in 1974 and 8.8 percent in 1975.

Table 10.-- Butadiene acrylonitrile rubber: Profit-and-loss experience of the domestic producers' 1/ overall operations of the establishment(s) in which acrylonitrile butadiene rubber was produced, 1971-75 2/

Year and company	Net sales	Cost of goods sold	Gross profit	General, selling and administrative expenses	Net operating profit	Other (expense) net	Net profit or (loss) before income taxes	Ratio of net profit or (loss) to net sales
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	Percent
1971								

*** 3/								
*** 4/								

Total or percent	321,798	242,153	79,645	15,721	63,924	63,558	19.9	19.6
1972								

*** 3/								
*** 4/								

Total or percent	344,348	255,641	88,707	16,380	72,327	71,574	21.0	20.8
1973								

*** 3/								
*** 4/								

Total or percent	365,268	272,413	92,855	17,443	75,412	74,831	20.7	20.5

Table 10.-- Butadiene acrylonitrile rubber: Profit-and-loss experience of the domestic producers' 1/ overall operations of the establishment(s) in which acrylonitrile butadiene rubber was produced, 1971-75 2/--Continued

Year and company	Net sales		Cost of goods sold		Gross profit		General, selling and administrative expenses		Net operating profit		Other (expense) net		Net profit or (loss) before income taxes		Ratio of net profit or (loss) to net sales	
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	Percent	Percent		
1974																

3/																
4/																

Total or percent-----	455,457	356,469	98,988	17,930	81,058	80,212							17.8		17.6	
1975																

3/																
4/																

Total or percent-----	427,904	372,321	55,583	17,878	37,705	35,822							8.8		8.4	

Source: Compiled from data submitted to the U.S. International Trade Commission by the domestic industry.

Net profit before income taxes followed the same trend as net operating profit--increasing from \$63.6 million in 1971 to \$80.2 million in 1974, then declined to \$35.8 million in 1975.

* * * * *

Nitrile rubber.--Total net sales of nitrile rubber for the five producers increased steadily from \$48.0 million in 1971 to \$78.0 million in 1974, then declined to \$58.0 million in 1975 (table 11). Net operating profit showed steady increases from \$12.3 million in 1971 to \$20.5 million in 1973, then declined to \$18.0 million in 1974 and \$2.9 million in 1975. As a share of net sales, net operating profit averaged 25.6 percent in 1971, 29.5 percent in 1972, 30.9 percent in 1973, 23.1 percent in 1974, and 5.1 percent in 1975 (table 11). Changes in net profit before income taxes followed the same trend as net operating profit--increasing from \$11.8 million in 1971 to \$19.9 million in 1973, then declined to \$18.0 million and \$3.0 million in 1974 and 1975, respectively. Two companies accounted for approximately three-fourths of the total net sales during the period 1971-75 and approximately three-fourths of the total net operating profit during the years 1971-74. However, their share of the latter declined to approximately 14 percent in 1975.

Table 11.--Butadiene acrylonitrile rubber: Profit-and-loss experience of the domestic producers of acrylonitrile butadiene rubber operations, 1971-75 1/

Year and company	Net sales dollars	Cost of goods sold dollars	Gross profit dollars	General, selling and administra- tive expenses dollars	Net operating profit dollars	Other (expense) net dollars	Net profit or (loss) before in- come taxes dollars	Ratio of net operating profit to profit to net sales	Ratio of net (loss) to (loss) to net sales
	1,000	1,000	1,000	1,000	1,000	1,000	1,000	Percent	Percent
1971									
2/									
3/									
4/									
Total or percent	48,044	28,090	19,954	7,652	12,302		11,831	25.6	24.6
1972									
2/									
3/									
4/									
Total or percent	52,863	29,579	23,284	7,716	15,568		15,086	29.5	28.5
1973									
2/									
3/									
4/									
Total or percent	66,289	36,927	29,362	8,879	20,483		19,929	30.9	30.1

Table 11.-- Butadiene acrylonitrile rubber: Profit-and-loss experience of the domestic producers of acrylonitrile butadiene rubber operations, 1971-75 1/--Continued

Year and company	Net sales 1,000 dollars	Cost of goods sold 1,000 dollars	Gross profit 1,000 dollars	General, selling and administra- tive expenses: 1,000 dollars	Net operating profit 1,000 dollars	Other (expense) net 1,000 dollars	Net profit or (loss) before in- come taxes 1,000 dollars	Ratio of net:	
								operating profit to net sales	profit or (loss) to net sales
1974									
2/									
3/									
4/									
Total or percent	78,011	51,345	26,666	8,664	18,002	17,975	23.1	23.1	23.0
1975									
2/									
3/									
4/									
Total or percent	58,047	45,496	12,551	9,617	2,934	2,884	5.1	5.1	5.0

1/ ***
2/ ***
3/ ***
4/ ***

Source: Compiled from data submitted to the U.S. International Trade Commission by the domestic industry.

During the period 1971-75 intracompany transfers played an important role in the total net sales of three of the five producers. * * *.

Table 12.--Nitrile rubber: Ratios of intracompany transfers to total net sales (including intracompany transfers) for the U.S. producers of nitrile rubber, 1971-75

(In percent)						
Item	1971	1972	1973	1974	1975	
* * *	*	*	*	*	*	*

Consideration of Likelihood of Injury

Sales at less than fair value (LTFV)

During the period of the Treasury investigation, 77 percent of all imports from Japan were found to have been sold at LTFV margins ranging from 7.3 to 11.4 percent (based on purchase price) with a weighted average margin for all imports of 5.2 percent. (Based on home market price, the LTFV margins range from 6.8 to 10.2 percent.) Total U.S. imports of Japanese nitrile rubber during the period of the Treasury investigation amounted to about \$200,000. * * *

Import penetration

The ratios of imports of dry nitrile rubber from Japan to U.S. consumption, production, and domestic sales by U.S. producers during 1973-75 were all within the range of 1 to 2 percent. Since LTFV margins were found by Treasury in 77 percent of all sales investigated, the ratios of LTFV sales to domestic production and sales would be lower than the ratios based on total imports from Japan. (See section on market penetration of LTFV sales under "Consideration of Injury").

Nippon Zeon production capacity and utilization

Nippon Zeon reported to the Commission its annual capacity for producing nitrile rubber during 1971-75 as * * * pounds. Nippon Zeon further reported that in 1973 it utilized ** percent of its capacity, but that such utilization decreased to 85 percent in 1974 and ** percent in 1975, with a low of ** percent reached in early 1975. (See section on the Japanese industry).

In testimony before the Commission, the attorney for Nippon Zeon stated: "The greater part of Zeon's existing unused capacity must be reserved for Japan's own projected economic recovery, and Zeon has currently no plans to expand that capacity." In separate information supplied the Commission, Nippon Zeon stated that capacity for other types of rubber produced by them (e.g., styrene-butadiene rubber), were "different and separated" and could not be diverted to NBR production.

Assurances of no future LTFV sales

In testimony before the Commission, the attorney for Nippon Zeon stated:

Now that . . . Zeon is able accurately to define "fair value," it has made appropriate adjustments in all prices to eliminate any possibility of less than fair value sales. Zeon is now able to make assurances to the ITC that there are no present LTFV sales. Zeon is confident that it will be able to maintain its prices above fair value for the foreseeable future.

Consideration of an Industry Prevented From Being Established 1/

* * * * *

1/ Prevention of the establishment of an industry is not an issue in this investigation.

APPENDIX

