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UNITED STATES TARIFF COMMISSION

**CUPRAMMONIUM CONTINUOUS FILAMENT YARN:
WORKERS OF THE AMERICAN BEMBERG PLANT
OF BEAUNIT CORP.**

**Report to the President
on Investigation No. TEA-W-79
Under Section 301(c)(2) of the Trade Expansion Act of 1962**



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C O N T E N T S

	<u>Page</u>
Introduction-----	1
Finding of the Commission-----	2
Considerations supporting the Commission's finding:	
Views of Commissioners Sutton, Clubb, and Moore-----	3
Separate statement of the views of Commissioner Leonard-----	5
Description and uses-----	A-1
U.S. tariff treatment-----	A-2
U.S. consumption-----	A-5
U.S. production-----	A-7
U.S. imports-----	A-8
U.S. exports-----	A-11
Market factors affecting the use of cuprammonium yarns and fabrics-----	A-12
The American Bemberg Plant-----	A-15
Production-----	A-15
* * *	
Closing announcements-----	A-16
Statistical appendix-----	A-17

TABLES

1. Manmade fiber textile materials: U.S. production of fibers, imports for consumption and exports of fibers and manufac- tures thereof, and apparent consumption, 1961-70-----	A-18
2. Textile fibers: U.S. mill consumption, by kinds, calendar years 1961-70-----	A-19
3. Manmade fibers: U.S. production, by types, 1961-70-----	A-20
4. Manmade fiber textiles: U.S. imports for consumption, by kinds, 1965-70-----	A-21

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Note.--The whole of the Commission's report to the President may not be made public since it contains certain information that would result in the disclosure of the operations of an individual concern. This published report is the same as the report to the President, except that the above-mentioned information has been omitted. Such omissions are indicated by asterisks.

REPORT TO THE PRESIDENT

U.S. Tariff Commission
April 9, 1971

To the President:

In accordance with section 301(f)(1) of the Trade Expansion Act of 1962 (76 Stat. 885), the U.S. Tariff Commission herein reports the results of an investigation made under section 301(c)(2) of the Act in response to a petition filed by a group of workers.

On February 8, 1971, a petition was received from the United Textile Workers of America, Watauga Rayon Workers' Union, Local 2207 (AFL-CIO), under section 301(a)(2) of the Trade Expansion Act of 1962, for determination of eligibility to apply for adjustment assistance on behalf of workers formerly employed by the American Bemberg Plant of Beaunit Fibers, Division of Beaunit Corp. (a subsidiary of El Paso Natural Gas Co.), Elizabethton, Tenn.

On March 1, 1971, the Tariff Commission instituted an investigation under section 301(c)(2) of the Trade Expansion Act of 1962 to determine whether, as a result in major part of concessions granted under trade agreements, articles like or directly competitive with cuprammonium rayon continuous filament yarn 1/ produced by the American Bemberg Plant of the Beaunit Corp., are being imported into the United States in such increased quantities as to cause, or threaten to cause, the unemployment or underemployment of a significant number or proportion of the workers of the plant.

1/ Hereinafter referred to as cuprammonium yarn.

Public notice of the receipt of the petition and the institution of the investigation was given by publication in the Federal Register of March 6, 1971 (36 F.R. 4527). No hearing was requested, and none was held.

The information in this report was obtained principally from the petitioners, the officials of the firm, importers, buyers of the yarn, and from the Commission's files.

Finding of the Commission

On the basis of its investigation, the Commission 1/ finds unani-
mously that articles like or directly competitive with the cuprammonium
rayon continuous filament yarn produced by the American Bemberg Plant
of Beaunit Fibers, Division of Beaunit Corp. at Elizabethton, Tennessee
are not, as a result in major part of concessions granted under trade
agreements , being imported into the United States in such increased
quantities as to cause, or threaten to cause, the unemployment or
underemployment of a significant number or proportion of workers at
that plant.

1/ Commissioner Young did not participate in the decision.

Considerations Supporting the Commission's Finding

Views of Commissioners Sutton, Clubb, and Moore

The petitioning workers in this case had been employed at the American Bemberg plant of Beaunit Corp., located at Elizabethton, Tenn. The plant had been the only producer of cuprammonium continuous filament yarns in the United States since 1949. The Bemberg plant was shut down late in 1970; it recently was purchased by another company, which reportedly plans to operate it on a smaller scale than formerly. Cuprammonium fiber is a manmade rayon fiber manufactured from cellulose by a different process than viscose rayon or acetate. It has high resilience, subdued luster, and soft hand. The yarn is used mostly in broadwoven fabrics, chiefly for linings in higher quality suits and dresses.

Section 301(c)(2) has established four conditions that must be met in the judgment of the Commission if an affirmative determination is to be reached. The determination must be negative if any one of the four conditions is not met. The four conditions are as follows:

- (1) Imports of articles like or directly competitive with those produced by the workers concerned must be increasing;
- (2) The increased imports must be in major part the result of concessions granted under trade agreements;
- (3) A significant number or proportion of the workers concerned must be unemployed or underemployed or threatened therewith; and
- (4) The increased imports resulting in major part from trade-agreement concessions must have been the major factor causing or threatening to cause the unemployment or underemployment.

In the case at hand, we have concluded that the first condition has not been met--namely, that articles like or directly competitive with cuprammonium yarn produced by the petitioning workers are not being imported in increased quantities.

The cuprammonium continuous filament yarns produced by the American Bemberg plant consisted almost entirely of singles yarn, with twist (but not over 20 turns per inch). None of the yarns are believed to have been textured by the plant. Data on U.S. imports of cuprammonium yarns are not separately recorded in the U.S. import statistics. The best information available to the Commission, however, indicates that imports of such yarn have been negligible in all recent years.

Almost the entire production of the American Bemberg plant was used in making fabrics wholly of cuprammonium yarns. Data respecting the importation of such fabrics into the United States were obtained by the Commission from importers believed to account for the great bulk of such entries. Annual imports of cuprammonium fabrics by these firms declined steadily in the late 1960's; * * *. Thus, even if we were to consider the imports of such fabrics in making our decision, we would have to conclude that the imports had not increased within the meaning of the statute.

In light of the circumstances set forth above, we have concluded that the first condition, that of increased imports of like or directly competitive articles, has not been met, and thus have made a negative determination.

Separate Statement of the Views of Commissioner Leonard

I concur in the negative determination of the other Commissioners. I agree with them that imports of cuprammonium yarns and fabrics are not being imported in increased quantities. I would go further, however, and make a determination that even if imports of other articles, which might be considered by some to be like or directly competitive with cuprammonium yarn, had increased, such increase could not be said to have been the "major" factor in causing unemployment or underemployment at the American Bemberg Plant.

The market for cuprammonium yarns in the United States in recent years has been materially affected by the expanded production and use of other manmade fibers, particularly the noncellulosics. While annual consumption of cuprammonium yarns and fabrics declined substantially between 1965 and 1970, consumption of other manmade fibers (including yarn), most of which was accounted for by domestic production, increased from 3.5 billion to 5.6 billion pounds during that period. Domestic production of continuous filament viscose and cuprammonium (cellulosic) yarns declined by nearly 40 percent between 1965 and 1970, whereas production of acetate (also cellulosic) continuous filament yarns increased by 18 percent and that of noncellulosic yarns by 79 percent. The domestic output of fabrics of manmade fibers followed a somewhat similar pattern.

Factors contributing to the decrease in consumption of cuprammonium yarns, in addition to competition from other manmade fiber products, include: (a) a decline in the demand for better quality suits, which used cuprammonium linings, in favor of less expensive suits with washable linings; (b) a trend away from traditional apparel (suits, smooth fabrics, tailored women's apparel, etc.) to modish (casual) wear (dungarees, bulky fabrics, see-throughs, "hot pants", etc.), preferred especially by teenagers and young adults; (c) a switch to types of outerwear which do not require linings; and (d) general adverse economic conditions over the past several months. In my judgment, the effects of these factors outweigh the effects of imports in causing the American Bemberg Plant to close, with the resulting unemployment of the petitioning workers.

INFORMATION OBTAINED IN THE INVESTIGATION

Description and Uses

Viscose and cuprammonium are currently the principal processes used in manufacturing rayon fibers. 1/ The viscose process is used to produce cellulosic filaments made of regenerated cellulose coagulated from a solution of cellulose xanthate. The cuprammonium process is used to produce filaments made of regenerated cellulose coagulated from a solution of cellulose in ammoniacal copper oxide. 2/ The cuprammonium process is estimated to account for less than 10 percent of the world trade in rayon fibers.

1/ A third process, nitrocellulose, is currently not commercially important.

2/ Jesse W. Markham in his Competition in the Rayon Industry, Harvard University Press, 1952, states:

Technically the process [cuprammonium] is quite similar to the viscose process; however, the following differences should be mentioned: . . . The alkali crumbs are immersed in a copper sulphate solution instead of carbon bisulphide and are later dissolved in a solution of ammonia. An important variation from the viscose process also occurs in the spinning operation. When the solution passes through the spinnerette orifices, jets of the solution pass into a glass funnel where diffusion and absorption of the ammonia in the liquid bath induces coagulation. The filaments then pass through an additional acid bath where the copper residue is extracted. Because coagulation takes place less rapidly in the cuprammonium than in the viscose process, the thread may be stretched to almost any desired degree of fineness. . . . The cost of production is higher under the cuprammonium than under the viscose process and a price differential has always existed between cuprammonium and viscose yarns

Cuprammonium has been manufactured in the United States only in the form of continuous filament yarn. It has been spun in deniers 1/ ranging from 15 to 5,000; the most popular deniers recently have been 40, 50, 65, 75, 85, 100, 150, and 285. Cuprammonium yarn has been shipped in skeins, cones, tubes, and beams. Its desirable characteristics include resilience, natural whiteness, subdued luster and soft hand, high wet strength, and resistance to perspiration.

In the United States cuprammonium yarn is used mostly in the manufacture of broadwoven filament fabrics, which are utilized principally as linings for higher quality suits and dresses. Other uses of cuprammonium yarn include dress goods, blouses, neckwear, sportswear, underwear, knitwear, drapery, upholstery, bedspreads, seam binding, and woven labels. Specialty cuprammonium yarns (slub, loop, boucle, etc.) are used mainly in upholstery, drapery, bedspreads, and some apparel.

U.S. Tariff Treatment

Yarns wholly of continuous manmade fibers, including the cuprammonium yarn covered by this investigation, are dutiable in items 310.01 through 310.21 of the Tariff Schedules of the United States (TSUS). The yarns included in these items are separated (1) as to whether singles or plied, (2) by the amount of twist, and (3) according to value per pound. The yarns under investigation fall principally in items 310.01 and 310.02 which cover singles, with twist not over 20

1/ Denier is the weight in grams for a length of 9,000 meters; the lower the denier, the finer the filament.

turns per inch. The rate history for these two items is in the following table.

Certain continuous filament yarns of manmade fibers:
Changes in rates of duty

TSUS 310.01	:	TSUS 310.02	:	Effective date of rate of duty
<u>Cents per pound</u>	:	<u>Percent ad valorem</u>	:	
50	:	50	:	1930
25	:	22.5	:	<u>1/</u>
22.5	:	21	:	Jan. 1, 1968 <u>2/</u>
20	:	19.5	:	Jan. 1, 1969 <u>2/</u>
17.5	:	18.5	:	Jan. 1, 1970 <u>2/</u>
15	:	17	:	Jan. 1, 1971 <u>2/</u>
12.5	:	16	:	Jan. 1, 1972 <u>2/</u>
:	:	:	:	:

1/ Pursuant to reductions under the GATT in 1948 and 1951.

2/ Kennedy Round.

The rate of duty on cuprammonium woven fabrics has also been reduced in trade agreements as indicated in the following table.

Certain woven fabrics of manmade fibers (TSUS item 338.30), including
cuprammonium woven fabrics: Changes in rate of duty

Rate of duty	:	Effective date
<u>Cents per pound and percent ad valorem</u>	:	
45¢ + 70%	:	1930
45¢ + 45%	:	1936
25¢ + 22.5%	:	1951
22¢ + 22.5%	:	Jan. 1, 1968 <u>1/</u>
20¢ + 22.5%	:	Jan. 1, 1969 <u>1/</u>
17¢ + 22.5%	:	Jan. 1, 1970 <u>1/</u>
15¢ + 22.5%	:	Jan. 1, 1971 <u>1/</u>
13¢ + 22.5%	:	Jan. 1, 1972 <u>1/</u>
:	:	:

1/ Kennedy Round.

The rates of duty on other yarns wholly of continuous manmade fibers (items 310.05 through 310.21), glass yarns (items 309.98 and 309.99), yarns wholly of noncontinuous manmade fibers (items 310.40 and 310.50), and other yarns and sewing threads of manmade fibers (items 310.60 through 310.91) have also been reduced in trade agreements. In addition, the rates on other manmade fiber articles consisting broadly of wastes, filaments (including staple fiber), and apparel have also been reduced through trade agreements. The rates on these yarns and articles are too numerous to be separately mentioned but the average ad valorem equivalents of the rates on groups of these articles are shown in the following table.

Manmade fiber textiles: Average ad valorem equivalent of duty, specified years, 1934 to 1970 1/

(In percent)						
Description	1934	1952	1962	1969	1970	
Yarns wholly of continuous manmade fibers:						
Specified type <u>2/</u> -----	63.5	24.3	31.4	21.3	19.0	
Other-----	50.0	31.2	28.1	23.2	19.5	
Manmade fibers and wastes, other yarns, and thread---	20.1	15.3	13.7	14.8	13.5	
Broadwoven fabrics of manmade fibers-----	77.3	31.0	36.6	30.7	28.2	
Knit and pile fabrics of manmade fibers-----	70.0	28.2	32.2	31.8	30.0	
Apparel of manmade fibers---	85.2	<u>3/</u> 38.4	<u>3/</u> 37.2	<u>3/</u> 38.5	<u>3/</u> 38.3	
Average-----	68.8	17.7	29.0	33.3	31.5	

1/ Based on the imports and rates of duty in the years specified.

2/ Singles, with twist but not over 20 turns per inch (items 310.01 and 310.02).

3/ Estimated.

The major reductions in average ad valorem equivalents of yarns wholly of continuous manmade fibers other than those dutiable in items 310.01 and 310.02, broadwoven fabrics, knit and pile fabrics, and apparel took place from 1934 to 1952. On broadwoven fabrics and knit and pile fabrics an increase in the ad valorem equivalents occurred from 1952 to 1962 while on manmade fibers and wastes, other yarns, thread, and apparel, an increase took place from 1962 to 1969. These increases were due principally to the change in composition of the imports for the years selected. Other yarns wholly of continuous manmade fibers showed a consistent decline in the ad valorem equivalents in the years selected; from 1969 to 1970, however, all articles listed in the above tabulation had declines in their ad valorem equivalents.

U.S. Consumption

The domestic consumption of cuprammonium yarns from 1965 to 1970, consisting almost entirely of the production of the American Bemberg Plant of the Beaunit Corp., declined from * * * in 1965 to * * * in 1970.

Consumption of continuous filament yarns of all manmade fibers increased from 1961 to 1968; in 1969 and 1970, however, it declined slightly. The consumption of rayon (including cuprammonium) continuous filament yarns fluctuated in the 1961-70 period; in the last few years it has also declined but at a more rapid pace than continuous filament yarns of other manmade fibers. * * *

The U.S. consumption of all manmade fiber textile materials increased without interruption from 1961 to 1969; in 1970, however, the consumption declined slightly (table 1). As compared with 1,846 million pounds in 1961, the consumption amounted to 3,946 million pounds in 1966, 5,660 million pounds in 1969, and 5,552 million pounds in 1970. The share of the consumption furnished by imports, however, increased almost consistently from 4.4 percent in 1961 to 11.1 percent in 1970.

The consumption of all major textile fibers (including manmade and natural) in the 1961-70 period increased from 6,561 million pounds in 1961 to 9,805 million pounds in 1969; in 1970, however, it declined to 9,558 million pounds (table 2). During this period a marked change occurred in the relative importance of individual fibers. The use of cotton, wool, and flax and silk declined while the use of manmade fibers increased. Manmade fiber consumption accounted for more than half of all textile fibers used in 1970 and was over $2\frac{1}{2}$ times greater than 1961. Much of the increase has occurred in noncellulosic manmade (nylon, polyester, acrylic, etc.) fibers.

U.S. Production

The American Bemberg Plant of Beaunit Corp. has been the only producer of cuprammonium yarns in the United States since 1949.

* * * * *

Annual U.S. production of continuous filament rayon yarns (including cuprammonium yarns) fluctuated during the 1961-70 period, reaching a high of 434 million pounds in 1965 and a low of 268 million pounds in 1970. Production of continuous filament acetate and noncellulosic yarns increased from 1961 to 1970 and far surpassed the production of rayon yarns. Acetate yarn production increased from 249 million pounds in 1961 to 463 million pounds in 1970, while noncellulosic yarn production increased from 497 million pounds in 1961 to 1,788 million pounds in 1970. By 1970 the U.S. output of acetate yarn was almost three-fourths greater, and noncellulosic yarn production was more than six times greater, than that of rayon (table 3).

U.S. Imports

The cuprammonium yarn covered by this investigation is not separated in import statistics from other cellulosic (viscose and acetate) yarns. Such yarn, however, would be imported under items 310.01 through 310.21 of the TSUS. More specifically, because it is believed that none of these yarns are textured at the plant, such yarns would be classified under items 310.0125 and 310.0225 of the Tariff Schedules of the United States Annotated (TSUSA). Imports of cuprammonium yarn, however, are estimated to have been less than 1 percent of the entries under the two classes. U.S. imports in these two classes since 1965 are shown in the table below.

Continuous filament yarn of manmade fibers, by specified types:
U.S. imports, 1965-70

Year	TSUSA 310.0125 <u>1/</u>		TSUSA 310.0225 <u>2/</u>	
	Quantity	Value	Quantity	Value
	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>
	<u>pounds</u>	<u>dollars</u>	<u>pounds</u>	<u>dollars</u>
1965 <u>3/</u> -----	5,599	3,853	960	1,268
1966-----	2,642	1,987	869	1,054
1967-----	6,145	3,885	1,002	1,161
1968-----	11,620	8,475	2,662	3,072
1969-----	3,120	2,478	860	1,007
1970-----	2,373	2,078	1,188	1,378

1/ Yarns wholly of continuous manmade fibers, singles, with twist but not over 20 turns per inch, valued not over \$1 per pound, wholly cellulosic and not textured.

2/ Yarns wholly of continuous manmade fibers, singles, with twist but not over 20 turns per inch, valued over \$1 per pound, wholly cellulosic and not textured.

3/ Includes textured yarns.

Total U.S. imports of continuous filament yarn of manmade fibers (including cuprammonium and glass) since 1965 are shown in the following table.

Continuous filament yarn of manmade fibers: U.S. imports, 1965-70

Year	Quantity	Value
	1,000 pounds	1,000 dollars
1965-----	13,831	13,523
1966-----	14,996	14,492
1967-----	27,262	28,245
1968-----	57,126	63,321
1969-----	38,876	49,379
1970-----	133,427	165,769

The preponderant share (over 90 percent) of the totals shown above is accounted for by singles yarn with twist but not over 20 turns per inch (see also table 4).

Imports of woven fabrics made from cuprammonium yarns are not available from official statistics. Data, however, obtained by the Commission from importing concerns, are believed to include over 90 percent of the woven cuprammonium fabrics imported * * *. Such imports increased from * * * 1965 to * * * 1967; thereafter, they declined to * * * 1970. Nearly all the imports were from Japan. Lining fabrics of cuprammonium fibers, the principal end use of domestically produced cuprammonium yarns, were imported in increasing amounts from 1965 to 1968; in 1969 and 1970, however, imports of such fabrics were declining * * *.

Imports of broadwoven fabrics of all manmade fibers (including cuprammonium) increased from about 161 million square yards in 1965 to almost 235 million square yards in 1970. * * *

Total imports of all manmade textiles (including fibers and the fiber equivalent of yarns, fabrics, and finished articles) increased almost without interruption in each year from 1961 to 1970 (table 1). From 81 million pounds in 1961, when they were 4.4 percent of consumption, they rose to an annual rate of nearly 500 million pounds in 1968-69, when they averaged 9 percent of consumption. Imports in 1970 were 614 million pounds and accounted for over 11 percent of the consumption. Much the greater part of the increase in imports from 1965 to 1970 occurred in continuous filament yarn and in apparel (table 4).

U.S. Exports

Domestic exports of continuous filament cuprammonium yarns are not separately recorded but are believed to be negligible, if any. Exports of regular and intermediate tenacity rayon continuous yarns (which would include cuprammonium yarns) since 1965 are shown in the following table.

Regular and intermediate tenacity rayon continuous yarns:
U.S. exports, 1965-70

Year	Quantity	Value
	<u>1,000 pounds</u>	<u>1,000 dollars</u>
1965-----	1,976	1,291
1966-----	1,489	1,027
1967-----	1,336	1,048
1968-----	1,130	739
1969-----	2,400	1,356
1970-----	2,253	2,403

Exports of all manmade fibers and manufactures, as shown in table 1, have been at the rate of 200 million pounds to 500 million pounds a year and have been the equivalent of 7 to 10 percent of the production of manmade fibers. The exports consist in large part of grouped filaments, yarn, staple (noncellulosic), and waste.

Market Factors Affecting the Use of Cuprammonium Yarns and Fabrics

The petitioning workers claimed that cuprammonium yarn has unique characteristics which makes competition between it and other manmade fiber yarns limited. The petitioners also stated that the principal competition for cuprammonium yarn came from the Far East. Japan is the only producer of cuprammonium fibers in the Far East. Its exports of cuprammonium yarns to the United States since 1965 are shown in the following table.

Cuprammonium continuous yarns: Japan's exports to the United States

Year	Pounds <u>1/</u>	Dollars <u>1/</u>
1965-----	158	322
1966-----	251	1,453
1967-----	689	2,923
1968-----	-	-
1969-----	73	515
1970: January-September-----	-	-

1/ Converted from kilograms and yen.

From the above figures it would appear that the imports of cuprammonium yarn from Japan have been miniscule.

The company manufacturing cuprammonium yarns contends that the competitive factor partially responsible for closing its cuprammonium plant was imports of fabric made of such yarns. The imports of cuprammonium rayon fabrics by the major importing concerns have declined steadily in recent years; * * *.

Former buyers of cuprammonium yarns from the domestic producer indicate they reduced their purchases of such yarns largely because of the market conditions of the last 5 years. Such conditions include the decline in demand for cuprammonium or "Bemberg" linings in better quality suits and the use of other manmade fibers for the same purposes as cuprammonium. The buyers mentioned other major reasons for curtailing their purchases of cuprammonium such as (1) other fibers flowed more smoothly, especially on weaving machines, and (2) many articles were being made that did not need linings, for example, double-knit apparel goods and laminated goods. None of the buyers purchased imported cuprammonium continuous filament yarns before the American Bemberg Plant closed; the buyers claim, however, that should cuprammonium yarn production again commence they would resume domestic purchases because of the processing advantages of domestic yarn, assured quality, and immediate availability.

Importers regard competition for cuprammonium yarns as being caused primarily by factors other than competition from lower-priced imported cuprammonium yarns and fabrics. A principal factor, they contend, is competition from other manmade fibers. Cheaper linings of viscose and acetate have been substituted for cuprammonium in some uses; viscose, moreover, processes better on weaving machines and acetate is not as abrasive as cuprammonium. Piece-dyed polyester is regarded as almost equivalent to yarn-dyed cuprammonium in a number of uses such as dress goods, sportswear, and knitwear; in addition, the price of polyester, once much higher than cuprammonium, has now reached about

the same level. A second factor is the switch to types of knit outerwear which do not need lining. A third factor is a general market trend in fashion from traditional wear (lined suits, smooth fabrics, etc.) to modish wear (dungarees, bulky fabrics, see-throughs, etc.), especially among teenagers and young adults.

The average ultimate user, the individual consumer, knows very little about cuprammonium or "Bemberg" yarn and fabric. Those familiar with it regard "Bemberg" as a cheaper substitute for silk. These individuals will usually purchase a suit, dress, or other apparel item containing "Bemberg" for prestige purposes, but most would prefer to buy an item containing silk were it not so expensive. The "easy care" attitude now prevailing among consumers in the United States has further discouraged purchases of articles containing cuprammonium, simply because it has to be drycleaned; most consumers prefer buying something washable. Some informed consumers, however, doubtless still favor "Bemberg," which costs more than viscose and less than silk but has the look and feel of silk.

The American Bemberg Plant

Production

The American Bemberg Plant of Beaunit had been the only producer of cuprammonium fibers in the United States since 1949. Its production had consisted of four principal types (all continuous filament yarns): skein yarn, novelty skein yarn, "Cuprel," and continuous "spun" 1/ yarn. * * *

* * * * *

Closing announcements

Beaunit Corp., a subsidiary of the El Paso Natural Gas Co., announced in the Daily News Record of December 7, 1970, that it--

. . . will suspend operations at the Bemberg cuprammonium rayon plant in Elizabethton, Tenn., effective Dec. 19.

About 350 employees will be affected by the shutdown. The move was necessitated by "general economic conditions, changes in men's fashions and severe competition from Far Eastern imports."

A second announcement in the same publication dated February 24, 1971, stated--

El Paso Natural Gas Co. has sold the real estate plant and equipment of the American Bemberg facility of Beaunit Corp., a subsidiary, to Senior State Corp., New York.

The facility, Elizabethton, Tenn., produced cuprammonium rayon until it was closed Dec. 19.

1/ This is the company's designation. It, too, is a continuous filament yarn.

STATISTICAL APPENDIX

Table 1.--Manmade fiber textile materials: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1961-70

Year	Production <u>1/</u>	Imports <u>2/</u>	Exports <u>2/</u>	Apparent consumption	Ratio imports to consumption
	Million pounds	Million pounds	Million pounds	Million pounds	Percent
1961-----	1,995.4	81.4	230.8	1,846.0	4.4
1962-----	2,435.3	124.1	268.5	2,290.0	5.4
1963-----	2,696.7	186.3	266.4	2,616.6	7.1
1964-----	3,078.0	208.4	307.9	2,978.5	7.0
1965-----	3,589.4	238.5	294.1	3,533.8	6.7
1966-----	3,934.2	338.3	326.4	3,946.1	8.6
1967-----	4,050.2	340.1	324.5	4,065.8	8.4
1968-----	5,226.4	497.1	366.0	5,357.5	9.3
1969-----	5,605.5	477.3	422.4	5,660.4	8.4
1970-----	5,425.2	614.3	487.4	5,552.1	11.1

1/ Consists of filaments, strips, and fibers (schedule 3, part 1, subpart E, headnote 2, TSUSA-1971).

2/ Includes manufactures of manmade fibers. Compiled partly from the Cotton Situation, U.S. Department of Agriculture, and partly from official statistics of the U.S. Department of Commerce.

Source: Production, Textile Organon; imports and exports, as noted.

Table 2.--Textile fibers: U.S. mill consumption, by kinds, calendar years 1961-70

(In millions of pounds)

Year	Cotton	Wool	Manmade fibers			Total	Flax and silk	All fibers
			Rayon and acetate	Noncellulosic fibers	Manmade fiber waste			
1961--	4,081.5	412.1	1,128.0	861.4	65.2	2,054.6	12.7	6,560.9
1962--	4,188.0	429.1	1,263.4	1,075.6	73.8	2,412.8	12.4	7,042.3
1963--	4,040.2	411.7	1,440.2	1,257.5	77.3	2,775.0	13.1	7,240.0
1964--	4,244.4	356.7	1,516.3	1,554.8	91.1	3,162.2	14.2	7,777.5
1965--	4,477.5	387.0	1,550.4	1,961.5	102.2	3,614.1	13.3	8,491.9
1966--	4,630.5	370.2	1,591.1	2,299.1	98.8	3,989.0	14.7	9,004.4
1967--	4,423.0	312.5	1,500.2	2,620.1	124.0	4,244.3	10.4	8,990.2
1968--	4,146.5	329.7	1,688.0	3,462.0	155.4	5,305.4	12.2	9,793.8
1969--	3,932.7	312.8	1,614.9	3,798.0	136.4	5,549.3	9.9	9,804.7
1970--	3,818.8	240.4	1,413.6	3,948.6	132.7	5,494.9	7.9	9,558.0

Source: Compiled from official statistics of the U.S. Department of Agriculture.

Table 3.--Manmade fibers: U.S. production, by types, 1961-70
(Quantity in millions of pounds)

Year	Staple and tow				Yarn				Total manmade fiber	
	Rayon	Acetate	Noncel- lulosic	Total	Rayon	Acetate	Noncel- lulosic	Total		
1961	400.5	53.0	253.7	707.2	392.7	249.0	497.2	1,138.9	149.3	1,995.4
1962	500.0	46.0	345.5	891.5	420.4	305.7	627.4	1,353.5	190.3	2,435.3
1963	579.1	60.0	443.2	1,082.3	400.2	309.5	712.8	1,422.5	191.9	2,696.7
1964	594.3	60.0	559.1	1,213.4	411.6	365.9	847.6	1,625.1	239.5	3,078.0
1965	648.0	54.0	782.4	1,484.4	433.8	391.2	997.7	1,822.7	282.3	3,589.4
1966	659.2	60.0	918.1	1,637.3	405.5	394.3	1,164.7	1,964.5	332.4	3,934.2
1967	603.4	50.0	1,137.9	1,791.3	309.1	425.6	1,215.4	1,950.1	308.8	4,050.2
1968	739.1	50.0	1,562.3	2,356.4	365.3	439.9	1,662.1	2,467.3	402.7	5,226.4
1969	758.8	43.0	1,761.0	2,562.8	319.2	455.2	1,766.9	2,541.3	501.0	5,605.5
1970	607.4	35.0	1,796.8	2,439.2	267.6	463.2	1,788.4	2,519.2	466.8	5,425.2

Source: Textile Organon.

Table 4.--Manmade fiber textiles: U.S. imports for consumption, by kinds, 1965-70

(In millions of pounds)

Year	Staple fiber	Yarn			Woven fabric	Apparel	Other textile articles	Total
		TSUS items: 310.01 and 310.02 ^{1/}	Other	Total				
1965--	128.8	13.5	1.9	15.4	26.1	30.6	37.6	238.5
1966--	176.6	13.6	6.2	19.8	44.2	38.4	59.3	338.3
1967--	148.7	22.0	10.6	32.6	32.7	60.1	66.0	340.1
1968--	214.9	46.3	23.1	69.4	38.1	91.3	83.4	497.1
1969--	156.1	34.4	19.2	53.6	48.3	143.5	75.8	477.3
1970--	135.5	123.1	25.7	148.8	54.9	187.9	87.2	614.3

^{1/} Singles, wholly of continuous manmade fibers, with twist but not over 20 turns per inch. The types of cuprammonium rayon yarns produced by the Beaunit Corp., if imported, would be covered under these TSUS items.

Source: Compiled partly from the Cotton Situation, U.S. Department of Agriculture, and partly from official statistics of the U.S. Department of Commerce.

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