of power to inhibit entry into this so-called market [i. e., flexible packaging materials], comprising widely disparate products, is no indicium of absence of power to exclude competition in the manufacture and sale of cellophane." The record shows the multiplicity of competitors and the financial strength of some with individual assets running to the hundreds of millions. Findings 66–72. Indeed, the

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trial court found that du Pont could not exclude competitors even from the manufacture of cellophane, Finding 727, an immaterial matter if the market is flexible packaging material. Nor can we say that du Pont's profits, while liberal (according to the Government 15.9% net after taxes on the 1937–1947 average), demonstrate the existence of a monopoly without proof of lack of comparable profits during those years in other prosperous industries. Cellophane was a leader over 17%, in the flexible packaging materials market. There is no showing that du Pont's rate of return was greater or less than that of other producers of flexible packaging materials. Finding 719.

[25, 26] The "market" which one must study to determine when a producer has monopoly power will vary with the part of commerce under consideration. The tests are constant. That market is composed of products that have reasonable interchangeability for the purposes for which they are produced—price, use and qualities considered. While the application of the tests remains uncertain, it seems to us that du Pont should not be found to monopolize cellophane when that product has the competition and interchangeability with other wrappings that this record shows.

On the findings of the District Court, its judgment is affirmed.

Affirmed.

Mr. Justice CLARK and Mr. Justice HARLAN took no part in the consideration or decision of this case.

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Appendix A.

VIII. Results of du Pont's Competition With Other Materials.

(Findings 279–292.)

279. During the period du Pont entered the flexible packaging business, and since its introduction of moistureproof cellophane, sales of cellophane have increased. Total volume of flexible packaging materials used in the United States has also increased. Du Pont's relative percentage of the packaging business has grown as a result of its research, price, sales and capacity policies, but du Pont cellophane even in uses where it has competed has not attained the bulk of the business, due to competition of other flexible packaging materials.

280. Of the production and imports of flexible packaging materials in 1949 measured in wrapping surface, du Pont cellophane accounted for less than 20% of flexible packaging materials consumed in the United States in that year. The figures on this are:

	Thousands of Square Yards
Glassine, Greaseproof and Vegetable Parchment Papers	3,125,826
Waxing Papers (18 Pounds and over)	4,614,685
Sulphite Bag and Wrapping Papers	1,788,615
Aluminum Foil	1,317,807
Cellophane	3,366,068
Cellulose Acetate	133,982
Pliofilm, Polyethylene, Saran and Cry-O-Rap	373,871
Total	14,720,854
Total du Pont Cellophane Production	2,629,747
Du Pont Cellophane Per Cent of Total United States Production and Imports of These Flexible Packaging Materials	17.9%

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281. Eighty percent of cellophane made by du Pont is sold for packaging

in the food industry. Of this quantity, 80% is sold for packaging baked goods, meat, candy, crackers and biscuits, frozen foods, fresh vegetables and produce, potato chips, and "snacks," such as peanut butter sandwiches, popcorn, etc. A small amount is sold for wrapping of textiles and paper products, etc. Largest non-food use of cellophane is the overwrapping of cigarette packages.

The breakdown of du Pont cellophane sales for the year 1949 was:

Use	*Sales (M pounds)*	*Percent of Total Sales*
TOBACCO		
Cigarettes	20,584	11.6
Cigars	3,195	1.8
Other Tobacco	1,657	0.9
Total	25,436	14.3
FOOD PRODUCTS		
Candy & Gum	17,054	9.6
Bread & Cake	40,081	22.5
Crackers & Biscuits	12,614	7.1
Meat	11,596	6.5
Noodles & Macaroni	2,602	1.5
Tea & Coffee	1,380	0.8
Cereals	2,487	1.4
Frozen Foods	5,234	2.9
Dried Fruit	333	0.2
Nuts	2,946	1.7
Popcorn & Potato Chips	6,929	3.9
Dairy Products	3,808	2.1
Fresh Produce	4,564	2.6
Unclassified Foods	8,750	4.9
Total	120,478	67.7
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MISCELLANEOUS		
Hosiery	1,370	0.7
Textiles	3,141	1.8
Drugs	1,031	0.6
Rubber	317	0.2
Paper	2,736	1.5
Unclassified	18,602	10.5
Total	27,197	15.3
Domestic Total	173,011	97.3
Export	4,820	2.7
Grand Total	177,831	100.0

282. Sales of cellophane by du Pont in 1951, by principal uses, were approximately as follows:

	Pounds
White bread ....between 8 and	9,000,000
Specialty breads	15,700,000
Cake and other baked sweet goods	22,000,000
Meat	19,000,000
Candy (including chewing gum)	20,000,000
Crackers and biscuits	17,000,000
Frozen foods	5,800,000
Cigarettes	23,000,000

283. 1949 sales of 19 major representative converters whose business covered a substantial segment of the total converting of flexible packaging materials for that year showed the following as to their sales of flexible packaging materials, classified by end use:

End Use	*Quantity (Millions sq. in.)*	*Percent of Total End Use*
BAKERY PRODUCTS		
Cellophane	109,670	6.8
Foil	2,652	.2
Glassine	72,216	4.4
Papers	1,440,413	88.6
Films	215	.0
	1,625,166	100.0
408		
CANDY		
Cellophane	134,280	24.4
Foil	178,967	32.5
Glassine	117,634	21.4
Papers	119,102	21.6
Films	484	.1
	550,467	100.0
SNACKS		
Cellophane	61,250	31.9
Foil	1,571	.8
Glassine	120,556	62.8
Papers	8,439	4.4
Films	79	.1
	191,895	100.0
MEAT AND POULTRY		
Cellophane	59,016	34.9
Foil	88	.1

End Use	*Quantity (Millions sq. in.)*	*Percent of Total End Use*
MEAT AND POULTRY		
Glassine	4,524	2.7
Papers	97,255	57.5
Films	8,173	4.8
	169,056	100.0
CRACKERS AND BISCUITS		
Cellophane	29,960	26.6
Foil	192	.2
Glassine	11,253	10.0
Papers	71,147	63.2
Films	8	.0
	112,560	100.0
FRESH PRODUCE		
Cellophane	52,828	47.2
Foil	43	.1
Glassine	96	.1
Papers	51,035	45.6
Films	7,867	7.0
	111,869	100.0

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FROZEN FOOD EXCLUDING DAIRY PRODUCTS		
Cellophane	31,684	33.6
Foil	629	.7
Glassine	1,943	2.1
Papers	56,925	60.3
Films	3,154	3.3
	94,335	100.0

284. About 96% of packaged white bread produced in the United States is wrapped in waxed paper or glassine, and about 6% in cellophane. The cellophane figure includes sales by all U. S. producers.

285. Forty-eight percent of specialty breads are wrapped in du Pont cellophane, the remainder in other cellophane or other materials. Most of this balance is wrapped in waxed paper and glassine.

286. Approximately 45% of cake and baked sweet goods packaged by wholesale bakers is wrapped in du Pont cellophane. The balance is wrapped in other cellophane or in waxed paper or glassine.

287. Between 25% and 35% of packaged candy units sold in the United States are wrapped in du Pont cellophane.

288. Of sponge and sweet crackers and biscuits combined approximately 25 to 30% of the packaged units produced in 1951 were wrapped in du Pont cellophane.

289. Du Pont cellophane at the present time is used on approximately 20 to 30% of packaged retail units of frozen foods. The remainder use waxed paper, waxed glassine, polyethylene, Pliofilm, Cry-O-Vac, or vegetable parchment.

290. Approximately 20 to 30% of packages of potato chips and other snacks are wrapped in du Pont cellophane. Most of the remainder are packaged in glassine and other flexible wraps.

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291. Approximately 4 to 6% of the packaged units of cereal are wrapped in du Pont cellophane. The principal flexible packaging materials used are waxed paper and glassine.

292. Du Pont cellophane is used as an outer wrap on the paper-foil packages for approximately 75 to 80% of cigarettes sold in the United States. Sales for this use represent about 11.6% of du Pont's total sales of cellophane.

Appendix B.

59. The accompanying Table compares, descriptively, physical properties of cellophane and other flexible packaging materials:

PHYSICAL PROPERTIES

Packaging Materials	Heat Sealability	Printability	Clarity	Tear Strength (Elmendorf)	Bursting Strength	Water Absorption in 24 hrs. Immersion	Moisture Permeability	Permeability to Gases (2)	Dimens. Change With Humid Diff.	Resistance to Grease & Oils	Wrapping Machine Running Qualities
Cellophane (plain)	Yes (if coated)	Yes	Highly Transparent	Low	High	High	High	Very Low	Large	Excellent	O.K.
Cellophane (Moisture-proof)	Yes (if coated)	Yes	Highly Transparent	Low	High	High	Low-Medium	Very Low	Large	Excellent	O.K.
Plain grease-proof paper	No	Yes	Opaque	Good	Low	High	High	Medium	Moderate	Good	O.K.
Plain Glassine	No	Yes	Commercially Transparent to Opaque	Good	Low	High	High	Low	Moderate	Good	O.K.
Lacquered Glassine	Yes	Yes	Commercially Transparent to Translucent	Good	Low	Low	Low-Medium	Low	Moderate	Good	O.K.
Waxed Glassine	Yes	(1)	Commercially Transparent to Translucent	Good	Low	Low	Low	Low	Moderate	Good	O.K.
Vegetable Parchment	No	Yes	Tends to be Opaque	Good	Good	High	High	Low	Moderate	Good	O.K.
Waxed Paper (18 lbs. or over)	Yes	(1)	Commercially Transparent	High	Good	Low	Low-Medium	High	Moderate	None	O.K.
Aluminum Foil	No	Yes	Opaque	Low	Low	Nil	Very Low	Very Low	None	Excellent	O.K.
Aluminum Foil (Heat Sealing)	Yes	Yes	Opaque	Low	Low	Nil	Nearly Nil	Very Low	None	Excellent	O.K.
Cellulose Acetate	Yes	Yes	Highly Transparent	Low	High	Low	High	Variable	Very Small	Excellent	O.K.
Pliofilm (rubber hydrochloride)	Yes (3)	Yes (3)	Highly Transparent with Slight Haze	Medium	High	Low	Medium	Low	Very Small	Excellent	Good (3)
Saran (Vinylidene Chloride)	Yes (3)	Yes (3)	Highly Transparent	High	High	Low	Very Low	Very Low	None	Excellent	Poor (3)
Polyethylene	Yes (3)	Yes (3)	Transparent with Slight Haze	High	High	Low	Medium	High	None	(4)	Poor (3)
Cry-O-Rap	Yes (3)	Yes (3)	Transparent with Slight Haze	High	High	Low	Medium	Low	None	Excellent	Poor (3)
Sulphite (high finish wrapper and label paper)	No	Yes	Opaque	High	Medium	High	Very High	High	Moderate	None	O.K.

References:

(1) Normally printed before waxing.

(2) The permeability to gases can vary greatly depending upon the gas and the humidity conditions. The levels indicated in this chart apply particularly to flavor type volatiles as found in many food products.

(3) Plastic films may require special heat sealing techniques, and printing processes or special machines.

(4) Not affected by greases but penetrated by some oils.

(5) The information on this chart is based upon the generally accepted properties of the materials listed; however, materials produced by different processes, formulations, coatings, raw materials, surface treatments, and thicknesses can show considerable variation from the properties indicated.

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Appendix C.

(Finding of Fact 130.)

1949 average wholesale prices of flexible packaging materials in the United States were:

Packaging Material	*Price per 1,000 sq. in. (cents)*	*Price per lb. (cents)*	*Yield per lb. (sq. in.)*
Saran			
100 Gauge #517	6.1	99.0	16,300
Cellulose Acetate			
.00088"	3.3	82.0	25,000
Polyethylene			
.002"—18" Flat Width	5.4	81.0	15,000
Pliofilm			
120 Gauge N 2	3.8	80.8	21,000
Aluminum Foil			
.00035"	1.8	52.2	29,200
Moistureproof Cellophane			
300 MST–51	2.3	47.8	21,000
Plain Cellophane			
300 PT	2.1	44.8	21,500
Vegetable Parchment			
27#	1.4	22.3	16,000
Bleached Glassine			
25#	1.0	17.8	17,280
Bleached Greaseproof			
25#	.9	15.8	17,280
Plain Waxed Sulphite			
25# Self-Sealing	1.1	15.2	14,400
Plain Waxed Sulphite			
25# Coated Opaque	.7	11.9	17,280
Cry-O-Rap	Sold only in converted form. No unconverted quotations.		

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Mr. Justice FRANKFURTER, concurring.

I concur in the judgment of the Court and in so much of Mr. Justice REED'S opinion as supports the conclusion that cellophane did not by itself constitute a closed market but was a part of the relevant market for flexible packaging materials.

Mr. Justice REED has pithily defined the conflicting claims in this case. "The charge was monopolization of cellophane. The defense, that cellophane was merely a part of the relevant market for flexible packaging materials." Since this defense is sustained, the judgment below must be affirmed and it becomes unnecessary to consider whether du Pont's power over trade in cellophane would, had the defense failed, come within the prohibition of "monopolizing" under § 2 of the Sherman Act. Needless disquisition on the difficult subject of single-firm monopoly should be avoided since the case may be disposed of without consideration of this problem.

The boundary between the course of events by which a business may reach a powerful position in an industry without offending the outlawry of "monopolizing" under § 2 of the Sherman Act and the course of events which brings the attainment of that result within the condem-