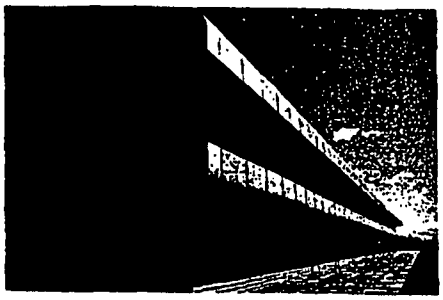
1977 sales. Carbon pitch sales to the aluminum industry increased by 10%, and increased penetration was achieved in the commercial carbon market (primarily for electrodes sold to the steel industry). Creosote sales showed a slight decline in pole/piling markets. Railroad demand for creosote-treated crossties remained strong.

- Process equipment changes, winter weather and plant malfunctions curtailed chemical production and reduced the overall capacity utilization rate to about 65% in 1978. Price increases were not sufficient to offset rising costs. Reduced unit sales of phthalic anhydride, resorcinol, maleic anhydride and other chemicals were not offset by improved demand for naphthalene. At year end, the chemical plants affected in 1978 were capable of full production.
- Polyester resin volume increased by 35% in 1978 because of the addition of a line of fire-retardant resins and strong demand for reinforced plastics, particularly in the automotive market. Alkyd resins and pipeline enamel coatings also contributed to the improved performance in the Company's coatings and resins operations.
- Sales of roofing and maintenance materials benefited from the high volume of new construction during the year. Good income improvement was recorded despite shortages of coal tar pitches caused by the coal strike. Cold-applied roofing system sales were more than double the 1977 level.





Koppers new line of fire-retardant polyester resins adds a new capability in architectural building materials.

A new cold-applied multiple membrane roofing system combines lower labor costs with faster application.

Backlog

Organic Materials 1978 year-end backlog was $84.6 million, versus $73.7 million a year earlier. The backlog normally increases substantially during the month of January, and at the close of January, 1979, the backlog was $251.3 million, versus $233.6 million a year earlier. This is derived from the detailed analysis of each customer's expected 1979 requirements. The total $84.6-million backlog is expected to be shipped during 1979, although most unfilled orders are subject to cancellation at the option of the buyer.

Organic Materials Business

Organic Materials is composed of interrelated businesses that have as a common denominator the technology associated with the manufacture and use of products derived from coal. More than half of the present product mix is manufactured from coal or such derivative products as coal tar and benzene. Other lines have been added to fill out specialty markets served. Four operating divisions and three wholly owned subsidiaries make up the Group.

Industrial Products Division operates 10 tar processing plants and four coke plants and is a major producer of such coal tar derivatives as:

Coal tar pitches used by the aluminum and commercial carbon industries as binders in the manufacture of electrodes;

Creosote, a complex mixture of chemicals, used primarily as a wood preservative, about half of which goes into Koppers Forest Products operations;

Chemical oil, which serves as raw material used in the Company's chemicals operations; and

Foundry coke, one of the principal products used for melting metal in foundries and other industrial operations.

A related subsidiary, Thiem Corporation, produces binder systems and coatings for molding metal in foundries, as well as refractory systems for casting iron and steel.

Chemical Division operates four plants and is a major supplier of naphthalene (used to produce phthalic anhydride and agricultural chemicals); phthalic anhydride (used in the production of alkyd and polyester resins

Organic Materials
1978 Sales by End Market

	($ Millions)	%
Chemical, Plastics and Rubber	$171.4	36
Iron and Steel	99.7	21
Architectural Construction	72.6	15
Nonferrous Metals and Mining	53.9	11
Engineered Construction	26.8	6
Lumber and Wood Products	15.3	3
Transportation	14.9	3
Utilities	9.9	2
Others	18.0	3
	$482.5	100