

company is in market areas not previously served by Koppers.

- Demand was strong in virtually all regional markets served by Koppers as the result of improved activity in private construction. Although government highway maintenance and construction remained weak in New York and Pennsylvania, business was good in the South and West.

- The Surface Transportation Assistance Act, passed in December, 1978, continues the Federal Highway Trust Fund for four more years. State funding, with the exception of the Southeast, continued to be inadequate. Further deterioration of highways, however, is raising the priority for maintenance and upgrading—a situation that should favor Koppers.

Backlog

Road Materials backlog at the end of 1978 was \$76.8 million, versus \$28.6 million a year earlier. The normal tendency is for this backlog to increase during the first six months of the year and to decline thereafter. Orders in the backlog are considered firm, and more than 95% of the year-end backlog is expected to result in 1979 sales.

Road Materials Business

Road Materials is made up of 139 facilities that serve roadbuilding and construction markets in 14 states. More than 80% of sales are from aggregates (crushed stone, sand, gravel, and slag), bituminous concrete, ready-mix concrete and paving services. The balance is from bituminous paving materials (road asphalt and asphalt emulsions).

About 60% of Road Materials sales result from publicly funded road maintenance and construction projects. The remainder is from privately funded work in many segments of the construction market.

Transportation is a major factor in total product cost. The delivered price of crushed stone doubles when transported 20 to 30 miles. Aggregate markets, therefore, are localized, and the Company generally supplies markets near its quarries in California, Colorado, Georgia, Indiana, Kansas, Kentucky, New York, Ohio, Pennsylvania, Tennessee and Virginia. In late 1978, Koppers completed a definitive merger agreement with Ivy Corporation, Atlanta, Georgia. The merger

was approved by Ivy shareholders in early 1979 and added nine aggregate-producing locations in Georgia along with six facilities in the Southeast and Southwest involved with the production and distribution of welded wire fabric and other concrete reinforcing and forming accessories.

Raw Materials and Fuel

Aggregate raw materials consist of sand and gravel, granite, limestone, trap rock and sandstone, which come from quarries, mines or Great Lakes dredging operations. Most of Koppers quarries are on land either owned by the Company or held under long-term leases. It is estimated that the present reserves of aggregates will be sufficient for more than 25 years at current production rates. Other major raw materials include asphalt, slag and cement, which are purchased from oil companies, steel producers and cement suppliers. Adequate supplies of raw materials and fuel are expected to continue. Fuel oil satisfies nearly half of Road Materials energy requirements, natural gas and diesel fuel each about 20%.

Competitive and Seasonal Conditions

Road Materials operations are geographically diversified, with limited vertical integration within individual regional markets. Because mineral reserves are limited within regional areas, the Company commonly occupies a high share of those regional markets in which it competes.

Principal factors in competition are price and service. Prices for aggregates are determined by local conditions and are not subject to wide fluctuations created by nationwide demand, supply and capacity factors. Increasingly, this business has become service-oriented, calling for dependable on-time delivery from a guaranteed source of supply.

Road Materials business is highly seasonal, with more than 80% of sales occurring during the peak construction period from May 1 to November 30.

Product inventories are controlled at volumes that reflect a balance between the most efficient production level and supplying peak demand. Inventories normally grow substantially during spring months in anticipation of high summer demand. It is not customary, however, to carry inventories or provide financing for customers.



Modern aggregate facilities provide crushed stone for roadbuilding and paving.

Paving services in Western markets include recreational applications.

Road Materials

1978 Sales by End Market	(\$ Millions)	%
Engineered Construction	\$232.5	76
Architectural Construction	58.7	19
Agriculture	3.3	1
Transportation	2.9	1
Other	6.7	3
	\$304.1	100