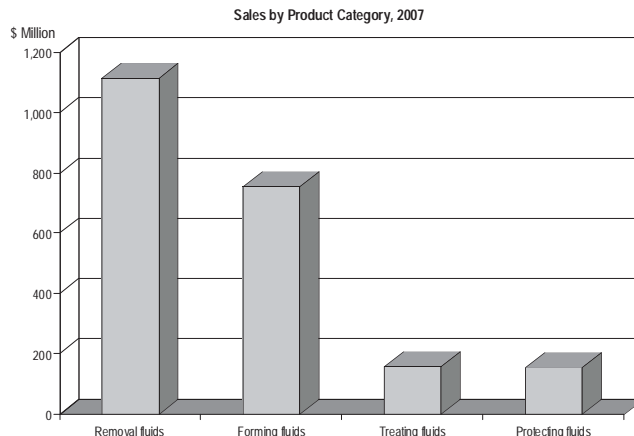


Metalworking Fluids 2008: North America Market Analysis and Opportunities

2008 Fact Sheet

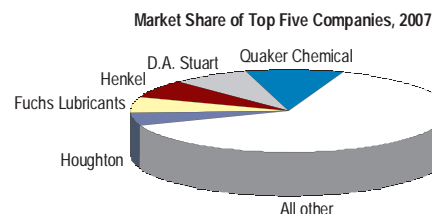
The Market

Total consumption of metalworking fluids in the North American industry is estimated at 782,300 tonnes in 2007, valued at \$2,178.1 million. A rough estimate of the total volume of additives used to formulate metalworking fluids in North America is 188,000 tonnes. Removal fluids represent the largest category with 354,600 tonnes, standing for 45% of the total volume and 51% of the total value.



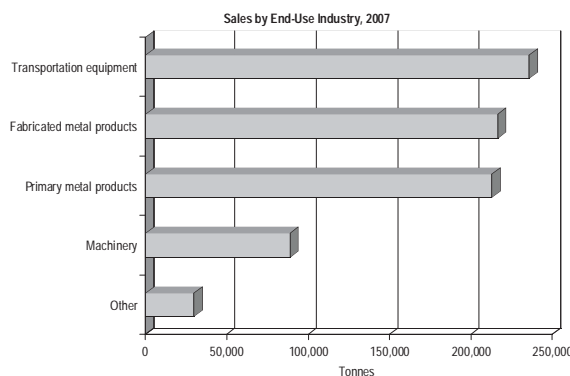
Companies

The leading North American suppliers of metalworking fluids on a volume basis are Quaker Chemical and D.A. Stuart, with 10% and 8% of the total volume, respectively. Both companies are broad-based suppliers, with especially strong positions in forming fluids. Henkel and Fuchs follow.



End-use Industry

With around 170,000 establishments involved in metalworking, the end-use market for metalworking fluids is very fragmented. However, the number of establishments with more than 20 employees is considerably less. Of the seven end-use industries detailed in this study, the transportation equipment industry is the leading consumer of metalworking fluids in North America in 2007, accounting for an estimated 235,600 tonnes, valued at \$656.6 million and representing 30% of the total.



Future Outlook

The average annual consumption of metalworking fluids in North America is forecast to remain flat during the 2007 to 2012 forecast period. The major reasons for this projection include greater use of longer lasting synthetic and semisynthetic fluids, increased recycling, better application technology, more efficient use of fluids, higher performing machine tools, nontraditional cutting methods and other technology advances, and the (slow) increase of chemical management services.

