

Executive Summary

The U.S. Consumer Product Safety Commission (CPSC) received a request from Michael Fox, Ph.D. that the Commission ban sulfuric acid drain openers (SADOs) for use by consumers, or in the alternative, that the Commission require SADOs for consumers be packaged in single-use containers and be limited to a maximum sulfuric acid concentration of 84 percent. This request was docketed under the Federal Hazardous Substances Act (FHSA) as Petition No. HP 04-2 on 1 April 2004, and a Federal Register notice soliciting comments was published 5 May 2004 (69 FR 25069).

Chemical drain opener products containing concentrated sulfuric acid have the potential to cause severe injuries from dermal or ocular exposure, inhalation of fumes, or ingestion. However, the possible chemical substitutes for sulfuric acid-based products, such as hydrochloric acid or formulations containing sodium or potassium hydroxide, especially products containing higher concentrations of hydroxide, also have the potential to cause severe injuries. Injury and exposure data show that each type of chemical drain opener is associated with a risk of injury, with medical outcomes ranging from no effect to major effect. There are also reports of fatalities from exposure to chemical drain opener products, including a child who ingested an alkaline-based product; another case involved exposure to fumes from use of a combination of a sulfuric acid based product and an alkaline product.

Analysis of some specific incidents shows that exposures to a wide variety of chemical drain opener products occurred through a variety of situations. Prompt treatment (*i.e.*, washing with water and seeking medical attention) can greatly reduce the severity of injury from chemical drain opener exposures, and these cases also showed that in many instances, consumers responded appropriately to exposure, such as by initiating washing or removing the victim from the exposure, and by seeking medical care.

The number of sulfuric acid drain opener exposures, as the percentage of exposures with known product type, is consistent with the estimated market share for these products (*i.e.*, sulfuric acid-based products account for 3-10 percent of chemical drain opener treatments used by consumers, and sulfuric acid drain openers are associated with about 6-10 percent of incidents).

If SADOS were banned, the staff believes that consumers are likely to substitute other chemical drain openers for SADOs. Therefore, any reduction in societal costs associated with all drain openers might be low. This might be especially true if consumers substituted the higher concentration alkaline products for SADOs. Effectively, a ban on SADOs might simply shift much of the societal costs now associated with SADOs to other chemical drain openers.

Thus, the staff believes that the available information does not support a conclusion that a ban of these products is necessary to protect public health and safety. Further, the staff does not believe that restrictions on package size or product formulation would necessarily reduce or eliminate the risk or severity of injury since exposure to a relatively small volume of a sulfuric acid product or to a product containing 84 percent sulfuric acid would likely still require prompt washing and treatment in order to lessen the risk and severity of injury. Therefore, the staff recommends that the Commission deny the petition.