

02/10 Sulfuric acid based drain cleaner causes serious burns

Incident

A worker received third degree burns to 13 percent of his body when using a new drain cleaning product containing 98 percent sulfuric acid. In an attempt to unblock a public toilet drain, workers placed a hose into the drain and poured the cleaning product through a funnel. Subsequently, the acid spat back onto the workers. Despite prompt attempts to wash off the acid, one of the workers received serious burns. The Material Safety Data Sheet (MSDS) and product label did not provide adequate directions, safety information and statements to inform the user of the risks involved when using the product.

Contributing Factors

- Sulfuric acid is a high-risk chemical for use in drain cleaning products. It is known to get dangerously hot and to erupt when added to water. It may also react with sulfides, resulting in the release of highly toxic hydrogen sulfide.
- The manufacturer/supplier had not provided adequate directions, safety information and statements to inform the user of the risks involved when using the product.
- The employer had not carried out a pre-purchase risk assessment on the hazardous substance and considered less hazardous alternatives or chemical-free methods of clearing the drain.
- The workers did not use adequate personal protective equipment.

Recommendations

1. Sulfuric acid based drain cleaners should be avoided, due to the intense heat produced and the possible reaction with sulfides.
2. Manufacturers or importers of hazardous substances should ensure that the design of the product is such that it is safe for the intended use.
3. Manufacturers or suppliers must provide adequate directions, safety information and statements to inform users of the risks.
4. Manufacturers or suppliers must provide a copy of the MSDS when they supply a substance for the first time.
5. Employers must carry out a pre-purchase risk assessment on hazardous substances and less hazardous substances or chemical-free methods should be considered as part of this.
6. Employers must keep a register of hazardous substances, including copies of MSDS.
7. Employers must ensure employees receive adequate training and keep training records.
8. Employees must use the adequate personal protective clothing and equipment that is provided.

Further information

- [National Code of Practice - Control of Hazardous Substances](#) [NOHSC: 2007 (1994)]
- [Guidance Note for the Assessment of Health Risks Arising from Hazardous Substances in the Workplace](#) [NOHSC: 3017 (1994)]
- Occupational Safety & Health Regulations 1996 – Part 5

Further information can be obtained from WorkSafe's internet site www.worksafe.wa.gov.au or by contacting customer service on 1300 307 877 or email safety@commerce.wa.gov.au

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