LANXESS
Energizing Chemistry

Trimethylolpropane

This document provides a brief description of trimethylolpropane, its uses, and the potential hazards associated with short and long term exposure. Environmental impact information for accidental releases is included. This information is general in nature and is not intended as a replacement for the safety data sheet (SDS), product label and other safe handling literature. For additional information consult the LANXESS safety data sheet.

Identification

Product Name:	Trimethylolpropane
Chemical Name:	2,2-Dihydroxymethylbutanol-1
Synonym(s):	1,1,1-Trimethylolpropane 1,1,1-Tris(hydroxymethyl)propane 2,2-Bis(hydroxymethyl)-1-butanol Hexaglycerol
CAS Number:	77-99-6

Description

Overview: Trimethylolpropane is a white solid in flake or powder form at ambient temperatures. The chemical is shipped and used in a liquid (hot melt) form. Liquid form trimethylolpropane is colorless and has a mild odor.

Uses: Trimethylolpropane is used as an additive or intermediate in the manufacture of alkyd and polyester resins, synthetic lubricants, polyurethane foams, lacquers, glues, adhesives, dyes, pigments, paints and silicone products.

Properties:

Melting Point:	138.2°F (58°C) Approx.
Boiling Point:	579°F (304°C)
Flash Point:	372°F (189°C) Soluble
Solubility in Water:	

Potential Human Health Effects

Occupational Exposure

Potential for occupational exposure to trimethylolpropane exists during manufacture, at transloading, storage and staging areas and in mixing or sampling operations. A much lower potential for exposure exists in facilities using the chemical in closed manufacturing processes by trained personnel.

Employee Training

Workers handling trimethylolpropane are trained to implement proper handling procedures and to understand the potential health and physical hazards of this product. A NIOSH approved air-purifying particulate respirator may be required in work environments with insufficient ventilation. In addition, LANXESS recommends that goggles, permeation resistant clothing, gloves and foot protection be worn when handling trimethylolpropane.

Consumer Exposure

LANXESS does not sell trimethylolpropane to the general public. Consumers may be exposed to trace amounts of the chemical from the handling of products manufactured using the chemical as an ingredient.

Short-Term Health Effects

Inhalation or ingestion of trimethylolpropane dust may induce a cough. Contact with heated (liquid) trimethylolpropane may cause thermal burns. Mechanical irritation may occur when in contact with the eyes.

Long-Term Health Effects

No applicable information was found concerning any adverse chronic health effects from overexposure to this product.

Physical Hazards

Trimethylolpropane is stable under normal conditions of use. Avoid contact with moisture in storage. Avoid contact with phosphorus compounds, nitric acid, hydrogen peroxide and strong oxidizing agents. Heating to decomposition may release carbon monoxide, carbon dioxide and other potentially toxic fumes.

Potential Environmental Impact

Trimethylolpropane is readily biodegradable. An accidental release to water may pose a danger to fish (low toxicity), invertebrates (low toxicity) and other aquatic organisms (low toxicity) prior to degradation. Bioaccumulation is not expected.

Conclusion

Under normal conditions of anticipated use as described in this Product Safety Assessment, and if the recommended safe use and handling procedures are followed, trimethylolpropane is not expected to pose a significant risk to human health or the environment.

References

International Chemical Safety Card, International Programme on Chemical Safety (IPCS)

IUCLID Dataset - CAS 77-99-6, European Chemicals Bureau, European Commission

Safety Data Sheet (SDS), TRIMETHYLOLPROPANE PURE LIQUID, LANXESS Corporation

MedlinePlus Medical Encyclopedia, U.S. National Library of Medicine and the National Institutes of Health

ToxNet Hazardous Substances Data Bank, U.S. National Library of Medicine, National Institutes of Health and the U.S. Department of Health and Human Services

Contact Information

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Notices

Use and Application Information