

Tetramethyl thiuram monosulfide

This document provides a brief description of tetramethyl thiuram monosulfide, 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:	Tetramethyl thiuram monosulfide
Chemical Name:	Tetramethylthiuram monosulfide
Synonym(s):	Bis(dimethylthiocarbamoyl) sulfide Bis(dimethylthiocarbamyl) monosulfide TMTM
CAS Number:	97-74-5

Description

Overview:	Tetramethyl thiuram monosulfide is a yellow solid at ambient temperatures. The chemical has a characteristic odor and is sold in powder form.		
Uses:	Tetramethyl thiuram monosulfide is sold by LANXESS for use as a vulcanization accelerator in the manufacture of rubber products.		
Properties:	Melting Point:	223°F (106°C)	
	Flash Point:	318°F (150°C)	
	Solubility in Water:	Insoluble	

Potential Human Health Effects

Occupational Exposure

Potential for exposure to tetramethyl thiuram monosulfide exists during manufacture, during transfers to storage or staging areas and while cleaning equipment used in the manufacture of rubber goods. A much lower potential for exposure exists in facilities using the chemical in closed manufacturing processes by trained personnel.

Employee Training

Workers handling tetramethyl thiuram monosulfide are trained to implement proper handling procedures and to understand the potential health and physical hazards of this product. A NIOSH approved particulate respirator is recommended for operations not contained within a closed system. In addition, LANXESS recommends that goggles, long-sleeved shirts, long pants and gloves be worn when handling tetramethyl thiuram monosulfide.

Consumer Exposure

LANXESS does not sell tetramethyl thiuram monosulfide to the general public. Rubber gloves and other goods manufactured using the chemical as an additive may retain the substance in encapsulated form. As a result, susceptible individuals may experience contact dermatitis from direct contact due to an allergic skin reaction. Skin irritation is usually temporary.

Short-Term Health Effects

Short-term contact may cause eye, skin or respiratory tract irritation. Susceptible individuals may experience an allergic skin reaction with symptoms of redness, itching and swelling. Sensitization is possible. Prolonged skin contact, inhalation or ingestion (particularly immediately before or after consuming alcohol) may cause nervous system effects with symptoms of headache, nausea, vomiting and dizziness. Symptoms of exposure may be delayed. Ingestion of tetramethyl thiuram monosulfide in sufficient quantities may cause kidney damage.

Long-Term Health Effects

Long-term overexposure to tetramethyl thiuram monosulfide may cause kidney damage.

Physical Hazards

Tetramethyl thiuram monosulfide is stable under normal conditions of use. Large concentrations of dust may be explosive. Avoid contact with strong oxidizers. Heating to decomposition may release carbon monoxide, carbon dioxide nitrogen oxide, sulfur oxides or other potentially toxic gases. Avoid heat, open flames and other potential sources of ignition.

Potential Environmental Impact

Tetramethyl thiuram monosulfide vapors released to the atmosphere will degrade rapidly. The chemical is not readily biodegradable in soil or water. An accidental release to water may pose a danger to fish (moderate toxicity), invertebrates (moderate toxicity) and other aquatic organisms (moderate toxicity) prior to degradation. Tetramethyl thiuram monosulfide has a low potential for bioaccumulation.

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, tetramethyl thiuram monosulfide is not expected to pose a significant risk to human health or the environment.

References

Safety Data Sheet (SDS), TETRAMETHYL THIURAM MONOSULFIDE, ChemAdvisor, Inc.

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

ToxNet Hazardous Substance 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

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