

2-Mercaptobenzothiazole Disulfide

This document provides a brief description of 2-Mercaptobenzothiazole Disulfide, 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:	Vulkacit DM/MG-C
Chemical Name:	Dibenzothiazyl Disulfide
Synonym(s):	2-Mercaptobenzothiazole Disulfide 2,2'-Dithiobis-benzothiazole Benzothiazolyl Disulfide Mercaptobenzothiazole Disulfide MBTS
CAS Number:	120-78-5

Description

Overview:	2-Mercaptobenzothiazole Disulfide is an odorless, pale yellow to gray powder at ambient temperatures.	
Uses:	2-Mercaptobenzothiazole Disulfide is manufactured by LANXESS for use as a vulcanization accelerator in the production of tires and other rubber products.	
Properties:	Auto-ignition:	> 689°F (365°C)
	Solubility in Water:	Soluble in cold water

Potential Human Health Effects

Occupational Exposure

Potential for occupational exposure exists during manufacture, at transloading facilities, during transfers to storage or staging areas and during the charging of mixers at operations using the product 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 2-Mercaptobenzothiazole Disulfide are trained to implement proper handling procedures and to understand the potential health and physical hazards of this product. NOISH approved respirators are recommended for product handlers. In addition, LANXESS recommends that workers wear goggles, permeation resistant clothing, gloves and foot protection when handling 2-Mercaptobenzothiazole Disulfide. Organic vapor respirators and engineering or process controls may be necessary in operations where the chemical is heated to thermal decomposition.

Consumer Exposure

LANXESS does not sell this product to the general public. Rubber goods manufactured using 2-Mercaptobenzothiazole Disulfide as an accelerator retain the substance in encapsulated form. Persons susceptible to allergic skin reactions may experience contact dermatitis as a result of direct skin contact with such products.

Short-Term Health Effects

Short-term contact with 2-Mercaptobenzothiazole Disulfide may cause skin irritation. Susceptible individuals may experience an allergic skin reaction with symptoms of redness, itching, swelling or rash. 2-Mercaptobenzothiazole Disulfide may be irritating to eyes with symptoms of redness, tearing, stinging and swelling. Inhalation of 2-Mercaptobenzothiazole Disulfide may cause irritation of the upper respiratory tract with symptoms of coughing and sore throat. 2-Mercaptobenzothiazole Disulfide is not expected to be harmful if swallowed.

Long-Term Health Effects

Long-term or repeated contact with 2-Mercaptobenzothiazole Disulfide may cause skin sensitization.

Physical Hazards

2-Mercaptobenzothiazole Disulfide is a stable, combustible solid at room temperature. Avoid contact with acids and strong oxidizing agents. High concentrations of 2-Mercaptobenzothiazole Disulfide dust may form explosive mixtures with air. Heating to decomposition may release carbon oxides, nitrogen oxides, sulfur oxides and other toxic fumes. Exposure to heat, open flames and other potential sources of ignition should be avoided.

Potential Environmental Impact

2-Mercaptobenzothiazole Disulfide released to air will degrade quickly. A release to water will degrade slowly in the environment and may adsorb to suspended soils and sediments. The chemical may pose a danger to fish (moderate to high toxicity), invertebrates (low toxicity) and aquatic plants (low toxicity) prior to degrading. 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, 2-Mercaptobenzothiazole Disulfide 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)

Safety Data Sheet (SDS), Vulkacit DM/MGC, 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

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