LANXESS
Energizing Chemistry

Vulkacit Merkapto

This document provides a brief description of Vulkacit Merkapto, 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 Merkapto
Chemical Name:	2-Mercaptobenzothiazole
Synonym(s):	2(3H)-Benzothiazolethione 2-Benzothiazolethiol Benzothiazole-2-thiol MBT
CAS Number:	149-30-4

Description

Overview: Vulkacit Merkapto is a yellow solid at ambient temperatures. The chemical is sold by LANXESS in powder form with a mild, pungent odor.

Uses: Vulkacit Merkapto is manufactured by LANXESS for use as a vulcanization accelerator in the production of tires and other rubber products. The chemical is also used as a mildewicide in the manufacture of textiles, paper sizings and water-based adhesives; and as a corrosion inhibitor in cutting oils and petroleum products.

Properties:

Melting Point:	>358°F (181°C)
Flash Point:	392°F (200°C)
Solubility in Water:	Low

Potential Human Health Effects

Occupational Exposure

Potential for exposure exists during manufacture, at transloading facilities, during transfers to storage or staging areas and—in its application as a vulcanization accelerator in the production of rubber—during the charging of mixers.

Employee Training

Workers handling Vulkacit Merkapto are trained to implement proper handling procedures and to understand the potential health and physical hazards of this product. NOISH approved, air-purifying particulate respirators are recommended for product handlers. In addition, LANXESS recommends that workers wear goggles, long-sleeved shirts, long pants and gloves when handling Vulkacit Merkapto to minimize skin and eye contact. Organic vapor respirators and engineering or process controls may be necessary in operations where the chemical is heated to thermal decomposition.

Consumer Exposure

LANXESS Corporation does not sell this product to the general public. Rubber goods using Vulkacit Merkapto as an accelerator retain the substance in encapsulated form in the final product. Persons susceptible to allergic skin reactions may experience “tennis shoe” dermatitis as a result of direct skin contact with shoes, elastic waistbands and other products containing the chemical. Skin irritation is typically temporary.

Short-Term Health Effects

Short-term contact with Vulkacit Merkapto may cause mild skin or eye irritation. Inhalation of Vulkacit Merkapto dust may cause respiratory tract irritation, with symptoms of coughing and a sore throat. Susceptible individuals may experience an allergic reaction from direct skin contact, with symptoms of redness, itching, swelling and rash. Vulkacit Merkapto is not expected to be harmful if swallowed.

Long-Term Health Effects

Long-term or repeated contact with Vulkacit Merkapto may cause skin sensitization.

Physical Hazards

Vulkacit Merkapto is a stable, non-volatile solid at room temperature. Avoid contact with strong oxidizing agents. Large concentrations of Vulkacit Merkapto dust may be explosive. Exposure to heat, open flames and other potential sources of ignition should be avoided.

Potential Environmental Impact

Vulkacit Merkapto is not biodegradable but the chemical does break down into biodegradable substances with prolonged exposure to water and/or light. Vulkacit Merkapto may pose a potential danger to fish (slight toxicity), invertebrates (moderate to high toxicity) and aquatic plants (moderate to high toxicity) prior to degrading. Accumulation in the environment 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, Vulkacit Merkapto 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 MERKAPTO, 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

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