

# 2-Mercaptobenzothiazole zinc salt

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This document provides a brief description of 2-mercaptobenzothiazole zinc salt, 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

<b>Product Name:</b>	2-mercaptobenzothiazole zinc salt
<b>Chemical Name:</b>	2(3H)-Benzothiazolethione, zinc salt
<b>Synonym(s):</b>	2-Benzothiazolethiol zinc salt bis(Benzothiazole-2-thiolato)zinc Zinc mercaptobenzothiazole ZMBT
<b>CAS Number:</b>	155-04-4

## Description

<b>Overview:</b>	2-Mercaptobenzothiazole zinc salt is a white to yellow solid at ambient temperatures. The chemical has a slight odor and is sold in powder form.
<b>Uses:</b>	2-Mercaptobenzothiazole zinc salt is sold by LANXESS for use as a vulcanization accelerator in the production of tires and other rubber products. The chemical is also used as a fungicide.
<b>Properties:</b>	<b>Melting Point:</b> >572°F (300°C) <b>Solubility in Water:</b> Low

## **Potential Human Health Effects**

### **Occupational Exposure**

Potential for occupational exposure exists during manufacture, in packaging operations, during transfers to storage or staging areas and—in its application as a vulcanization accelerator—during the charging of mixers. 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 zinc salt 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 is recommended if airborne concentrations are expected to exceed appropriate standards/guidelines. In addition, LANXESS recommends that goggles, permeation resistant clothing, gloves and foot protection be worn when handling 2-mercaptobenzothiazole zinc salt.

### **Consumer Exposure**

LANXESS does not sell this product to the general public. Rubber goods manufactured using 2-mercaptobenzothiazole zinc salt as an accelerator may 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 exposure to 2-mercaptobenzothiazole zinc salt may cause minor irritation to the skin. Susceptible individuals may experience an allergic reaction with symptoms of redness, itching, swelling and rash. 2-Mercaptobenzothiazole zinc salt dust may cause mechanical (abrasive) irritation to the eyes and respiratory tract. The chemical is not expected to be harmful if swallowed.

### **Long-Term Health Effects**

Long-term or repeated contact with 2-mercaptobenzothiazole zinc salt may cause skin sensitization.

## **Physical Hazards**

2-Mercaptobenzothiazole zinc salt is a stable, non-volatile solid at room temperature. Avoid contact with strong acids and oxidizing agents. Large concentrations of 2-mercaptobenzothiazole zinc salt dust may be explosive. Heating to decomposition may release carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides and other potentially toxic gases/fumes. Exposure to heat, open flames and other potential sources of ignition should be avoided.

## Potential Environmental Impact

2-Mercaptobenzothiazole zinc salt is not biodegradable but it does break down to biodegradable substances with prolonged exposure to water and/or light. 2-Mercaptobenzothiazole zinc salt may pose a potential danger to fish (high toxicity), invertebrates (high toxicity) and aquatic plants (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, 2-mercaptobenzothiazole zinc salt is not expected to pose a significant risk to human health or the environment.

## References

**Safety Data Sheet (SDS), VULKACIT ZM**, LANXESS Corporation

**IUCLID Dataset - CAS 155-04-4**, European Chemicals Bureau, European Commission

**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

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

## Contact Information

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## Notices

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