

4(or 5)-Methyl-1H-benzotriazole

This document provides a brief description of 4(or 5)-methyl-1H-benzotriazole, 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:	Tolyltriazole
Chemical Name:	1H-Benzotriazole, methyl-
Synonym(s):	4(or 5)-Methyl-1H-benzotriazole 4/5-Methyl-1,2,3-benzotriazole Methylbenzotriazole Tolyltriazole
CAS Number:	29385-43-1

Description

Overview:	4(or 5)-Methyl-1H-benzotriazole is a light brown to beige solid at ambient temperatures. The chemical has a slight odor and is sold in pellet form.								
Uses:	4(or 5)-Methyl-1H-benzotriazole is sold by LANXESS primarily for use as a corrosion inhibitor in antifreeze and de-icing solutions, engine oils, hydraulic and brake fluids, metalworking fluids, industrial water treatment systems and protective coatings. The chemical is also used as a UV stabilizer and corrosion inhibitor in the production of circuit boards, photographic chemicals and other products.								
Properties:	<table><tr><td>Melting Point:</td><td>Approx. 168.8°F (76°C)</td></tr><tr><td>Boiling Point:</td><td>320°F (160°C)</td></tr><tr><td>Auto-ignition:</td><td>Approx. 752°F (400°C)</td></tr><tr><td>Solubility in Water:</td><td>Insoluble</td></tr></table>	Melting Point:	Approx. 168.8°F (76°C)	Boiling Point:	320°F (160°C)	Auto-ignition:	Approx. 752°F (400°C)	Solubility in Water:	Insoluble
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Solubility in Water:	Insoluble								

Potential Human Health Effects

Occupational Exposure

Potential for occupational exposure exists during manufacture, during transfers to storage or staging areas, in packaging operations and during the loading of reaction vessels. Workers handling commercial or industrial products manufactured using 4(or 5)-methyl-1H-benzotriazole as an ingredient may also be exposed to low concentrations of the chemical. A much lower potential for exposure exists in facilities using the chemical in closed manufacturing processes by trained personnel.

Employee Training

Workers handling 4(or 5)-methyl-1H-benzotriazole should be trained to implement proper handling procedures and to understand the potential health and physical hazards of this product. A NIOSH approved respirator is recommended for packaging, unloading and other operations not contained within a closed system. In addition, LANXESS recommends that goggles, long pants, long-sleeved shirts, gloves and foot protection be worn when handling 4(or 5)-methyl-1H-benzotriazole.

Consumer Exposure

LANXESS does not sell 4(or 5)-methyl-1H-benzotriazole to the general public. Direct contact with products manufactured using 4(or 5)-methyl-1H-benzotriazole as an ingredient may expose consumers to trace amounts of the chemical.

Short-Term Health Effects

4(or 5)-Methyl-1H-benzotriazole is not expected to be irritating to skin. 4(or 5)-Methyl-1H-benzotriazole dust may be irritating to eyes with symptoms of redness, tearing and stinging. Inhaling 4(or 5)-methyl-1H-benzotriazole may be irritating to the upper respiratory tract with symptoms of coughing, sore throat and runny nose. 4(or 5)-Methyl-1H-benzotriazole may be harmful if swallowed. Symptoms of ingestion include abdominal pain, nausea, vomiting and diarrhea.

Long-Term Health Effects

No long-term adverse health effects are expected.

Physical Hazards

4(or 5)-Methyl-1H-benzotriazole is stable under normal conditions of use. Heating to decomposition may produce irritating and toxic gases or fumes. Exposure to heat, open flames and other potential sources of ignition should be avoided. Avoid contact with oxidizing and reducing agents. High concentrations of 4(or 5)-methyl-1H-benzotriazole dust may form explosive mixtures with air.

Potential Environmental Impact

4(or 5)-Methyl-1H-benzotriazole is readily biodegradable. An accidental release to water may pose a danger to fish (low toxicity), invertebrates (low toxicity) and aquatic plants (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, 4(or 5)-methyl-1H-benzotriazole is not expected to pose a significant risk to human health or the environment.

References

Benzotriazoles: Category Justification and Testing Rationale, Benzotriazoles Coalition, Synthetic Organic Chemical Manufacturers Association (SOCMA)

Safety Data Sheet (SDS), PREVENTOL CI 7-100, LANXESS Corporation

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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