

Flexsys America L.P.

Material Safety Data Sheet

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Draft Date: 12/13/96

MSDS Number: FLXP0055

PERKACIT MBT

Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product: **PERKACIT MBT**
MSDS Number: FLXP0055
Chemical Name: 2-Mercaptobenzothiazole
Synonyms: THIOTAX, THIOTAX O; 2-Benzothiazolethiol; MBT; 2(3H)-Benzothiazolethione
Supplying Company: Flexsys America L.P.
260 Springside Drive PO Box 5444
Akron, Ohio 44334-0444

EMERGENCY PHONE NUMBER: CHEMTREC

800/424-9300 TOLL FREE IN CONTINENTAL U.S., HAWAII, PUERTO RICO, CANADA, ALASKA, OR VIRGIN ISLANDS

202/483-7616 ELSEWHERE (COLLECT CALLS ACCEPTED)

FOR NON-EMERGENCY INFORMATION, CALL 330/668-8281

Section 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component:	CAS Number:	Usage Percentage:
2-Mercaptobenzothiazole *	149-30-4	>97.0
White Mineral Oil	8042-47-5	1.5-3.0

*This substance is identified as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This Material Safety Data Sheet applies to all product forms. Mineral Oil is a component of the dust-suppressed powder only.

Section 3. HAZARDS IDENTIFICATION

WARNING!

Emergency Overview: COMBUSTIBLE DUST- EXPLOSION POTENTIAL
MAY CAUSE ALLERGIC SKIN REACTION

Potential Routes of Exposure:

Eye Contact: This material was found to be practically non-irritating based on animal data.

Skin Contact: This material was found to be non-irritating based on animal data. Prolonged or repeated skin contact can cause allergic skin reaction in sensitive persons.

Inhalation: Practically non-toxic based on animal data.

Ingestion: Slightly toxic if swallowed based upon animal data.

MARKETED BY
HARWICK STANDARD
DISTRIBUTION CORPORATION
60 S. Seiberling Street • Akron, Ohio 44305

Section 4. FIRST AID MEASURES

IN EYES: Flush promptly with plenty of water for at least fifteen minutes. Remove contact lenses if worn. Hold eyelids apart to ensure complete washing of all eye surfaces. Get medical attention if irritation develops.

ON SKIN: Promptly wash with soap and plenty of water, remove contaminated clothing and get medical attention if irritation symptoms occur. Launder clothes and clean protective equipment before reuse.

INHALED: Remove victim to fresh air. This material does not pose a significant inhalation hazard. However, in all cases of respiratory problems, if victim is not breathing, begin artificial respiration. If breathing is difficult, get medical attention and give oxygen.

SWALLOWED: Contact a physician or Poison Control Center immediately. If victim is conscious and alert, give several glasses of water to drink. DO NOT induce vomiting unless directed to do so by a medical professional. This material is slightly toxic if ingested. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

Section 5. FIRE FIGHTING MEASURES

Cream powder or extrusions

Flash Point °F/°C: Approx. 485°F /

Autoignition Temp °F/°C: /

Flash Method: Cleveland Open Cup

Extinguishing Method: Water spray or other Class A extinguishing agent

Procedures and Equipment: Firefighters and other emergency responders should wear full impervious protective clothing, boots and positive pressure/pressure demand self-containing breathing apparatus. Dike firewater for later disposal. Do not allow contaminated water to enter storm sewers, watersheds or waterways. Equipment should be thoroughly decontaminated after use.

Hazardous Products: Carbon monoxide, oxides of nitrogen and sulfur dioxide are products of combustion.

Fire & Explosion Hazards: This material is sometimes sold as a milled grade. The fine particle size of this grade creates the potential for dust explosions or fires. For any operations involving milled material or addition to flammable solvents, use only Class II, Division I electrical equipment. Ensure that all equipment is properly grounded.

As with any dry material, pouring it, allowing it to free-fall or conveying it through chutes/ pipes can accumulate and generate an electrostatic charge. This may potentially cause ignition of the material itself, or of any flammable materials in contact with the material or its container. Take proper precautions when transferring this material: ground equipment, provide an inert atmosphere and properly design materials handling equipment to prevent electrostatic charge formation.

Lower Explosion Limit (LEL): Dust cloud at 0.2 oz/ft³

Section 6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK:

Avoid creating a dust cloud. Avoid skin contact. Wear a NIOSH/MSHA approved respirator, appropriate protective clothing and chemical resistant gloves. Remove or turn off any ignition sources in the area.

Scoop, sweep or vacuum up spilled material and place in a dry, covered container for reuse or chemical disposal. Use vacuum equipment designed specifically for handling combustible dusts. Flush area with water. Keep this material out of storm sewers, watersheds and waterways.

CERCLA REPORTABLE QUANTITY (RQ): Not Applicable

Section 7. HANDLING AND STORAGE

- Handling:** Keep away from heat, sparks and flame.
Avoid creating a dust cloud in handling, transfer and clean-up.
Avoid contact with eyes, skin and clothing.
Wash thoroughly with soap and water after handling.
Empty container retains product residue. Observe all label safeguards until container is destroyed.
Do not reuse this container for other materials.
- Storage:** Store closed container in a cool, dry, well-ventilated area.
Store away from foodstuffs and animal feeds.
Store separate from strong acids and oxidizers.
Avoid exposure to direct sunlight.

Section 8. EXPOSURE CONTROL/PERSONAL PROTECTION

EYE PROTECTION:

This material causes only slight eye irritation. No special protection is required. Avoid eye contact as good industrial practice.

SKIN PROTECTION:

Wear chemical resistant gloves and clothing to prevent skin contact. Consult glove manufacturer for appropriate glove type. Wash contaminated skin promptly with plenty of soap and water. Launder contaminated clothing and clean protective equipment before reuse.

RESPIRATORY PROTECTION:

Avoid breathing dust of this material. Use NIOSH/MSHA approved respiratory protection equipment when airborne exposure is excessive. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 CFR 1910.134.

VENTILATION:

Provide natural or mechanical ventilation to minimize exposure. If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

AIRBORNE EXPOSURE LIMITS

Product: 2-Mercaptobenzothiazole

OSHA PEL/8-hour TWA: 15 mg/m³ (Total Dust)
OSHA PEL/8-hour TWA: 5 mg/m³ (Respirable Dust)

ACGIH TLV/8-hour TWA: 10 mg/m³

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Cream powder or extrusions
Odor: Aromatic
Specific Gravity: @ 25°C: 1.42-1.5
Water Solubility: 0.032 g/100ml @ 25°C
Other Solubility: Acetone and dilute alkali. Slightly soluble in ethanol
Density: Not available at this time.
Note: Melting Point: Approximately 180°C
Boiling Point: Decomposes at >260°C
Molecular Weight: 167.25
Molecular Formula: C7-H5-S2-N

Section 10. STABILITY AND REACTIVITY

Stability: This product is thermally stable to 260°C.

Materials to avoid: Oxidizing materials and acids.

Decomposition: Carbon monoxide, nitrogen oxides and sulfur dioxide fumes are liberated when product is ignited.

Hazardous Polymerization: Does not occur

Section 11. TOXICOLOGICAL INFORMATION

Target Organ(s): Respiratory system, eyes, skin

Oral LD50 (rat):	3800 mg/kg	Slightly Toxic
Dermal LD50 (rabbit):	>7940 mg/kg	Practically Non-Toxic
Eye Irritation (rabbit):	3.2/110.0	Practically Non-Irritating
Skin Irritation (rabbit):	0.0/8.0	Practically Non-Irritating

Inhalation: The product was found to be practically non-toxic in animal tests.

Skin: This product produced no allergic skin reaction, or cumulative or primary irritation in controlled skin contact studies with human volunteers.

Eye: This material caused slight eye irritation in animal tests.

Ingestion: Product is slightly toxic by single-dose ingestion. Repeated ingestion in laboratory animals resulted in increased liver weights.

*NOTE: The National Toxicology Program (NTP) conducted a two year toxicity study with rats and mice which resulted in conclusions that "there was some evidence of carcinogenic activity" in the treated male and female rats.

Section 12. ECOLOGICAL INFORMATION

Acute aquatic toxicity data:

96-hr LC50 Rainbow Trout	0.75 mg/L	Highly Toxic
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96-hr LC50 Bluegill	1.50 mg/L	Moderately Toxic
96-hr LC50 Fathead Minnow	11.0 mg/L	Slightly Toxic
48-hr LC50 Daphnia Magna	4.10 mg/L	Moderately Toxic
96-hr EC50 Algae	0.25 mg/L	Highly Toxic

Biodegradability/CO2 evolution: 2% CO2 evolution
Aerobic aquatic biodegradation: Not mineralized under test conditions
River water biodegradation: None in 8 weeks
Indirect photolysis: Marginally susceptible

MBT did not measurably hydrolyze over a 7-day testing period.

MBT mobility in soil: Medium to low
MBT mobility in sediments: Slight to nil

Section 13. DISPOSAL CONSIDERATIONS

In its unused condition, this material is not a "hazardous waste" as defined by the Resource Conservation and Recovery Act (RCRA), 40 CFR 261. Disposal via incineration is recommended.

Burn in an approved incinerator or landfill in a secure landfill in accordance with all applicable federal, state and local regulations.

Empty containers retain product residue. Burn in an approved incinerator or landfill in a secure landfill in accordance with all applicable federal, state and local regulations.

Section 14. TRANSPORT INFORMATION

Not regulated in transport.

DOT Proper shipping name: Not applicable
DOT Hazard Class/ I.D. No.: Not applicable
DOT Label: Not applicable

U.S. Surface Freight Classification: Rubber accelerator, N.O.I.B.N.

Section 15. REGULATORY INFORMATION

TSCA: Listed
DSL: Listed (Canada)
RCRA: Not Regulated
CERCLA: Not Applicable
DOT: Not Regulated

"2-Mercaptobenzothiazole" is regulated as follows:

TSCA Section 4(a) Final Test Rule and Consent Agreement Substances
TSCA Section 8(a) PAIR Substances
TSCA Section 12(b) One-Time Export Notification Substances
National Toxicology Program (NTP) Testing Program Substances

SARA Title III:

Hazard categories under SARA Title III rules: Delayed, Fire
SARA Title III Section 313 Toxic Chemicals: 2-Mercaptobenzothiazole

FDA - Regulated For Use under the following sections of 21 CFR:

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177.2600 Rubber Articles Intended for Repeated Use/Contact w/Food
175.105 Components of Adhesives
176.300 Slimicides in Paper and Paperboard

Hazard Rating	Health	Flammability	Reactivity	Other
HMIS	1	1	0	N/A

Section 16. OTHER INFORMATION

Reason for most recent revision: Add toxicity data (Section 11) and HMIS Rating (Section 15).

Although the information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof, Flexsys America L.P. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Flexsys America be responsible for damages of any nature whatsoever resulting from the use of reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.