

# Material Safety Data Sheet

Revision date 30-Jan-2014

Version 2

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**Product name** SANTOCURE™ TBSI

**Product code** 20045

**Recommended Use** Vulcanizing agent/vulcanization accelerator

**Manufacturer** Solutia Inc.  
A subsidiary of Eastman Chemical Company  
575 Maryville Centre Drive  
St. Louis, Missouri 63141 U.S.A.  
Telephone: +1-314-674-6661

**Emergency Phone Number** Chemtrec: 1-800-424-9300 - Direct Dial:1-703-527-3887

**SECTION 2: Hazards identification****Signal word - Warning****EMERGENCY OVERVIEW**

Combustible dust  
May cause skin, eye, and respiratory tract irritation  
May produce an allergic reaction

**Appearance** White Powder**Physical State** Solid**Odor** Characteristic**Potential health effects****Acute toxicity****Eyes**

May cause slight irritation.

**Skin**

May irritate the skin. May cause an allergic skin reaction.

**Inhalation**

May be harmful if inhaled.

**Ingestion**

Ingestion may cause irritation to mucous membranes.

**Chronic effects**

Repeated contact may cause allergic reactions in very susceptible persons.

**Aggravated Medical Conditions**

Skin disorders.

**Environmental Hazard**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. See Section 12 for additional Ecological Information.

**SECTION 3: Composition/information on ingredients**

Chemical name	CAS-No	Weight %
2-Benzothiazolesulfenamide, N-(2-benzothiazolylthio)-N-(1,1-dimethylethyl)-	3741-80-8	98 - 99
White mineral oil (petroleum)	8042-47-5	1 - 2

**SECTION 4: First aid measures**

<b>General advice</b>	If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Get medical attention if irritation develops and persists.
<b>Inhalation</b>	Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. Consult a physician.
<b>Ingestion</b>	Rinse mouth. Do NOT induce vomiting. If symptoms persist, call a physician.
<b>Notes to physician</b>	Treat symptomatically.

### SECTION 5: Firefighting measures

<b>Flammable properties</b>	Dust explosive, Dust explosion category: ST 2.
<b>Flash point</b>	No information available Not applicable.
<b>Suitable extinguishing media</b>	Water, Water spray, Foam, Carbon dioxide (CO <sub>2</sub> ), Dry extinguishing powder
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	None
<b>Sensitivity to static discharge</b>	Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
<b>Specific hazards arising from the chemical</b>	Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### SECTION 6: Accidental release measures

<b>Personal precautions</b>	No action shall be taken involving any personal risk or without suitable training. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Fine dust dispersed in air may ignite. Remove all sources of ignition, Heat, flames and sparks.
<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Clean up spill immediately. Prevent product and washings from entering drains, sewers or surface water due to high toxicity to aquatic organisms.
<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Wear impervious personal protective equipment to protect eyes, skin and clothing. If material is in the liquid state, absorb liquid with inert materials. Scoop, sweep or shovel solids and place in a closed container for proper disposal. Isolate spill and stop leak where safe. Do NOT spread spilled product with water. Spilled material may stain and discolor surfaces.

### SECTION 7: Handling and storage

<b>Advice on safe handling</b>	Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Take precautionary measures against static discharges.
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**Technical measures/Storage conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Keep away from contact with oxidizing materials. Keep in properly labeled containers. Use appropriate containment to avoid environmental contamination. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with local regulations.

## SECTION 8: Exposure controls/personal protection

**Exposure Guidelines**

For dust or mist of substances with special limit values, those values apply.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2-Benzothiazolesulfenamide, N-(2-benzothiazolylthio)-N-(1,1-dimethylethyl)-	3 mg/m <sup>3</sup> (1) 10 mg/m <sup>3</sup> (3)	5 mg/m <sup>3</sup> (1) 15 mg/m <sup>3</sup> (3)	Not available
White mineral oil (petroleum)	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	Not available

**Limit values for nuisance dust**

(1) Respirable dust (2) Inhalable dust (3) Total dust

**Engineering measures**

Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Apply technical measures to comply with the occupational exposure limits. If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Personal protective equipment****Eye/face protection**

Safety glasses with side-shields

**Skin and body protection**

Lightweight protective clothing Impervious gloves

**Respiratory protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene measures**

When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use.

## SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties**

<b>Physical State</b>	Solid
<b>Appearance</b>	White Powder
<b>Odor</b>	Characteristic
<b>Color</b>	White
<b>Odor threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Methods</u>
<b>pH</b>	No information available	Not applicable
<b>Melting point/freezing point</b>	135 - 140 °C / 266 °F	
<b>Boiling point/boiling range</b>	No information available	Decomposes
<b>Flash point</b>	No information available	Not applicable
<b>Evaporation rate</b>	No information available	
<b>Specific gravity</b>	1.401	20°C
<b>Flammability (solid, gas)</b>		
<b>Flammability Limits in Air</b>		
<b>Upper flammability limit</b>	No information available	

<b>Lower flammability limit</b>	40 - 45 g/m <sup>3</sup>	
<b>Vapor pressure</b>	0.0000053 hPa	20 °C
<b>Vapor density</b>	No information available	
<b>Water solubility</b>	1.80 mg/m <sup>3</sup>	20 °C
<b>Solubility in other solvents</b>	Organic media	
<b>Partition coefficient: n-octanol/water</b>	6.7	log Pow @ 20 °C
<b>Autoignition temperature</b>	> 140 °C	
<b>Decomposition temperature</b>	No information available	
<b>Viscosity, kinematic</b>	No information available	
<b>Viscosity, dynamic</b>	No information available	
<b>Explosive properties</b>	Not explosive May form explosive mixtures with air	
<b>Oxidizing properties</b>	Not oxidizing	

## 9.2 Other information

<b>Molecular weight</b>	403.61
<b>Density</b>	1.401 g/cm <sup>3</sup>

## SECTION 10: Stability and reactivity

<b>Stability</b>	Stable under recommended storage and handling conditions (see section 7).
<b>Incompatible products</b>	Strong oxidizing agents.
<b>Conditions to avoid</b>	Heat, flames and sparks
<b>Hazardous decomposition products</b>	Carbon monoxide (CO), Nitrogen oxides (NOx), Sulfur oxides.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.

## SECTION 11: Toxicological information

### Acute toxicity

#### Product Information

<b>LD50 oral:</b>	> 5000 mg/kg (rat)
<b>LD50 dermal:</b>	> 2000 mg/kg (rabbit)

<b>Inhalation</b>	May be harmful if inhaled.
<b>Skin</b>	May irritate the skin. May cause an allergic skin reaction.
<b>Ingestion</b>	Ingestion may cause irritation to mucous membranes.

### Chronic Toxicity

<b>Chronic Toxicity</b>	Repeated contact may cause allergic reactions in very susceptible persons.
<b>Carcinogenicity</b>	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

<b>Sensitization</b>	May cause sensitization of susceptible persons.
<b>Germ cell mutagenicity</b>	Not mutagenic (in vitro, in vivo).
<b>Teratogenicity</b>	No evidence of teratogenicity in animal studies.
<b>Target organ effects</b>	Skin, Eyes, Respiratory system.

## SECTION 12: Ecological information

### Acute aquatic toxicity

#### *Product Information*

<u>Property</u>	<u>Result</u>	<u>Species</u>
<b>96-hour LC50 - Fish</b>	No data available	No information available
<b>48-hour EC50 - Aquatic invertebrates</b>	No data available	No information available
<b>72-hour EC50 - Algae/aquatic plants</b>	No data available	No information available

#### *Component Information*

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
2-Benzothiazolesulfenamide, N-(2-benzothiazolylthio)-N-(1,1-dimethylethyl)-	> 0.87 mg/l	> 2.7 mg/l	> 0.005 mg/l
White mineral oil (petroleum)		96-h LC50 (Lepomis macrochirus): 10000 mg/l	

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Ecotoxicity

Chemical name	log Pow
2-Benzothiazolesulfenamide, N-(2-benzothiazolylthio)-N-(1,1-dimethylethyl)-	6.7

## SECTION 13: Disposal considerations

<b>Waste disposal methods</b>	This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). Dispose of in accordance with federal, state, and local regulations.
<b>Contaminated packaging</b>	Empty remaining contents. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## SECTION 14: Transport information

### DOT

<b>UN/ID no</b>	UN3077
<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-tert-Butyl-di-(2-benzothiazolesulfen)imide)
<b>Hazard Class</b>	9
<b>Packing group</b>	III
<b>Emergency Response Guide Number</b>	171

### IMDG

<b>UN/ID no</b>	UN3077
<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-tert-Butyl-di-(2-benzothiazolesulfen)imide)
<b>Hazard Class</b>	9
<b>Packing group</b>	III
<b>EmS No.</b>	F-A, S-F
<b>Special Provisions</b>	none
<b>Marine pollutant</b>	yes

**IATA**

<b>UN/ID no</b>	UN3077
<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-tert-Butyl-di-(2-benzothiazolesulfen)imide)
<b>Hazard Class</b>	9
<b>Packing group</b>	III
<b>Note</b>	Subject to ICAO/IATA Environmentally Hazardous Substance marking requirement (IATA 7.1.6.3)

**TDG** See DOT

## SECTION 15: Regulatory information

### U.S. Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

#### **SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	no
<b>Chronic Health Hazard</b>	no
<b>Fire Hazard</b>	yes
<b>Sudden release of pressure hazard</b>	no
<b>Reactive Hazard</b>	no

#### **Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

#### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

### U.S. State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated by state right-to-know regulations

### International Regulations

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

**WHMIS Hazard Class**

D2B Toxic materials

Materials causing other toxic effects

**International Inventories**

<b>TSCA (US)</b>	Complies
<b>DSL/NDSL (Canada)</b>	Complies
<b>EINECS/ELINCS (EU)</b>	Complies
<b>ENCS (Japan)</b>	Complies
<b>IECSC (China)</b>	Complies
<b>KECL (Korea)</b>	Complies
<b>PICCS (Philippines)</b>	-
<b>AICS (Australia)</b>	Complies

**SECTION 16: Other information****NFPA****HMIS****Health hazard** 1**Health hazard** 1**Flammability** 1**Flammability** 1**Stability** 0**Physical hazard** 0**Prepared By**

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**Revision date**

30-Jan-2014

**Revision Note**

SDS sections updated: 14.

**Date of previous issue**

13-Dec-2013

**Disclaimer**

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Material Safety Data Sheet**