



KEMAI Chemical Co., Ltd.

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Safety Data Sheet

According to Hazard Communication Standard (29 CFR 1910.1200)

TBBS

Issue date: 03/18/2015

Version 1.0

Revision date: 03/18/2015

1. Product and Company Identification

| | |
|-----------------------------|--|
| Material name | TBBS |
| CAS # | 95-31-8 |
| Product code | - |
| Product use | Not available. |
| Manufacturer/Supplier | |
| Supplier(Manufacturer): | KEMAI Chemical Co., Ltd. |
| Address: | No.72 Haixin Road, Gulin Industry Zone, Dagang, Binhai New Dist, Tianjin P.R.CHINA |
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2. Hazards identification

GHS classification

| | | |
|-----------------------|--|-------------|
| Physical hazards | Not classified | |
| Health hazards | Skin sensitization | Category 1B |
| Environmental hazards | Hazardous to the aquatic environment-acute | Category 1 |
| | Hazardous to the aquatic environment-chronic | Category 1 |

GHS label elements

Hazard Pictograms



| | |
|------------------|---|
| Signal word | Warning |
| Hazard statement | May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects. |

Precautionary statement

| | |
|------------|---|
| Prevention | Avoid breathing dust/fume/ gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves. |
| Response | If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. Collect spillage. |

Storage Not application.
Disposal Dispose of contents/container in according with local regulation.

3. Composition / Information on Ingredients

| Components | CAS# | Percent |
|--|----------|---------|
| N-tert-butylbenzothiazole-2-sulphenamide | 95-31-8, | ≥96% |

4% percent of the mixture consists of component (s) of unknown toxicity.

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Skin contact Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Ingestion Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Notes to physician Treat symptoms.

5. Fire Fighting Measure

Flammable properties This product is non-flammable.

Extinguishing media

Suitable extinguishing media Use water spray (fog), foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media Water jet.

Firefighting equipment/instructions Wear self contained breathing apparatus for firefighting if necessary.

Hazardous combustion products Carbon oxides, nitrogen oxides, sulfur oxides.

6. Accidental Release Measures

Personal precautions

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Put on appropriate personal protective equipment (see section 8).

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Methods for cleaning up

Large spill: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

Small spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

7. Handling and Storage

Handling

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous.

Storage

Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure Controls / Personal Protection

Control parameters:

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA:

Not available.

EMERGENCY LIMITS:

| Ingredient | TEEL-1 | TEEL-2 | TEEL-3 |
|--|---------------|---------------|---------------|
| N-tert-butylbenzothiazole-2-sulphenamamide | Not Available | Not Available | Not Available |

| Ingredient | Original IDLH | Revised IDLH |
|--|---------------|---------------|
| N-tert-butylbenzothiazole-2-sulphenamide | Not Available | Not Available |

Exposure controls:

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Individual protection measures, such as personal protective equipment:

Eye / face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: Tightly fitting safety goggles.

Skin protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. After contamination with product change the gloves immediately and dispose of them according to relevant national and local regulations <1 hours (breakthrough time): Nitrile rubber - NBR , Polyvinyl chloride - PVC , Polychloroprene – CR.

Respiratory protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: In case of dust formation particle filter.

General hygiene considerations

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

9. Physical & Chemical Properties

Appearance

| | |
|-------------------------------------|-------------------------|
| Physical state | Solid |
| Form | Powder |
| Color | light tan-buff |
| Odor | Not available |
| Odor threshold | Not available |
| pH | Not available |
| Vapor pressure | < 0.0000021hPa (25°C) |
| Vapor density | Not available |
| Boiling point | Not available |
| Melting point/Freezing point | >= 105 °C |
| Solubility (water) | 1.74 mg/L (PH7.42,20°C) |
| Specific gravity | Not available |
| Relative density | Not available |
| Density | 1.28 g/cm ³ |

| | |
|--|---------------|
| Flash point | Not available |
| Flammability limits in air, upper, %by volume | Not available |
| Flammability limits in air, lower, % by volume | Not available |
| Auto-ignition temperature | Not available |
| VOC | Not available |
| Percent volatile | Not available |
| Other data | |
| Viscosity | Not available |
| Partition coefficient | 3.36 |
| Decomposition temperature | 207°C. |

10. Chemical Stability & Reactivity Information

| | |
|------------------------------------|---|
| Reactivity | The product is stable. |
| Chemical stability | Material is stable under normal conditions. |
| Conditions to avoid | Product of hydrolysis: tert-butylamine. |
| Incompatible materials | Not available. |
| Hazardous decomposition products | Carbon oxides, nitrogen oxides, sulfur oxides. |
| Possibility of hazardous reactions | Under normal conditions of storage and use, hazardous reactions will not occur. |

11. Toxicological Information

Toxicokinetics, metabolism and distribution:

Non-human toxicological data: Not available

Information on toxicological effects:

Acute toxicity:

| | |
|------------------------------------|--------------------------------------|
| LD50(Oral, Rat): | > 6310 mg/kg bw |
| LD50(Dermal, Rabbit): | > 7940 mg/kg bw |
| LC50(Inhalation, Rat): | Not available |
| Skin corrosion/Irritation: | Not classified |
| Serious eye damage/irritation: | Not classified |
| Respiratory or skin sensitization: | May cause an allergic skin reaction. |
| Germ cell mutagenicity: | Not classified |
| Carcinogenicity: | Not classified |
| Reproductive toxicity: | Not classified |
| STOT- single exposure: | Not classified |
| STOT-repeated exposure: | Not classified |
| Aspiration hazard: | Not classified |

12. Ecological Information

Toxicity:

| Acute toxicity | | Time | Species | Method | Evaluation | Remarks |
|----------------|------------|------|---------|----------|------------|---------|
| LC50 | N/A | 96h | Fish | OECD 203 | N/A | N/A |
| EC50 | 1.3 mg/L | 48h | Daphnia | OECD 202 | N/A | N/A |
| EC50 | 0.071 mg/L | 72h | Algae | OECD 201 | N/A | N/A |

Persistence and degradability: Not readily biodegradable.

Bioaccumulative potential: TBBS is considered to have very low potential for bioaccumulation.

Mobility in soil: log Koc= 2.51 - 3.13

Results of PBT&vPvB assessment: The substance is not PBT / vPvB.

Other adverse effects: Very toxic to aquatic life with long lasting effects.

13. Disposal Considerations

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT:

Not regulated.

15. Regulatory Information

Safety, health and environmental regulations / legislation specific for the substance or mixture

N-tert-butylbenzothiazole-2-sulphenamide (95-31-8) is found on the following regulatory lists

"US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"

16. Other Information

HMIS® ratings

Health:1

Flammability:1

Physical hazard: 0

Material name: TBBS
Version #:1.0 Revision date:03-18-2015. Issue date:03-18-2015.

MSDS US
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NFPA ratings

Health: 1
Flammability: 1
Instability: 0

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available.

Issue date

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