

MSDS Document

Product BOSS® 341 Polyurethane Adhesive/Sealant

1. Chemical Product and Company Identification

Trade Name of this Product BOSS® 341 Polyurethane Adhesive/Sealant

Synonyms: 02683WH10, 02683BK10, 02683GY10, 02683TN10, 02683BZ10, 02683LS10

MSDS ID BOSS341

Manufacturer

Accumetric, LLC
350 Ring Road
Elizabethtown, KY 42701

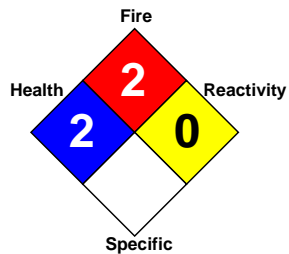
Phone Number

(270) 769-3385

Emergency Phone

CHEMTREC (800) 424-9300

Revision Date 3/19/2007



2. Composition and Information on Ingredients

| Ingredient | CAS Number | Weight % | ACGIH TLV | PEL | STEL |
|-----------------------------------|------------|-------------|---------------|----------|---------|
| Xylene | 1330-20-7 | 1% - 4% | 100 ppm | 100 ppm | 150 ppm |
| 4,4'-Diphenylmethane diisocyanate | 101-68-8 | 0.5% - 1.5% | 0.005 ppm TWA | 0.02 ppm | |
| Ethyl benzene | 100-41-4 | 0.1% - 1% | 100 ppm | 100 ppm | 125 ppm |

3. Hazard Identification

Eye Contact

Direct contact irritates with redness and swelling.

Skin Contact

A single short exposure (less than 24 hours) may irritate. Repeated prolonged contact (24 to 48 hours) may irritate moderately. MDI may cause irritation to the skin or mucous membranes. Product contains xylene is a possible skin sensitizer. Ethyl benzene may be absorbed through the skin.

Inhalation

Vapor overexposure may severely irritate eyes, nose, throat, upper respiratory tract and lungs. Vapor overexposure may cause drowsiness. Inhalation of high concentrations of xylene and/or ethyl benzene may cause respiratory irritation or difficulties and central nervous system effects characterized by headache, nausea and dizziness. MDI vapors or mist can cause irritation of upper respiratory tract: signs/symptoms can include soreness of the nose and throat, coughing and sneezing. Persons previously sensitized to isocyanates may experience an allergic respiratory reaction: signs/symptoms can include difficulty breathing, wheezing, tightness of chest and respiratory failure.

Ingestion

Small amounts transferred to the mouth by fingers during use, etc. should not injure. Swallowing large amounts may cause digestive discomfort and gastrointestinal irritation. Aspiration of xylene or ethyl benzene into lungs may cause chemical pneumonitis.

4. First Aid Information

Comments

Treat according to person's condition and specifics of exposure.

Skin Contact

Remove from skin and wash thoroughly with soap and water or waterless cleanser. Get medical attention if irritation or other ill effects develop or persist.

Inhalation

Remove patient to fresh air. Administer oxygen if breathing is difficult. Get medical attention if symptoms persist.

Ingestion

DO NOT INDUCE VOMITING. Seek immediate medical attention.

Eye Contact

Immediately flush eyes with water for at least 15 minutes. Get medical attention if irritation develops.

5. Fire Fighting Measures

| | |
|--------------------|--------------|
| Flash Point | > 65C (150F) |
| FP Method | Setaflash |
| LEL | 1 |
| UEL | 8 |

Extinguishing Media

Compatible with all usual extinguishing media.

Special Fire Fighting Procedures

Wear full protective clothing, positive pressure or pressure demand breathing apparatus and protective clothing covering the exposed area of the head. If large amount is involved, evacuate area.

Hazardous Decomposition Products

By high heat and fire: oxides of carbon, oxides of nitrogen, and hydrogen chloride

6. Accidental Release Measures

Personal Precautions

Observe all personal protective equipment recommendations described in Sections 5 and 8.

Environmental Precautions

Disposal of collected product, residues, and cleanup materials may be governmentally regulated. Observe all applicable local, state and federal waste management regulations.

Methods for Cleaning Up

Ventilate area. Extinguish all ignition sources. Contain spill. Evacuate unprotected personnel from hazard area. Cover with absorbent, place in approved drum; do not seal drum for 48 hours to avoid possible pressure build-up. Local, state and federal reporting regulations may apply to spills or releases of this material into the environment. See applicable regulatory compliance information in Section 15.

7. Handling and Storage

Handling

Assure good ventilation.

Storage

Eliminate sources of ignition. Store in original sealed containers away from heat and moisture.

8. Exposure Controls and Personal Protection

Engineering Controls

Local Ventilation: Recommended
General Ventilation: Recommended

Eye Protection

Avoid eye contact. Use proper protection - safety glasses as a minimum.

Skin Protection

Avoid skin contact. Protect hands with impervious rubber gloves and wear typical full cover clothing. Gloves must be checked before each use for signs of degradation and penetration and for proper functioning.

Respiratory Protection

Avoid breathing vapors. Wear appropriate, properly fitted NIOSH/MSHA approved respirator when the airborne contaminant levels exceed that exposure limits indicated in this MSDS. Follow respirator manufacturer's directions for respirator use. Industrial hygiene personnel can assist in judging the adequacy of existing engineering controls.

Ingestion

Wash hands after handling and before eating.

Precautionary Measures

Avoid eye contact. Avoid skin contact. Avoid breathing vapor, mist, dust or fumes. Keep container closed. Do not take internally. Use reasonable care.

Note

These precautions are for room temperature handling. Use at elevated temperatures or aerosol/spray applications may require added precautions.

9. Physical and Chemical Properties

| | |
|-------------------------|--------------------------|
| Physical State | Solid (Paste) |
| Specific Gravity | 1.25 |
| Density lbs/Gal. | 10.4 |
| Color/Appearance | Various |
| Odor | Slight odor |
| Solubility | Nil in water |
| VOC % | 3.72% by weight (33 g/L) |
| Percent Volatile | < 4% by volume |
| Vapor Density | 3.66 (Xylene) |
| Vapor Pressure | Not Applicable |

Note

The above information is not intended for use in preparing product specifications. Contact Accumetric LLC before writing specifications.

10. Stability and Reactivity

Chemical Stability

Stable under the recommended storage and handling conditions.

Hazardous Decomposition Products

Thermal decomposition products as described in Section 5.

11. Toxicological Information

Chronic Hazards

May cause respiratory sensitization, eye and skin irritation. May cause allergic respiratory and/or allergic skin reaction. See Section 2 for exposure limits, Section 3 for exposure effects.

Acute Toxicity

FOR XYLENE

Inhalation LC50 - 5,000 ppm/4hr (rat)

Oral LD50 - 4,300 mg/kg (rat)

Dermal LD50 - >1,700 mg/kg (rabbit)

FOR MDI

Inhalation LC50 - 178 mg/m (rat)

Oral LD50 - 2,200 mg/kg (mouse)

FOR ETHYL BENZENE

Oral LD50 - 3,500 mg/kg (rat)

Dermal LD50 - 17,800 µL/kg (rabbit)

Inhalation LCLo - 4,000 ppm/4hr (rat)

Chronic Toxicity

SKIN:

Repeated contact with skin may cause severe irritation, sensitization or allergic reaction. Prolonged skin contact with xylene or ethyl benzene may cause skin irritation or dermatitis.

INHALATION:

Vapor overexposure may cause drowsiness, irritate eyes, nose and throat, or injure blood, liver, or central nervous system. Chronic exposure to xylene may cause damage to the eyes, central nervous system, bone marrow, liver or kidneys. Chronic overexposure of isocyanates (found in MDI) may cause lung damage and isocyanate sensitization (chemical asthma), which may be temporary or permanent. Chronic inhalation of ethyl benzene may have central nervous system effects.

ORAL:

Small amount transferred to the mouth by fingers during use, etc. should not injure. Swallowing larger quantities may have adverse effects depending on quantity ingested. Ingestion of xylene may cause central nervous system effects.

Specific Effects

This material contains the following components with the special hazards listed below.

Carcinogens: See below.

Teratogens: Xylene and ethyl benzene may cause teratogenic effects.

Mutagens: Positive and negative results has been observed "in vitro" for MDI and ethyl benzene. For ethyl benzene, mutation in mammalian somatic cells (Rodent, mouse) Lymphocyte = 80 mg/L.

Reproductive Toxins:

Xylene and ethyl benzene may cause reproductive effects.

Carcinogenicity

Ingredients listed on International Agency for Research on Cancer (IARC) Monographs.

The following ingredients are listed as Group 2B: The agent is possibly carcinogenic to humans.

Ethyl benzene (100-41-4)

The following ingredients are listed as Group 3: The agent (mixture or exposure circumstances) is not classifiable as to its carcinogenicity to humans.

Polyvinyl chloride (9002-86-2)

Xylene (1330-20-7)

Methyl diisocyanate (MDI) (101-68-8)

12. Ecological Information

For Xylene

Environmental Fate:

When released into the soil, this material may evaporate to a moderate extent. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material may biodegrade to a moderate extent. When released into water, this material may evaporate to a moderate extent. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life of less than 1 day. This material is not expected to significantly bioaccumulate. [Mixed xylenes: octanol / water partition coefficient 3.1 - 3.2; bioconcentration factor= 1.3 (eels).]

Environmental Toxicity:

This material is expected to be slightly toxic to aquatic life.
LC50 -- Range 10 - 100 mg/L/96hr (fish)

For MDI

Environmental Fate:

Aquatic: Rapidly hydrolyzes to form an insoluble crust.
Terrestrial: Will bind with moist soil. No leaching will occur.
Atmospheric: Remains in the vapor phase and is degraded by photochemically produced radicals (half-life is 32 hours).
Will not bioconcentrate or biodegrade.

Environmental Toxicity:

This material may be toxic to some types of aquatic life.
LC50 -- >500 mg/L/24hr static (Daphnia magna, Limnea stagnalis and Zebra fish).

For Ethyl Benzene

Environmental Fate:

No information available

Environmental Toxicity:

This chemical is expected to be toxic to aquatic life.
Fish: Rainbow trout: LC50 - 14.0 mg/L/96hr
Static Bioassay Fish: Fathead Minnow: LC50 - 12.1 mg/L/96hr
Flow-through Bioassay Fish: Bluegill/Sunfish: LC50 - 150.0 mg/L/96hr
Static Bioassay, pH 6.5-7.9, 21-23 degrees C, Water flea: EC50 - 2.1 mg/L/48hr
Static Bioassay Water flea: EC50 - 75.0 mg/L/48hr
Static Bioassay Shrimp (mysidopsis bahia): LC50 - 87.6 mg/L/96hr
Sheepshead minnow: LC50 - 275 mg/L/96hr
Fathead minnow: LC - 42.3 mg/L/96hr in hard water, 48.5 mg/L/96 hr in softwater.

13. Disposal Considerations

We make no guarantee or warranty of any kind that the use or disposal of this product complies with all local, state, or federal laws. It is also the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable statutes.

RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? NO

State or local laws may impose additional regulatory requirements regarding disposal.

14. Transportation Information

DOT Road Shipment Information

Proper Shipping Name: Not applicable
Hazard Class: Not applicable
UN/NA Number: None
Packing Group: Not applicable
Quantity Limitations: Not applicable
Vessel Storage Requirements: Not applicable

15. Regulatory Information

The contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status

All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

SARA Title III Section 302 Extremely Hazardous Substances

None

SARA Title III Section 304 CERCLA Hazardous Substances

Xylene (1330-20-7)
MDI (101-68-8)
Ethyl benzene (100-41-4)

SARA Title III Section 312 Hazard Class

Acute: Yes
Chronic: No
Fire: No
Pressure: No
Reactive: No

SARA Title III Section 313 Toxic Chemicals

Xylene (1330-20-7)
Ethyl benzene (100-41-4)
MDI (101-68-8)

State Regulations

This product complies with the California Air Resources Board maximum VOCs in a sealant.

Per the California Air Resources Board TITLE 17 Division 3 Chapter 1 Subchapter 8.5 Article

2 §94508, a VOC substance with a vapor pressure greater than or equal to 0.1 mm Hg at 20°C (68°F), or is a chemical compound with less than or equal to 12 carbon atoms if the vapor pressure is not known, or is a chemical compound with a boiling point less than or equal to 216°C (421°F).

California Proposition 65

This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm:

Ethyl benzene (100-41-4)

Massachusetts

MDI-based polymer (Proprietary)

Butyl benzyl phthalate (85-68-7)

Xylene (1330-20-7)

Ethyl benzene (100-41-4)

MDI (101-68-8)

New Jersey

MDI-based polymer (Proprietary)

Butyl benzyl phthalate (85-68-7)

Polyvinyl chloride (9002-86-2)

Xylene (1330-20-7)

Ethyl benzene (100-41-4)

MDI (101-68-8)

Pennsylvania

MDI-based polymer (Proprietary)

Butyl benzyl phthalate (85-68-7)

Xylene (1330-20-7)

Ethyl benzene (100-41-4)

MDI (101-68-8)

16. Other Information

Disclaimer

The data contained herein is based upon information that Accumetric LLC believes to be reliable. Users of this product have the responsibility to determine that suitability of use and to adopt all necessary precautions to ensure the safety and protection of property and persons involved in said use. All statements to suggestions are made without warranty, expressed or implied, regarding the accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof.