



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Product name</b>	<b>BH EFA Product Series</b>
<b>MSDS name</b>	BOSTIK EFA L
<b>Product name(s) covered</b>	See Section 16 for Product Names Covered.
<b>CAS #</b>	Mixture
<b>Generic description</b>	Polyurethane Sealant/Adhesive
<b>Manufacturer</b>	Bostik, Inc. 211 Boston Street Middleton, MA 01949 USA
<b>24 hour emergency assistance</b>	Telephone: 1-800-227-0332
<b>General assistance</b>	Telephone: 1-978-777-0100
<b>MSDS assistance</b>	Telephone: 1-414-607-1347

## 2. Hazards Identification

**Emergency overview** This product is irritating to the eyes and skin. Thermal decomposition/burning may produce toxic gases and fumes. Closed containers may rupture when exposed to high temperatures, or when the product has been contaminated with water.

Avoid breathing hot mists and vapors. This product contains a respiratory and skin sensitizer. Causes respiratory tract irritation and may cause allergic respiratory reaction. May cause permanent respiratory damage. Product vapors are potentially irritating to skin. May cause allergic skin reaction and dermatitis.

### Potential health effects

**Eyes** This product may cause irritation to the eyes. May cause temporary corneal injury.

**Skin** Skin contact may cause irritation. Isocyanates may react with skin protein and moisture to cause itching, reddening, swelling, scaling or blistering. Individuals previously sensitized to this material may experience these symptoms from exposure to very small amounts of liquid or vapor.

**Inhalation** Single large does, and/or repeated exposures, may lead to sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms), causing an individual to experience adverse effects at exposure levels well below exposure limits or guidelines. Symptoms may include chest tightness, wheezing, shortness of breath, coughing or asthmatic attack, and may be delayed up to several hours. Extreme asthmatic reactions can be life threatening. Once sensitized, an individual may experience adverse symptoms upon exposure to dust, cold air or other irritants. Sensitization can last several months, years or be permanent in some cases.

**Ingestion** May cause irritation and corrosive action in the mouth, throat and digestive tract.

**Target organs** The lungs and skin may be targeted and damaged by components of this product.

**Signs and symptoms** Signs and symptoms of overexposure to this product include headache, irritation of upper respiratory tract, asthmatic symptoms, chest tightness, breathing difficulty, coughing, sore throat, eye irritation, skin irritation and/or diarrhea.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Stoddard solvent	8052-41-3	2.5 - 10
Methylene Diphenyl Isocyanate (MDI)	101-68-8	0.1 - 1

## 4. First Aid Measures

### First aid procedures

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention or advice.

<b>Skin contact</b>	Remove contaminated clothing to prevent further skin exposure and dispose of properly. In situations involving considerable skin contact, place the contaminated person in a deluge shower for at least 15 minutes. For minor exposures, wash thoroughly with soap and clean water. Get medical attention if irritation persists.
<b>Inhalation</b>	Remove to fresh air. Get medical attention immediately for a large dose exposure or if cough or other symptoms develop. Administer oxygen or artificial respiration as needed.
<b>Ingestion</b>	If ingested, get immediate medical attention. Do not induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to a victim who is unconscious or is having convulsions.
<b>Notes to physician</b>	Treat symptomatically and supportively. Contact Bostik to determine whether any additional information is available. Eyes: Stain for evidence of corneal injury. If cornea is burned, apply antibiotic/steroid preparation as needed. Skin: This product contains a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: Treat symptomatically.  Inhalation: This material contains a known pulmonary sensitizer. Any individual experiencing dermal or pulmonary sensitization should be removed from exposure to any diisocyanate. May aggravate existing heart conditions, particularly those with abnormal heart rhythms. If overexposure to the solvents in this product is suspected, testing should include nervous system and brain effects including recent memory, mood, concentration, headaches and altered sleep patterns. Liver and kidney function should be evaluated. This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately.

## 5. Fire Fighting Measures

<b>Hazardous combustion products</b>	Additional decomposition products include oxides of nitrogen, amines, hydrogen cyanide and isocyanate-containing compounds.
<b>Extinguishing media</b>	
<b>    Suitable extinguishing media</b>	Use dry chemical, carbon dioxide, or foam. Water spray (fog).
<b>Fire fighting equipment/instructions</b>	Firefighters should wear NFPA compliant structural fire fighting protective equipment, including a self-contained breathing apparatus, helmet, hood, boots and gloves. Avoid contact with isocyanates. During a fire, isocyanate vapors and other irritating and highly toxic gases may be produced.
<b>Dust explosion hazard</b>	None Known
<b>Explosion data</b>	
<b>    Sensitivity to static discharge</b>	Not available.
<b>    Sensitivity to mechanical impact</b>	Not available.
<b>Flash point</b>	170 °F (76.7 °C)

## 6. Accidental Release Measures

<b>Emergency action</b>	Appropriate safety measures and protective equipment should be used. See Section 8. Do not discharge to lakes, streams, ponds, or sewers. Dispose of in compliance with local, state, and federal regulations.
<b>Spill or leak procedure</b>	Place into appropriate containers for disposal. Thoroughly clean area where spill occurred.
<b>Containment procedures</b>	Isolate spill area. Stop discharge if safe to do so. Stop material from contaminating soil or from entering sewers or water streams. Liquid spills: Cover spills with absorbent clay or sawdust and collect material in open container and neutralize with a solution containing 2% liquid detergent, 3% concentrated ammonium hydroxide and 95% water. Wash spill area clean with the neutralization solution. Remove container to a safe place, cover loosely and allow to stand for 24 to 48 hours letting evolved carbon dioxide escape. Pellet or chip spill: Collect and contain for salvage or disposal. Molten adhesive spill: Placard hot material, allow to cool and remove. Collect and contain for salvage or disposal.
<b>Reporting</b>	See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

## 7. Handling and Storage

<b>Handling</b>	Wash hands thoroughly after handling, especially before eating, drinking, smoking, and using restroom facilities. Wash contaminated goggles, face shields, and gloves. Professionally launder contaminated clothing before re-use. Do not breathe vapors, mists or dusts. Do not breathe fumes generated when the material is overheated or burned. Use adequate ventilation. Wear respiratory protection if the material is heated, sprayed, used in a confined space or if exposure limit is exceeded. This product can produce asthmatic sensitization. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must avoid fumes from this product. Wear appropriate protective equipment to avoid contact with skin and eyes.
<b>Storage</b>	Store in a cool, dry, well-ventilated area away from heat, ignition sources and direct sunlight. Water contamination should be avoided. Cool location should be 60-80 degrees F or 15-30 degrees C.
<b>Empty container precaution</b>	Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

## 8. Exposure Controls / Personal Protection

<b>Engineering controls</b>	Use local exhaust or general ventilation where the potential exists to exceed the PEL or TLV exposure limits.
<b>Personal protective equipment</b>	
<b>Eye protection</b>	Wear goggles or safety glasses with side shields.
<b>Skin and body protection</b>	Wear appropriate clothing to minimize skin contact with this product.
<b>Respiratory protection</b>	Avoid breathing vapor and/or mists. If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator.
<b>General</b>	Eyewash fountains and emergency showers should be readily available.

### Additional exposure data

#### US ACGIH Threshold Limit Values: Time Weighted Average (TWA): mg/m3 & ppm

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENE BISPHENYL ISOCYANATE (MDI) 0.005 PPM
Stoddard solvent	8052-41-3	STODDARD SOLVENT 100 PPM

#### US NIOSH Pocket Guide to Chemical Hazards: Ceiling Limit Value and Time Period (if specified)

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENE BISPHENYL ISOCYANATE 0.2 MGM3 - 0.020 PPM 10-min
Stoddard solvent	8052-41-3	STODDARD SOLVENT 1800 MGM3 15-min

#### US OSHA Table Z-1-A: Time Weighted Average (TWA): mg/m3 & ppm

Stoddard solvent	8052-41-3	STODDARD SOLVENT 525 MGM3 - 100 PPM
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## 9. Physical & Chemical Properties

<b>Target solids</b>	91.7 %
<b>Density</b>	1.13 g/cc
<b>Odor</b>	Mild
<b>Color</b>	Amber
<b>Physical state</b>	Liquid
<b>Freeze protect</b>	No
<b>VOC (Volatile Organic Compounds)</b>	96 g/l

## 10. Chemical Stability & Reactivity Information

<b>Hazardous reactions/decomposition products</b>	Unknown due to the complex nature of this material. Fumes from complete or incomplete combustion may include carbon dioxide, carbon monoxide, water vapor, oxides of nitrogen and a wide variety of innocuous or toxic fumes. Additional decomposition products include oxides of nitrogen, amines, hydrogen cyanide and isocyanate-containing compounds.
<b>Hazardous polymerization</b>	Hazardous polymerization can occur with elevated temperatures or contact with water.
<b>Conditions to avoid</b>	Avoid Strong Acids. Avoid amines, strong bases, alcohols and metallic hydrides.

**Stability**

This product is stable under normal conditions but will react slightly with water to release some heat and carbon dioxide. The reaction is not violent. Carbon dioxide, carbon monoxide and in high temperature (800° F) low oxygen atmospheres such as in fire situations, hydrogen cyanide may be released.

**11. Toxicological Information****Carcinogenicity**

If this product contains any carcinogens, they will be noted below:

This product contains Methylene Diphenyl Isocyanate (MDI). MDI is not listed by the NTP, IARC or regulated by OSHA as a carcinogen. However, it has been shown to alter cells in certain experiments. Although inconclusive, these cellular changes are thought to indicate potential carcinogenicity.

**12. Ecological Information**

**Ecotoxicological information** Organic solvents produce slight to moderate toxicity to aquatic life.

**13. Disposal Considerations**

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

**Waste disposal**

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

**14. Transport Information****DOT**

Not regulated as hazardous goods.

**IATA**

Not regulated as hazardous goods.

**IMDG**

Not regulated as hazardous goods.

**15. Regulatory Information**

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200.

**Federal regulations**

All components are on the U.S. EPA TSCA Inventory List.

**State regulations**

If this product contains any ingredients listed under California Proposition 65, they will be noted below:

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Naphthalene

91-20-3

Listed: April 19, 2002 Carcinogenic.

**International regulations**

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

**HMIS Ratings**

Health: 2\*

Flammability: 2

Physical hazard: 0

Personal protection: X

**SARA 311/312 HAZARD CATEGORIES**

Immediate Hazard - Yes

Delayed Hazard - Yes

Fire Hazard - Yes

Pressure Hazard - No

Reactivity Hazard - No

**WHMIS status**

Controlled

**WHMIS labeling**

**WHMIS classification**

B3 - Flammable/Combustible  
D2A - Other Toxic Effects-VERY TOXIC  
D2B - Other Toxic Effects-TOXIC

**16. Other Information****Disclaimer**

The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

**Further information**

Any characters following an individual item number are just designations for the various types of packaging that are available for this product. For example, a product "G12345-XX" is item number "G12345" with a packaging designation of "XX". These characters do not indicate a different product nor a different regulatory, health, safety and/or environmental status. This document covers the item numbers listed above for all of their packaging types.

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**Prepared by**

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**Supercedes**

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**This data sheet contains changes from the previous version in section(s):**

Other Information: Further information