



Health	1
Flammability	2
Reactivity	0
PPE	X

## 1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

**Product** A46000  
**MSDS Name** BOSTIK EFA L  
**CAS #** Mixture  
**Generic Description** Polyurethane Sealant/Adh  
**Manufacturer** BOSTIK FINDLEY, INC.  
 211 Boston Street  
 Middleton , MA 01949 USA

### 24 Hour Emergency Assistance

Phone: 1-800-227-0332

### General Assistance

Phone: 1-978-777-0100

### MSDS Assistance

Phone: 1-978-777-0100

## 2 COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Percentage
ODORLESS MINERAL SPIRITS	8052-41-3	5 - 10
Methylene Bisphenol Isocyanate (MDI)	101-68-8	0.1 - 1
Non-hazardous and other ingredients below reportable levels	Proprietary	Balance

## 3 HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

This product contains materials that on exposure could cause irritation and minor residual injury even if no treatment is provided. 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.

### POTENTIAL HEALTH EFFECTS

**Skin Contact:** Skin contact may cause irritation. A component of this product is a potential skin sensitizer. Repeated skin contact may cause a persistent irritation or dermatitis.

**Eye Contact:** May cause irritation with temporary redness with stinging and tearing.

**Inhalation:** Inhalation of hot mist may cause respiratory irritation. Prolonged or repeated exposure may cause asthmatic or other pulmonary responses.

**Ingestion:** Exposure is unlikely. This product can cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

### TARGET ORGANS

Skin. Eyes. Lungs.

## 4 FIRST AID MEASURES

### SKIN

Remove contaminated clothing to prevent further skin exposure and dispose of properly. Wash affected skin thoroughly with soap and water. For minor exposures, flush exposed skin for at least 15 minutes with clean water. Once thoroughly washed, seek medical attention if irritation develops or persists after the area is washed.

### EYE

Immediately flush with plenty of water for at least 15 minutes, holding eyelids open at all times. Get medical attention immediately. See Notes to Physician.

### INHALATION

Remove to fresh air. Give artificial respiration if not breathing. If symptoms persist, get medical attention.

### INGESTION

No harmful effect is anticipated. If ingested, get immediate medical attention. Do not induce vomiting unless instructed to do so by medical personnel. If victim is conscious and not convulsing give 1 or 2 glasses of water to dilute the chemical. Never give anything by mouth to a victim who is unconscious or is having convulsions.

### NOTES TO PHYSICIAN

Treat symptomatically and supportively. Contact Bostik Findley to determine whether any additional information is available.

## 5 FIRE FIGHTING MEASURES

### EXTINGUISHING MEDIA

Use dry chemical, carbon dioxide, or foam. Use water spray on large fires.

### DUST EXPLOSION HAZARD

None Known

### SENSITIVITY TO MECHANICAL IMPACT

None Known

### SENSITIVITY TO STATIC DISCHARGE

None Known

### UNUSUAL FIRE & EXPLOSION HAZARDS

This product is classified as a Combustible Liquid. Containers may explode in a fire. Product may burn and produce toxic gases in a fire.

### FIRE FIGHTING EQUIPMENT/INSTRUCTIONS

Firefighters should wear full protective clothing including self contained breathing apparatus.

**Flash Point** 170 F (77 C)

## 6 ACCIDENTAL RELEASE MEASURES

### EMERGENCY ACTION

Appropriate safety measures and protective equipment should be used. See Section 8.

## **CONTAINMENT**

Isolate spill area. Stop discharge if safe to do so. Stop material from contaminating soil or from entering sewers or water streams. Scrape up polyurethane and deposit into appropriate containers.

## **7 HANDLING & STORAGE**

For Commercial Use Only - Not Packaged or Labeled for Home Use!

### **HANDLING**

Avoid contact with skin and eyes. Wash thoroughly after handling. Use this product with adequate ventilation.

### **STORAGE**

Store in a cool, dry, well-ventilated area away from heat, ignition sources and direct sunlight. Keep containers tightly closed unless the product has become moisture contaminated.

### **EMPTY CONTAINER PRECAUTION**

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**

### **ENGINEERING CONTROLS**

Use local exhaust ventilation when vapors, mists, or dusts can be released in concentrations above the TLV. Local exhaust is preferred, but general ventilation may be acceptable to meet exposure limits.

### **EYE PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)**

Wear safety glasses with side shields.

### **SKIN PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)**

Cover as much of exposed skin as possible. Wear protective clothing that provides protection against skin exposure. Wear chemical resistant gloves and clothing.

### **RESPIRATORY PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)**

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.

### **GENERAL**

Eyewash fountains and emergency showers should be readily available. Use good industrial hygiene practices in handling this material.

## EXPOSURE LIMITS

### ACGIH 2000 - Time Weighted Averages

4,4'-METHYLENEDIPHENYL DIISOCYANATE; DIPHENYLMETHANE-4,4'-DI	101-68-8	0.005 ppm TWA
ODORLESS MINERAL SPIRITS	8052-41-3	100 ppm TWA

### OSHA - Vacated PELs - Ceiling Limits

4,4'-METHYLENEDIPHENYL DIISOCYANATE; DIPHENYLMETHANE-4,4'-DI	101-68-8	C 0.02 ppm; C 0.2 mg/m <sup>3</sup>
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### OSHA - Vacated PELs - Time Weighted Averages

ODORLESS MINERAL SPIRITS	8052-41-3	100 ppm TWA; 525 mg/m <sup>3</sup> TWA
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## 9 PHYSICAL & CHEMICAL PROPERTIES

<b>Boiling Point</b>	310 - 405 F (154 - 207 C)
<b>Vapor Pressure</b>	2 MM HG
<b>Vapor Density</b>	5
<b>Solubility In Water</b>	0 %
<b>Target Solids</b>	91.7 %
<b>pH</b>	N/A
<b>Density</b>	1.13 g/cc
<b>Odor</b>	Solvent
<b>Color</b>	Amber
<b>Physical State</b>	Paste
<b>Freeze Protect</b>	No

## 10 STABILITY & REACTIVITY

### STABILITY/INCOMPATIBILITY

Stable under normal conditions.

### HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS

If product is burned carbon monoxide, carbon dioxide, oxides of nitrogen, amines, isocyanate-containing compounds and other unknown products may be produced.

### HAZARDOUS POLYMERIZATION

Not likely to occur. However, curing of product releases carbon dioxide. If curing occurs inside a closed container, pressure buildup may result.

### CONDITIONS TO AVOID

Avoid contact with Strong Oxidizers, Strong Alkalis, Strong Acids, Alcohols, and Water.

## 11 TOXICOLOGICAL INFORMATION

## LD50

### NIOSH - Selected LD50s and LC50s

4,4'-METHYLENEDIPHENYL DIISOCYANATE;  
DIPHENYLMETHANE-4,4'-DI 101-68-8 Inhalation LC50 Rat : 178 mg/m<sup>3</sup>; Oral LD50 R  
mg/kg; Oral LD50 Mouse : 2200 mg/kg

## CARCINOGENICITY

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

**VOC (Volatile Organic Compounds)** 93.7 g/l

### ECOTOXICOLOGICAL INFORMATION

Organic solvents produce slight to moderate toxicity to aquatic life. Insufficient data exists to evaluate the effect on plants, birds or land animals.

## 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.

### WASTE DISPOSAL

This product is not known to be regulated under RCRA regulations but contains SARA regulated substances. Disposal of unused portions of this product and process waste containing this product should be done only after a careful evaluation and in compliance with all federal, local and state laws.

## 14 TRANSPORT INFORMATION

Proper Shipping Name Not Regulated  
Hazard Class Not Applicable  
DOT Restrictions Not Applicable

## 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.

### CERCLA/SARA - Hazardous Substances and their Reportable Quantities

4,4'-METHYLENEDIPHENYL DIISOCYANATE;  
DIPHENYLMETHANE-4,4'-DI 101-68-8 final RQ = 5000 pounds (2270 kg)

Based on an evaluation of the components used, this product does contain hazardous ingredients identified as per 29 CFR 1910.1200.

### STATE REGULATIONS

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

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<b>MSDS Number</b>	15958	<b>Product</b>	A46000
<b>Label Number</b>	15958	<b>NA = Not Available</b>	<b>ND = Not Determined</b>

## INTERNATIONAL REGULATIONS

This is a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS).  
Class D Division 2 Sub-division B. and Class B Division 3

## SARA 302 EXTREMELY HAZARDOUS SUBSTANCES

Not Regulated

## SARA 311/312 HAZARD CATEGORIES

Immediate Hazard	Yes
Delayed Hazard	Yes
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

## SARA 313 TOXIC CHEMICALS

Component	CAS Number	Percentage
Methylene Bisphenol Isocyanate (MDI)	101-68-8	0.1 - 1

## WHMIS RATINGS

Compressed Gas		Flammable/Combustible	X	Oxidizer		Acutely Toxic
Other Toxic Effects	X	Bio Hazardous		Corrosive		Dangerously Reactive

## 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 Findley, 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.

<b>Issue Date</b>	28-Nov-2001	<b>Supersedes</b>	25-Nov-2001
<b>Prepared By</b>	Russell Hardenber		