

EFA+(TM)  
 Revision Number 3

Revision date 01-Nov-2019  
 Supersedes Date: 24-May-2018

## 1. Identification

### 1.1. Product Identifier

Product Name EFA+(TM)

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Adhesives.  
 Uses advised against No information available

### 1.3. Details of the supplier of the safety data sheet

#### Responsible Party

Bostik Inc.  
 11320 W. Watertown Plank Road  
 Wauwatosa, Wisconsin 53226 USA  
 Phone: +1 (800) 843-0844 (Domestic Toll Free)  
 Phone: +1 (414) 774-2250 (International)  
 Fax: +1 (414) 774-8075

E-mail msds@bostik.com

### 1.4. Emergency telephone number

Telephone: 1-800-227-0332  
 (Outside U.S.) 1-703-527-3887

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Respiratory sensitization	Category 1
Skin sensitization	Category 1
Flammable liquids	Category 4

### 2.2. Label Elements

#### EMERGENCY OVERVIEW

**Danger**

#### Hazard statements

May cause allergy or asthma symptoms or breathing difficulties if inhaled  
 May cause an allergic skin reaction  
 Combustible liquid



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**Appearance** Paste **Physical State** Liquid **Odor** No information available

## Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray  
In case of inadequate ventilation wear respiratory protection  
Contaminated work clothing should not be allowed out of the workplace  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
Wear protective gloves/protective clothing/eye protection/face protection

## Precautionary Statements - Response

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.  
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.

## Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool

## Precautionary Statements - Disposal

Dispose of contents/ container to an approved waste disposal plant

## Hazards not otherwise classified (HNOC)

Not applicable

## Unknown acute toxicity

29 % of the mixture consists of ingredient(s) of unknown toxicity

## 2.3. Other Information

Causes mild skin irritation.

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Mixture

### 3.2 Mixtures

Chemical name	CAS No.	Weight-%
Limestone	1317-65-3	40 - 70
Naphtha, petroleum, heavy alkylate	64741-65-7	3 - 7
Benzene, 1,1'-methylenebis[isocyanato-	26447-40-5	0.1 - 1
Quartz	14808-60-7	0.1 - 1
Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	0.1 - 1

*\*The exact percentage (concentration) of composition has been withheld as a trade secret.*

## Section 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### Eye contact

In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

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<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. May cause sensitization by skin contact. In the case of skin irritation or allergic reactions see a physician.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. May cause allergic respiratory reaction. Administer oxygen if breathing is difficult. Get medical attention if symptoms occur.
<b>Ingestion</b>	Do NOT induce vomiting. Call a physician or poison control center immediately.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

## 4.2. Most important symptoms and effects, both acute and delayed

**Symptoms** May cause sensitization by inhalation and skin contact.

## 4.3. Indication of any immediate medical attention and special treatment needed

**Note to physicians** May cause sensitization by inhalation and skin contact. Treat symptomatically.

## 4.4. Reference to Other Sections

**Reference to other sections** Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION  
Section 11: TOXICOLOGY INFORMATION

## **Section 5: FIRE-FIGHTING MEASURES**

### 5.1. Extinguishing media

#### **Suitable extinguishing media**

Dry chemical, CO<sub>2</sub>, water spray or regular foam. Use water spray or fog; do not use straight streams. Move containers from fire area if you can do it without risk.

#### **Unsuitable extinguishing media**

CAUTION: All these products have a very low flash point: Use of water spray when fighting fire may be inefficient.

### 5.2. Special hazards arising from the substance or mixture

#### **Specific hazards arising from the chemical**

Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Keep product and empty container away from heat and sources of ignition. Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact.

#### **Explosion Data**

<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.

### 5.3. Advice for firefighters

#### **Special protective actions for fire-fighters**

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**

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** Use personal protective equipment as required. ELIMINATE all ignition sources (no

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smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Wash thoroughly after handling.

**Other information** Water spray may reduce vapor; but may not prevent ignition in closed spaces.

## 6.2. Environmental precautions

**Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional Ecological Information.

## 6.3. Methods and material for containment and cleaning up

**Methods for containment** Protect from moisture. A vapor suppressing foam may be used to reduce vapors. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

**Methods for cleaning up** Use personal protective equipment as required. Dam up. Soak up with inert absorbent material. Use clean non-sparking tools to collect absorbed material. Take precautionary measures against static discharges. Clean contaminated surface thoroughly.

## 6.4. Reference to other sections

**Reference to other sections** Section 7: HANDLING AND STORAGE  
Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION  
Section 13: DISPOSAL CONSIDERATIONS

## **Section 7: HANDLING AND STORAGE**

### 7.1. Precautions for safe handling

**Advice on safe handling** Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Use with local exhaust ventilation. All equipment used when handling the product must be grounded. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Avoid contact with skin, eyes or clothing. After contact with skin, wash immediately with plenty of water and soap. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep out of the reach of children. Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Protect from direct contact with water or excessive moisture.

**Incompatible materials** Water.

### 7.3. Specific end use(s)

**Specific Use(s)**  
Adhesives.

**Other information** No information available.

### 7.4. References to Other Sections

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Reference to other sections Section 13: DISPOSAL CONSIDERATIONS  
Section 10: STABILITY AND REACTIVITY

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure Guidelines

. This product contains substances which in their raw state are powder form, however in this product they are in a non-respirable form. Inhalation of powder/dust particles is unlikely to occur from exposure to this product.

Chemical name	ACGIH TLV	NIOSH IDLH	OSHA PEL	Mexico
Limestone 1317-65-3	No data available	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction	-
Benzene, 1,1'-methylenebis[isocyanato - 26447-40-5	No data available	-	Ceiling: 0.02 ppm Ceiling: 0.2 mg/m <sup>3</sup>	-
Quartz 14808-60-7	TWA: 0.025 mg/m <sup>3</sup> respirable particulate matter	IDLH: 50 mg/m <sup>3</sup> respirable dust TWA: 0.05 mg/m <sup>3</sup> respirable dust	TWA: 50 µg/m <sup>3</sup> TWA: 50 µg/m <sup>3</sup> excludes construction work, agricultural operations, and exposures that result from the processing of sorptive clays : (250)/( %SiO <sub>2</sub> + 5) mppcf TWA respirable fraction : (10)/( %SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA respirable fraction	TWA: 0.025 mg/m <sup>3</sup>

Chemical name	Argentina	Brazil	Chile	Venezuela
Limestone 1317-65-3	TWA: 10 mg/m <sup>3</sup>	-	TWA: 7 mg/m <sup>3</sup>	-
Benzene, 1,1'-methylenebis[isocyanato - 26447-40-5	TWA: 0.005 ppm	-	TWA: 0.004 ppm TWA: 0.045 mg/m <sup>3</sup>	-
Quartz 14808-60-7	TWA: 0.05 mg/m <sup>3</sup>	-	TWA: 0.08 mg/m <sup>3</sup>	TWA: 0.025 mg/m <sup>3</sup>

### 8.2. Exposure controls

#### Engineering controls

Showers  
Eyewash stations  
Ventilation systems.

#### Personal protective equipment [PPE]

##### Eye/face protection

Tight sealing safety goggles.

##### Skin and body protection

Wear suitable chemical resistant gloves. The selection of suitable gloves does not only depend on the material, but also on further marks of quality and various manufacturers.

##### 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.

##### General hygiene considerations

Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice. When using do not eat, drink or smoke. Avoid breathing (dust, vapor, mist, gas). Avoid contact with skin, eyes or clothing. Wash face, hands and any exposed skin thoroughly after handling. Take off all contaminated clothing and wash it

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before reuse. Regular cleaning of equipment, work area and clothing is recommended.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Paste
Color	White
Odor	No information available
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point / freezing point	No data available	
Boiling point / boiling range	172 °C / 342 °F	
Flash point	63 °C / 145 °F	CC (closed cup)
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability or explosive limits	No information available	
Lower flammability or explosive limits	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	No information available	
Water solubility	No information available	
Solubility in Other Solvents		
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	
9.2. Other information		
Softening Point	No information available	
Molecular weight	No information available	
Solvent content (%)	No information available	
Solid content (%)	95.5	
Density	1.649 g/cm <sup>3</sup>	
VOC Content (%)		< 25 g/L / 2 %

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Reacts with water. Protect from moisture.

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

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None under normal processing.

## 10.4. Conditions to avoid

Heat, flames and sparks. Protect from moisture.

## 10.5. Incompatible materials

Water.

## 10.6. Hazardous decomposition products

None known based on information supplied.

## Section 11: TOXICOLOGY INFORMATION

### 11.1. Information on toxicological effects

<b>Product Information</b>	No data available
<b>Inhalation</b>	May cause sensitization by inhalation.
<b>Eye contact</b>	Based on available data, the classification criteria are not met.
<b>Skin contact</b>	May cause sensitization by skin contact.
<b>Ingestion</b>	Based on available data, the classification criteria are not met.

### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Limestone 1317-65-3	>5000 mg/kg (Rattus)	-	-
Naphtha, petroleum, heavy alkylate 64741-65-7	>7000 mg/kg (Rattus)	> 2000 mg/kg (Oryctolagus cuniculus)	>5.04 mg/L (Rattus) 4 h
Benzene, 1,1'-methylenebis[isocyanato- 26447-40-5	>10000 mg/kg (Rattus)	> 10000 mg/kg (Oryctolagus cuniculus)	=490 mg/m <sup>3</sup> (Rattus) 4 h
Quartz 14808-60-7	>2000 mg/kg (Rattus)	-	-
Benzenesulfonyl isocyanate, 4-methyl- 4083-64-1	=2234 mg/kg (Rattus)	LD 50 (Rattus) > 2000 mg/kg OECD 402	>640 ppm (Rattus) 1 h

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Symptoms</b>	No information available.
<b>Skin corrosion/irritation</b>	No information available.
<b>Serious eye damage/eye irritation</b>	No information available.
<b>Irritation</b>	No information available.
<b>Corrosivity</b>	No information available.
<b>Sensitization</b>	Isocyanates are known to be strong sensitizers. People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation. May cause sensitization by inhalation and skin contact.
<b>Germ cell mutagenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>Developmental toxicity</b>	No information available.
<b>Teratogenicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Chronic Toxicity</b>	No information available.
<b>Target organ effects</b>	Skin, Respiratory system.

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**Aspiration hazard**  
**Carcinogenicity**

No information available.  
The table below indicates whether each agency has listed any ingredient as a carcinogen. As Quartz (14808-60-7) is inextricably bound in the polymer matrix, it is not expected to be available as an airborne hazard (dust, mist, or spray) under normal condition of uses.

Chemical name	ACGIH	IARC	NTP	OSHA
Benzene, 1,1'-methylenebis[isocyanato - 26447-40-5	-	Group 3	-	-
Quartz 14808-60-7	A2	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)  
A2 - *Suspected Human Carcinogen*  
IARC (International Agency for Research on Cancer)  
Group 1 - *Carcinogenic to Humans*  
Group 3 - *Not Classifiable as to Carcinogenicity in Humans*  
NTP (National Toxicology Program)  
Known - *Known Carcinogen*  
OSHA (Occupational Safety and Health Administration of the US Department of Labor)  
X - *Present*

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Limestone 1317-65-3	CE50 (72h) >200mg/L Algae (Desmondesmus subspicatus)	CL50 (96h)>10000mg/L (Oncorhynchus mykiss)		CE50 (48h) >1000 mg/L Daphnia Magna
Naphtha, petroleum, heavy alkylate 64741-65-7	EC50: =30000mg/L (72h, Pseudokirchneriella subcapitata)			LC50: =2mg/L (48h, Mysidopsis bahia)
Benzene, 1,1'-methylenebis[isocyanato - 26447-40-5	EC50: =3230mg/L (96h, Skeletonema costatum)			EC50: >1000mg/L (24h, Daphnia magna)

### 12.2. Persistence and degradability

No information available.

### 12.3. Bioaccumulative potential

No information available.

### 12.4. Mobility in soil

No information available.

### Other adverse effects

No information available

## Section 13: DISPOSAL CONSIDERATIONS



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## 13.1. Waste treatment methods

**Disposal of Wastes** It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations

**Contaminated packaging** Dispose of in accordance with federal, state and local regulations

## Section 14: TRANSPORT INFORMATION

**Note:** The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments made in non-bulk packages (see regulatory definition)  
The information shown here, may not always agree with the bill of lading shipping description for the material  
49 CFR 173.150(f)(2) "The requirements in this subchapter do not apply to a material classed as a combustible liquid in a non-bulk packaging unless the combustible liquid is a hazardous substance, a hazardous waste, or a marine pollutant."

### DOT

<b>UN/ID No</b>	NA1993
<b>Proper Shipping Name</b>	Combustible liquid, n.o.s.
<b>Hazard class</b>	Combustible liquid
<b>Packing Group</b>	III
<b>Special Provisions</b>	IB3, T1, TP1, 148
<b>Description</b>	NA1993, Combustible liquid, n.o.s. (Naphtha, petroleum, heavy alkylate), Combustible liquid, III
<b>Emergency Response Guide Number</b>	128

**IATA** Not regulated

**IMDG** Not regulated

## Section 15: REGULATORY INFORMATION

### Global Inventories

<b>TSCA</b>	Listed
<b>DSL</b>	Listed

#### Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL** - Canadian Domestic Substances List

**Listed** - The components of this product are either listed or exempt from listing on inventory.

**Not Listed** - One or more components of this product are not listed on inventory.

### United States of America

#### 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

Classification is shown in section 2 of this SDS

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## Europe

### **Restrictions of Use of Hazardous Substances (RoHS) Directive 2011/65/EU**

This product does not contain Lead (7439-92-1), Cadmium (7440-43-9), Mercury (7439-97-6), Hexavalent chromium (7440-47-3), Polybrominated biphenyls (PBB), and Polybrominated diphenyl ethers (PBDE) above the regulated limit mentioned in this regulation

### **SVHC: Substances of Very High Concern for Authorization:**

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

## **Section 16: OTHER INFORMATION**

### **Key or legend to abbreviations and acronyms used in the safety data sheet**

No information available

### **Key Literature References and Sources for Data**

No information available

<b>Prepared By</b>	Product Safety & Regulatory Affairs
<b>Revision date</b>	01-Nov-2019
<b>Revision note</b>	SDS sections updated, 1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 15.
<b>Training Advice</b>	No information available
<b>Further information</b>	No information available

### **Disclaimer**

The information provided in this 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 Safety Data Sheet**