

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** Thiokol FEC 2233 Flexible Epoxy Coating - Hardener/Side B  
**Version #** 2.0  
**Revision date** 24-Nov-2008  
**Company information** PolySpec  
 6614 Gant Road  
 Houston, TX 77066 US  
**Emergency** Chemtrec (800) 424-9300  
 International (703) 527-3887

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

Component(s)	CAS #	Percent
Benzyl Alcohol	100-51-6	< 40
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	< 2.5
Non-hazardous and other components below reportable levels		> 60
<b>Composition comments</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	

## 3. HAZARDS IDENTIFICATION

**Emergency overview** Kidney injury may occur. Harmful in contact with eyes. Danger of serious damage to health by prolonged exposure. May cause breathing disorders and lung damage. May cause liver damage. Causes skin and eye burns.

**Potential short term health effects**

- Eyes** Contact may irritate or burn eyes. Eye contact may result in corneal injury.
- Skin** Components of the product may be absorbed into the body through the skin.
- Inhalation** May cause breathing disorders and lung damage.
- Ingestion** Do not ingest. May be harmful if swallowed.

**Target organs** Eyes. Kidney. Liver. Respiratory system. Skin.

**Main symptoms** Liver injury may occur. Kidney injury may occur.

## 4. FIRST AID MEASURES

**First aid**

- Eye contact** Immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention immediately. Get medical attention if irritation develops or persists.
- Skin contact** Get medical attention immediately. Remove and isolate contaminated clothing and shoes. Immediately flush skin with running water for at least 20 minutes. For minor skin contact, avoid spreading material on unaffected skin. Wash off immediately with plenty of water. If skin irritation persists, call a physician.
- Inhalation** Get medical attention immediately. Move to fresh air. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, give oxygen. Get medical attention, if needed.
- Ingestion** Do not induce vomiting without medical advice. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Do not use mouth-to-mouth method if victim ingested the substance. Have victim rinse mouth thoroughly with water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. If ingestion of a large amount does occur, seek medical attention.

**Notes to physician** Symptoms may be delayed.

**General advice** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Keep victim warm. In case of shortness of breath, give oxygen. If you feel unwell, seek medical advice (show the label where possible).

## 5. FIRE FIGHTING MEASURES

<b>Suitable extinguishing media</b>	Small Fires:  Large Fires: Carbon dioxide (CO <sub>2</sub> ). Alcohol foam. Water spray. Water Fog. Polymer foam. Dry chemical powder.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do it without risk. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. ALWAYS stay away from tanks engulfed in flame. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. Cool containers with flooding quantities of water until well after fire is out. Do not scatter spilled material with high pressure water streams.
<b>Specific methods</b>	In the event of fire, cool tanks with water spray. Water mist may be used to cool closed containers.
<b>Flash point</b>	208 °F (97.8 °C) Pensky-Martens Closed Cup

## 6. ACCIDENTAL RELEASE MEASURES

<b>Evacuation procedures</b>	Stay upwind. Keep out of low areas. Keep unnecessary personnel away.
<b>Containment procedures</b>	Prevent entry into waterways, sewers, basements or confined areas. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use water spray to reduce vapors or divert vapor cloud drift.
<b>Personal precautions</b>	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material. Keep people away from and upwind of spill/leak.
<b>Methods for cleaning up</b>	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Dike far ahead of liquid spill for later disposal. Never return spills in original containers for re-use. Large Spills: Wet down with water and dike for later disposal. After removal flush contaminated area thoroughly with water.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Do not handle or store near an open flame, heat or other sources of ignition. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation wear suitable respiratory equipment. Surfaces may become slippery after spillage.
<b>Storage</b>	Keep in a cool, well-ventilated place. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Do not freeze.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure limits

<b>ACGIH - Threshold Limits Values - Ceilings (TLV-C)</b>		
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	0.1 Mg/m <sup>3</sup> Ceiling
<b>ACGIH - Threshold Limits Values - TLV Basis - Critical Effects</b>		
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	irritation; blood

### Personal protective equipment

<b>Respiratory protection</b>	A NIOSH- approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. In case of insufficient ventilation wear suitable respiratory equipment.
<b>Eye protection</b>	Wear chemical goggles.
<b>Skin and body protection</b>	Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Wear suitable protective clothing.
<b>General</b>	Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

<b>Hygiene measures</b>	Avoid contact with the skin and the eyes. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.
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## 9. PHYSICAL & CHEMICAL PROPERTIES

<b>Density</b>	9.0797 lb/gal
<b>Form</b>	Liquid.
<b>Specific gravity</b>	1.09

## 10. CHEMICAL STABILITY & REACTIVITY INFORMATION

<b>Stability</b>	Stable at normal conditions.
<b>Conditions to avoid</b>	Direct sources of heat.
<b>Incompatibility</b>	Amines. Caustics. Isocyanates. Strong oxidizing agents. Will form explosive mixtures in air.

## 11. TOXICOLOGICAL INFORMATION

**Local effects** Liver toxicity. Risk of serious damage to eyes. Components of the product may be absorbed into the body through the skin.

### Component analysis - LD50

#### NIOSH - Selected LD50s and LC50s

Benzyl Alcohol	100-51-6	Oral LD50 Rat: 1230 mg/kg; Oral LD50 Mouse: 1360 mg/kg; Dermal LD50 Rabbit: 2 g/kg
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	Inhalation LC50 Rat: 700 ppm/1H; Oral LD50 Rat: 930 mg/kg; Dermal LD50 Rabbit: 2 g/kg

**Chronic toxicity** Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged or repeated exposure may cause lung injury.

**Subchronic toxicity** Kidney injury may occur.

**Further information** Symptoms may be delayed.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Components of this product have been identified as having potential environmental concerns.

### Environmental effects

#### Ecotoxicity - Freshwater Fish Species Data

Benzyl Alcohol 100-51-6 96 Hr LC50 fathead minnow: 460 mg/L (Static); 96 Hr LC50 bluegill: 10 mg/L (Static)

#### Ecotoxicity - Microtox Data

Benzyl Alcohol 100-51-6 5 Min EC50 Photobacterium phosphoreum: 63.7 mg/L; 15 min EC50 Photobacterium phosphoreum: 63.7 mg/L; 30 min EC50 Photobacterium phosphoreum: 71.4 mg/L

#### Ecotoxicity - Water Flea Data

Benzyl Alcohol 100-51-6 48 Hr EC50 water flea: 23 mg/L

## 13. DISPOSAL CONSIDERATIONS

**Disposal instructions** Dispose in accordance with all applicable regulations. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

## 14. TRANSPORTATION INFORMATION

### Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

### International Air Transport Association (IATA) Requirements

Not regulated as dangerous goods.

### International Maritime Dangerous Goods (IMDG) Code Requirements

Not regulated as dangerous goods.

## 15. REGULATORY INFORMATION

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

### Inventory - European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

Benzyl Alcohol	100-51-6	202-859-9
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	216-032-5

### Inventory - United States - Section 8(b) Inventory (TSCA)

Benzyl Alcohol	100-51-6	Present
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	Present

### Occupational safety and health administration (OSHA)

**29 CFR 1910.1200** Yes  
**hazardous chemical**

### CERCLA (superfund) reportable quantity

None

### Superfund amendments and reauthorization act of 1986 (SARA)

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** Yes

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - Yes  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

### NFPA ratings

Health: 0  
Flammability: 1  
Instability: 0

### International regulations

#### Canada - WHMIS - Ingredient Disclosure List

Benzyl Alcohol	100-51-6	1 % (English Item 169, French Item 170)
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	1 % (English Item 1697, French Item 1725)

### State regulations

#### Massachusetts - Right To Know List

Benzyl Alcohol	100-51-6	Present
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	Present

#### New Jersey - Right to Know Hazardous Substance List

M-Xylene-.alpha., .alpha.'-diamine 1477-55-0 sn 1320

#### Pennsylvania - RTK (Right to Know) List

Benzyl Alcohol	100-51-6	Present
M-Xylene-.alpha., .alpha.'-diamine	1477-55-0	Present

## 16. OTHER INFORMATION

### 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 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. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.

### Issue date

24-Nov-2008

### MSDS sections updated

This document has undergone significant changes and should be reviewed in its entirety