

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	Thiokol FEC 2234 Flexible Epoxy Coating - Resin/Side A
Version #	2.0
Revision date	29-Oct-2009
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
Crystalline Silica	14808-60-7	< 40
Bisphenol-A-(Epichlorohydrin) polymer	25068-38-6	< 20
Non-hazardous and other components below reportable levels		> 60

3. HAZARDS IDENTIFICATION

Emergency overview	May cause sensitization by skin contact. Irritating to skin. Harmful in contact with eyes. Danger of serious damage to health by prolonged exposure. May cause cancer. May cause breathing disorders and lung damage.
Potential short term health effects	
Eyes	Contact may irritate or burn eyes. Eye contact may result in corneal injury.
Skin	Irritating to skin. May cause sensitization by skin contact.
Inhalation	May cause breathing disorders and lung damage.
Ingestion	Do not ingest.
Target organs	Eyes. Lungs. Respiratory system.

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. If skin irritation persists, call a physician. Wash off immediately with plenty of water.
Inhalation	Get medical attention immediately. Move to fresh air. Oxygen or artificial respiration if needed. 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	If material is ingested, immediately contact a physician or poison control center. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. 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. Drink plenty of water.
Notes to physician	Symptoms may be delayed.
General advice	Keep victim warm. Keep victim under observation. In case of shortness of breath, give oxygen. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Take off contaminated clothing and shoes immediately.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	Small Fires: Dry chemical, CO2, water spray or regular foam. Large Fires: Water spray, fog or regular foam.
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Fire fighting equipment/instructions	Move containers from fire area if you can do it without risk. Do not scatter spilled material with high pressure water streams. 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.
Flash point	200 °F (93.3 °C) Pensky-Martens Closed Cup

6. ACCIDENTAL RELEASE MEASURES

Evacuation procedures	Stay upwind. Keep out of low areas. Keep unnecessary personnel away.
Containment procedures	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.
Personal precautions	Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Methods for cleaning up	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.

7. HANDLING AND STORAGE

Handling	Do not breathe gas/fumes/vapor/spray. Wear personal protective equipment. Avoid contact with eyes. Do not get this material in contact with skin or eyes. Do not handle or store near an open flame, heat or other sources of ignition. Surfaces may become slippery after spillage.
Storage	Keep container tightly closed. Keep out of the reach of children. 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

ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWA)

Crystalline Silica	14808-60-7	0.05 Mg/m ³ TWA (respirable fraction)
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ACGIH - Threshold Limits Values - TLV Basis - Critical Effects

Crystalline Silica	14808-60-7	silicosis; lung function; lung fibrosis; cancer
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Personal protective equipment

Respiratory protection	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.
Hand protection	Protective gloves.
Eye protection	Wear chemical goggles. Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant gloves. Wear suitable protective clothing.
General	Avoid contact with the skin and the eyes.

Engineering measures to reduce exposure Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Hygiene measures Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice for diagnostics. Avoid contact with the skin and the eyes. Handle in accordance with good industrial hygiene and safety practice. When using do not smoke.

9. PHYSICAL & CHEMICAL PROPERTIES

Density	11.1669 lb/gal
Form	Liquid.
Specific gravity	1.34

10. CHEMICAL STABILITY & REACTIVITY INFORMATION

Stability	Stable at normal conditions.
Conditions to avoid	Direct sources of heat.
Incompatibility	Fluoride. Powerful oxidizers.

11. TOXICOLOGICAL INFORMATION

Local effects Risk of serious damage to eyes. Irritating to skin. May cause sensitization by skin contact.

Component analysis - LD50

NIOSH - Selected LD50s and LC50s

Bisphenol-A-(Epichlorohydrin) 25068-38-6 Oral LD50 Rat: 11400 mg/kg; Oral LD50 Mouse: 15600 mg/kg
polymer

Sensitization May cause sensitization by skin contact.

Carcinogenicity Cancer hazard.

ACGIH - Threshold Limits Values - Carcinogens

Crystalline Silica 14808-60-7 A2 - Suspected Human Carcinogen

NTP (National Toxicology Program) - Report on Carcinogens - Known Carcinogens

Crystalline Silica 14808-60-7 Known Carcinogen

Chronic toxicity Prolonged or repeated exposure may cause lung injury.

Routes of exposure Skin contact.

12. ECOLOGICAL INFORMATION

Ecotoxicity This material is not expected to be harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Disposal instructions 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. Dispose in accordance with all applicable regulations.

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.
CERCLA/SARA Hazardous Substances - Not applicable.

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

Crystalline Silica 14808-60-7 238-878-4

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

Bisphenol-A-(Epichlorohydrin) 25068-38-6 XU
polymer

Crystalline Silica 14808-60-7 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 No
hazardous substance

Section 311 hazardous Yes
chemical

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

NFPA ratings Health: 2
Flammability: 1
Instability: 0

International regulations

Canada - WHMIS - Ingredient Disclosure List

Crystalline Silica 14808-60-7 1 % (English Item 1406, French Item 1491)

State regulations

California - Proposition 65 - Carcinogens List

Crystalline Silica 14808-60-7 carcinogen, initial date 10/1/88 (airborne particles of respirable size)

Massachusetts - Right To Know List

Crystalline Silica 14808-60-7 Carcinogen; Extraordinarily hazardous

New Jersey - Right to Know Hazardous Substance List

Crystalline Silica 14808-60-7 sn 1660

Pennsylvania - RTK (Right to Know) List

Crystalline Silica 14808-60-7 Present as well as its dust

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

29-Oct-2009