

# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>Thiokol FEC 2234 - Resin/Side A</b>	
<b>Other means of identification</b>		
<b>SKU#</b>	TK230R	
<b>Recommended use</b>	Not available.	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
<b>Company name</b>	ITW Engineered Polymers	
<b>Address</b>	130 Commerce Drive Montgomeryville, PA 18936 United States	
<b>Telephone</b>	Customer Service	215-855-8450
<b>Website</b>	www.itwengineeredpolymers.com	
<b>E-mail</b>	orders.na@itwep.com	
<b>Contact person</b>	EHS Department	
<b>Emergency phone number</b>	CHEMTREC	800-424-9300
	International	703-527-3887

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Sensitization, skin	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, long-term hazard	Category 3
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Warning	
<b>Hazard statement</b>	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.	
<b>Precautionary statement</b>		
<b>Prevention</b>	Avoid breathing mist or vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear eye protection/face protection. Wear protective gloves.	
<b>Response</b>	If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.	
<b>Storage</b>	Store away from incompatible materials.	
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.	
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.	

## Supplemental information

99.79% of the mixture consists of component(s) of unknown acute oral toxicity. 99.79% of the mixture consists of component(s) of unknown acute dermal toxicity. 75.88% of the mixture consists of component(s) of unknown acute inhalation toxicity. 99.79% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 76.5% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Epoxy Resin:--reaction Product Of Bisphenol A And Epichlorohydrin (refer To Epichlorohydrin)		25068-38-6	10 - 30
Quartz		14808-60-7	10 - 30
Oxirane, Mono[(c12-14-alkyloxy)methyl] Derivatives [alkyl (c12-14) Glycidyl Ether]		68609-97-2	1 - 5
Other components below reportable levels			30 - 60

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

## 4. First-aid measures

### Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

### Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

### Ingestion

Rinse mouth. Get medical attention if symptoms occur.

### Most important symptoms/effects, acute and delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

### Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

### General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

## 5. Fire-fighting measures

### Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

### Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

### Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

### Fire fighting equipment/instructions

Move containers from fire area if you can do so without risk.

### Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

### General fire hazards

No unusual fire or explosion hazards noted.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage****Precautions for safe handling**

Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection****Occupational exposure limits**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
Quartz (CAS 14808-60-7)	PEL	0.05 mg/m <sup>3</sup>

**US. OSHA Table Z-3 (29 CFR 1910.1000)**

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m <sup>3</sup> 2.4 mppcf	Respirable. Respirable.

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.05 mg/m <sup>3</sup>	Respirable dust.

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Face shield is recommended. Wear safety glasses with side shields (or goggles).

**Skin protection****Hand protection**

Wear appropriate chemical resistant gloves.

**Other**

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

**9. Physical and chemical properties****Appearance**

Liquid.

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Black. or Neutral
<b>Odor</b>	Slight.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	200.0 °F (93.3 °C) Pensky-Martens Closed Cup
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	8.91 lb/gal
<b>Explosive properties</b>	Not explosive.
<b>Flammability class</b>	Combustible IIIB estimated
<b>Oxidizing properties</b>	Not oxidizing.
<b>Specific gravity</b>	1.07
<b>VOC</b>	< 25 g/l Mixed components

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye irritation.

**Ingestion** Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

**Information on toxicological effects**

**Acute toxicity** Not known.

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Quartz (CAS 14808-60-7) 1 Carcinogenic to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Quartz (CAS 14808-60-7) Known To Be Human Carcinogen.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful.

**12. Ecological information**

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential**

**Mobility in soil** No data available.

**Other adverse effects** The product contains volatile organic compounds which have a photochemical ozone creation potential.

**13. Disposal considerations**

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information**

**DOT**

Not regulated as dangerous goods.

**IATA**

**UN number** UN3082

**UN proper shipping name** Environmentally hazardous substance, liquid, n.o.s. (Epoxy Resin:--reaction Product Of Bisphenol A And Epichlorohydrin (refer To Epichlorohydrin))

**Transport hazard class(es)**

**Class** 9

**Subsidiary risk** -

**Packing group** III

**Environmental hazards** No.

**ERG Code** 9L

**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Other information**

**Passenger and cargo aircraft** Allowed with restrictions.

**Cargo aircraft only** Allowed with restrictions.

**IMDG**

**UN number** UN3082

**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin:--reaction Product Of Bisphenol A And Epichlorohydrin (refer To Epichlorohydrin)), MARINE POLLUTANT

**Transport hazard class(es)**

**Class** 9

**Subsidiary risk** -

**Packing group** III

**Environmental hazards**

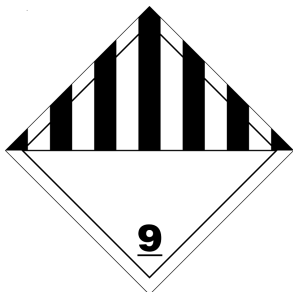
**Marine pollutant** Yes

**EmS** F-A, S-F

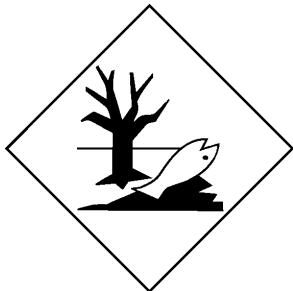
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

**IATA; IMDG**



**Marine pollutant**



**General information** IMDG Regulated Marine Pollutant.

**15. Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

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

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations** WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

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

Quartz (CAS 14808-60-7)

Listed: October 1, 1988

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Quartz (CAS 14808-60-7)

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

**Issue date** 10-08-2013  
**Revision date** 08-25-2017  
**Version #** 04  
**HMIS® ratings** Health: 2  
 Flammability: 1  
 Physical hazard: 0

**NFPA ratings**

Health: 2  
Flammability: 1  
Instability: 0

**Disclaimer**

ITW Engineered Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

**Revision information**

Physical & Chemical Properties: Multiple Properties  
Physical and chemical properties: Color