



SDS: 0000388  
Date Prepared: 01/08/2015

## SAFETY DATA SHEET

### 1. IDENTIFICATION

**Product Name:** BR® 127 Corrosion Inhibiting Primer  
**Synonyms:** None  
**Chemical Family:** Epoxy-phenolic resin  
**Molecular Formula:** Mixture  
**Molecular Weight:** Mixture  
**Intended/Recommended Use:** Engineered materials

CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WOODLAND PARK, NEW JERSEY 07424, USA  
**For Product and all Non-Emergency Information call 1-800/652-6013.** Outside the USA and Canada call 1-973/357-3193.

**EMERGENCY PHONE (24 hours/day) - For emergency only involving spill, leak, fire, exposure or accident call:**

**Asia Pacific:**

Australia - +61-3-9663-2130 or 1800-033-111  
China (PRC) - +86 0532 83889090 (NRCC)  
New Guinea - +61-3-9663-2130  
New Zealand - +61-3-9663-2130 or 0800-734-607  
All Others - +65 3158 1074 (Carechem24 Singapore)

**Canada:** +1-905-356-8310 (Cytec Welland, Canada plant)

**Europe/Africa/Middle East (Carechem24 UK):**

Europe, Middle East, Africa, Israel - +44 (0) 1235 239 670  
Middle East, Africa (Arabic speaking countries) - +44 (0) 1235 239 671

**Latin America:**

Brazil - 0800 7077 022 (SUATRANS)  
Chile - +56-2-247-3600 (CITUC QUIMICO)  
All Others - +52-376-73 74122 (Cytec Atequiza, Mexico plant)

**USA:** +1-703-527-3887 or 1-800-424-9300 (CHEMTREC #CCN6083)

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### 2. HAZARDS IDENTIFICATION

**GHS Classification**

Flammable Liquid Hazard Category 2  
Carcinogenicity Hazard Category 1B  
Reproductive Toxicant Category 1B  
Acute Toxicity (Inhalation) Hazard Category 4  
Specific Target Organ Toxicity - Single Exposure Hazard Category 3  
Serious Eye Damage / Eye Irritation Hazard Category 2A  
Skin Sensitizer Hazard Category 1B  
Aquatic Environment Acute Hazard Category 3  
Aquatic Environment Chronic Hazard Category 3

**LABEL ELEMENTS**

**Signal Word**

Danger

**Hazard Statements**

Highly flammable liquid and vapor  
May cause cancer  
May damage fertility or the unborn child  
Harmful if inhaled  
May cause drowsiness or dizziness  
Causes serious eye irritation  
May cause an allergic skin reaction  
Harmful to aquatic life with long lasting effects

**Precautionary Statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Ground/Bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting/equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Obtain special instructions before use.  
Avoid breathing dust/fume/gas/mist/vapours/spray.  
Use only outdoors or in a well-ventilated area.  
Wash face, hands and any exposed skin thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.  
Avoid release to the environment.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction.  
IF exposed or concerned: Get medical advice/attention.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER or doctor/physician if you feel unwell.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
If skin irritation or rash occurs: Get medical advice/attention.  
Specific treatment (see supplemental first aid instructions on this label).  
Wash contaminated clothing before reuse.  
Store in a well-ventilated place. Keep cool.  
Store locked up.  
Store in a well-ventilated place. Keep container tightly closed.  
Dispose of contents/container in accordance with local and national regulations.

**Hazards Not Otherwise Classified (HNOC), Other Hazards**

Polymerization may occur from excessive heat, contamination or exposure to direct sunlight.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**HAZARDOUS INGREDIENTS**

Component / CAS No.	%	GHS Classification	Carcinogen
2-Butanone (Methyl ethyl ketone) 78-93-3	60 - 75	Flam. Liq. 2 (H225) STOT SE 3 (H336) Skin Irrit. 3 (H316) Eye Irrit. 2A (H319)	-
2-Ethoxyethanol 110-80-5	10 - 30	Flam. Liq. 3 (H226) Repr. 1B (H360FD) Acute Tox. 4 (H302) Acute Tox. 3 (H331) Skin Irrit. 3 (H316) Eye Irrit. 2B (H320)	-
Epoxy/Phenolic resin	1 - 5	Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	-
Phenolic epoxy resin #1	1 - 5	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) Skin Sens. 1B (H317) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	-
Strontium chromate 7789-06-2	1 - 5	Carc. 1B (H350) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	IARC 1 NTP ACGIH A2
Phenolic Resin #2	1 - 5	Eye Irrit. 2A (H319) Skin Sens. 1B (H317) Aquatic Chronic 4 (H413)	-
Methanol 67-56-1	0.1 - 1	Flam. Liq. 2 (H225) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370) Skin Irrit. 3 (H316) Eye Irrit. 2B (H320)	-
Formaldehyde 50-00-0	< 0.02	Carc. 1B (H350) Muta. 2 (H341) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1A (H317)	IARC 1 NTP ACGIH A2

The specific chemical identity and/or exact percentage of composition for one or more ingredients has been withheld as a trade secret.

Additional GHS classification or other information may be included in this section but has not been adopted by OSHA. See Section 16 for full text of H phrases.

## 4. FIRST AID MEASURES

### DESCRIPTION OF FIRST AID MEASURES

#### Eye Contact:

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical attention immediately.

**Skin Contact:**

Wash immediately with plenty of water and soap. Remove contaminated clothing and shoes without delay. Obtain medical attention. Do not reuse contaminated clothing without laundering. Destroy or thoroughly clean shoes before reuse.

**Ingestion:**

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person. If vomiting occurs naturally in a conscious person, lean forward to reduce the risk of aspiration. If breathing or the heart has stopped as a result of ingestion, trained personnel should administer artificial respiration or cardio-pulmonary resuscitation.

**Inhalation:**

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms. If breathing has stopped, trained personnel should administer artificial respiration. If the heart has stopped, trained personnel should administer cardio-pulmonary resuscitation.

**MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED**

None known

**INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS**

Not applicable

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## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:**

Use water spray, alcohol foam, carbon dioxide or dry chemical to extinguish fires. Water stream may be ineffective.

**Extinguishing Media to Avoid:**

full water jet

**Protective Equipment:**

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

**Special Hazards:**

Keep containers cool by spraying with water if exposed to fire.

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## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:**

Where exposure level is known, wear approved respirator suitable for level of exposure. Where exposure level is not known, wear approved, positive pressure, self-contained respirator. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

**Methods For Cleaning Up:**

Remove sources of ignition. Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

**References to other sections:**

See Sections 8 and 13 for additional information.

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## 7. HANDLING AND STORAGE

### HANDLING

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**Precautions:** Keep away from heat, sparks and open flame. - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting and other equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye/face protection. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid release to the environment. Avoid breathing vapors or spray mist.

**Special Handling Statements:** Containers must be bonded and grounded when pouring or transferring material. If ventilation is inadequate, vapors can spread from open containers of the controlled product and may flashback, causing a fire if they contact an ignition source.

### STORAGE

Areas containing this material should have fire safe practices and electrical equipment in accordance with applicable regulations and/or guidelines. Standards are primarily based on the material's flashpoint, but may also take into account properties such as miscibility with water or toxicity. All local and national regulations should be followed. In the Americas, National Fire Protection Association (NFPA) 30: Flammable and Combustible Liquids Code, is a widely used standard. NFPA 30 establishes storage conditions for the following classes of materials: Class I Flammable Liquids, Flashpoint <37.8 °C. Class II Combustible Liquids, 37.8 °C < Flashpoint <60 °C. Class IIIa Combustible Liquids, 60 °C < Flashpoint < 93 °C. Class IIIb Combustible Liquids, Flashpoint > 93 °C.

**Storage Temperature:** Store at ≤-17.8 °C 0 °F

**Reason:** Quality.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering Measures:

Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure when spraying or curing at elevated temperatures.

### Respiratory Protection:

Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure. A full facepiece respirator also provides eye and face protection. Cutting, grinding or sanding of parts fabricated after curing may create respirable dust particles. Respiratory protection appropriate for this dust may be required. Refer to components listed above for potential hazardous components in the dust.

### Eye Protection:

Wear eye/face protection such as chemical splash proof goggles or face shield. Eyewash equipment and safety shower should be provided in areas of potential exposure.

### Skin Protection:

Avoid skin contact. Wear impermeable gloves and suitable protective clothing. Barrier creams may be used in conjunction with the gloves to provide additional skin protection. Since this product is absorbed through the skin, care must be taken to prevent skin contact and contamination of clothing.

### Hand Protection:

Wear impermeable gloves. Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

### Additional Advice:

Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. It is recommended that a shower be taken after completion of workshift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home.

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## Exposure Limit(s)

### 110-80-5 2-Ethoxyethanol

OSHA (PEL): 200 ppm (TWA)  
740 mg/m<sup>3</sup> (TWA)  
(skin)  
ACGIH (TLV): (skin)  
5 ppm (TWA)  
Other Value: Not established

### 50-00-0 Formaldehyde

OSHA (PEL): 0.75 ppm (TWA)  
2 ppm (STEL)  
2 ppm STEL 15 min  
0.5 ppm Action Level  
0.75 ppm TWA  
ACGIH (TLV): 0.3 ppm (Ceiling)  
Other Value: Not established

### 67-56-1 Methanol

OSHA (PEL): 200 ppm (TWA)  
260 mg/m<sup>3</sup> (TWA)  
ACGIH (TLV): 250 ppm (STEL)  
(skin)  
200 ppm (TWA)  
Other Value: Not established

### 7789-06-2 Strontium chromate

OSHA (PEL): 5 µg/m<sup>3</sup> (TWA)(as Chromium(VI) compounds)  
0.1 mg/m<sup>3</sup> (Ceiling)(as Chromates)  
5 µg/m<sup>3</sup> TWA(as Chromium(VI) compounds)  
2.5 µg/m<sup>3</sup> Action Level  
ACGIH (TLV): 0.0005 mg/m<sup>3</sup> as Cr (TWA)  
Other Value: Not established

### 78-93-3 2-Butanone (Methyl ethyl ketone)

OSHA (PEL): 200 ppm (TWA)  
590 mg/m<sup>3</sup> (TWA)  
ACGIH (TLV): 300 ppm (STEL)  
200 ppm (TWA)  
Other Value: Not established

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Color: colorless to light-yellow or blue-green  
Appearance: volatile liquid  
Odor: moderate sweet  
Boiling Point: 80 °C 176 °F  
Melting Point: Not applicable  
Vapor Pressure: 86mm Hg  
Specific Gravity/Density: 0.88  
Vapor Density: 2.88  
Percent Volatile (% by wt.): ~90  
pH: Not available  
Saturation In Air (% By Vol.): Not available  
Evaporation Rate: Not available  
Solubility In Water: Slight  
Volatile Organic Content: 780 - 800 gm/L  
Flash Point: -2 °C 29 °F Setflash Closed Cup

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Flammable Limits (% By Vol):	Lower: 1.8	Upper: 10.0
Autoignition (Self) Temperature:	516 °C	960 °F
Decomposition Temperature:	Not available	
Partition coefficient (n-octanol/water):	Not available	
Odor Threshold:	Not available	
Viscosity (Kinematic):	Not available	

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## 10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions To Avoid:	None known
Polymerization:	May occur
Conditions To Avoid:	Avoid contact with oxidizing agents, free radical initiators, sunlight or ultraviolet light, bases or amines.
Materials To Avoid:	Strong acids
Hazardous Decomposition Products:	Carbon monoxide (CO) Carbon dioxide chromium oxides Oxides of nitrogen hydrogen chloride

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## 11. TOXICOLOGICAL INFORMATION

### PRODUCT TOXICITY INFORMATION

Likely Routes of Exposure: Skin, Eyes, Oral.

#### ACUTE TOXICITY DATA

oral	rat	Acute LD50	>2000 mg/kg
dermal	rabbit	Acute LD50	>2000 mg/kg
inhalation	rat	Acute LC50 4 hr	~16 mg/l (Vapors)

#### LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	skin	No data
Acute Irritation	eye	Irritating

#### ALLERGIC SENSITIZATION

Sensitization	skin	Sensitizing
Sensitization	respiratory	No data

#### GENOTOXICITY

##### Assays for Gene Mutations

Ames Salmonella Assay	No data
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#### OTHER INFORMATION

The product toxicity information above has been estimated.  
Repeated exposure may cause skin dryness or cracking.

## HAZARDOUS INGREDIENT TOXICITY DATA

2-Butanone (MEK) has acute oral (rat) and dermal (rabbit) LD50 values of 2700 mg/kg and 6500 mg/kg, respectively. The acute inhalation (rat) LC50 following a 2-hour exposure is 4000 ppm (8.3 mg/L/4hr). Acute exposure to 2-Butanone (MEK) vapor may cause eye and respiratory tract irritation, central nervous system depression, headache, nausea, dizziness and staggered gait. 2-Butanone (MEK) causes moderate to severe eye and mild to moderate skin irritation upon contact. Chronic exposure to 2-Butanone (MEK) vapor may cause central nervous system depression and sleepiness. In a teratogenicity study, pregnant rats inhaled 0, 400, 1000, or 3000 ppm 2-Butanone for 7 hr/day on days 6 through 15 of gestation. Exposure at these levels did not cause any serious birth defects. A few minor malformations were observed at 3000 ppm. At this level, maternal toxicity, evidenced by decreased weight gain and water intake, was observed. In another teratogenicity study, minor malformations were also observed, however, no signs of maternal toxicity were noted. MEK is reported to have shown positive results in a screening test for mutagenicity using the *S. cerevisiae* strain of yeast. Absorption of a high dose of MEK caused death in laboratory animals. Human ingestion of MEK has caused central nervous system effects and aspiration has caused sudden death in laboratory animal tests.

2-ethoxy ethanol has acute oral (guinea pig) and dermal (rabbit) LD50 values of 1400 mg/kg and 3720 mg/kg, respectively. The 8-hour inhalation (rat) LC50 is 7.36 mg/l (vapor). Direct contact with this material may cause mild eye and skin irritation. 2-Ethoxy ethanol has been shown to cause fetal malformations (birth defects) and alter male reproductive function in laboratory animals. Ingestion has caused central nervous system effects, swelling in the lungs and delayed kidney and liver problems. In animal studies, inhalation caused gastrointestinal irritation, central nervous system effects, lung edema and congestion and damage to the kidneys and spleen. Chronic exposure caused effects on the blood system, enlargement of the adrenal glands (via ingestion), and a reduction in body weight in laboratory animals. Positive results in in vitro screening tests for mutagenicity have been shown. 2-Ethoxyethanol is a chemical known to the State of California to cause reproductive toxicity.

Epoxy/Phenolic resin has acute oral (rat) and dermal (rabbit) LD50 values of >2000 mg/kg and 4000 mg/kg, respectively. Direct contact may cause mild eye irritation. Prolonged or repeated dermal exposure may cause irritation. This material may cause allergic skin reactions in rare instances. This polymer has been reported to have tested positive for mutagenicity in the standard Ames screening test as well as in a mouse lymphoma cell point mutation assay.

Phenolic epoxy resin #1 has acute oral (rat) and dermal (rabbit) LD50 values of both >2000 mg/kg. A 4-hour inhalation LC50 (rat) value of >700 mg/m<sup>3</sup> has been reported. Prolonged or repeated exposure may cause primary skin irritation and allergic skin reactions in some instances. Mechanical action of this resin may cause eye irritation upon contact. This resin has produced moderate eye irritation in laboratory animals. This resin has been reported to have tested positive for mutagenicity in the standard Ames screening test as well as in a mouse lymphoma cell point mutation assay. The literature reports several cases of asthmatic symptoms developing in workers due to occupational exposure to this resin. Large oral doses of Phenolic epoxy resin #1 have produced central nervous system effects in laboratory animals.

Strontium chromate has an oral (rat) LD50 value of 3118 mg/kg. An LC50 (rat, aerosol, 4h) value range of 0.27-0.051 mg/L has been established. Acute overexposure to inorganic chromates may cause skin irritation. Repeated prolonged exposure to chromates may cause slow-healing skin lesions and allergic reactions. Inhalation of chromate dust or mist may cause corrosion of the nose. Workers exposed to chrome processing operations have an increased incidence of cancer of the lung. Virtually all soluble chromium salts can cause cancer in laboratory animal tests. Strontium chromate tested positive in the Ames test and produced sister chromatid exchanges in CHO cells. Strontium chromate is a hexavalent chromium compound which is known to the State of California to cause cancer. Strontium chromate is classified as Carcinogenic to Humans by the International Agency for Research on Cancer (IARC-1), and a Suspected Human Carcinogen by the ACGIH (A2).



Phenolic Resin #2 acute toxicity can vary based on residual free phenol monomer content. The acute oral (rat) LD50 value is estimated to be >2000 mg/kg for all grades containing less than 25% free phenol. A grade containing 15-20% free phenol and 2-3% free formaldehyde had an estimated acute oral (rat) LD50 value of 2900 mg/kg. The estimated acute oral (rat) LD50 for low free phenol grades is >5000 mg/kg. The acute dermal (rabbit) LD50 value for all grades containing less than 25% free phenol is estimated to be >2000 mg/kg. In contrast to the oral studies, dermal application of phenolic resins does not evoke a toxic response equivalent to that predicted based upon the free phenol content. Eye irritation studies in rabbits produced irritation which became more severe as the free phenol level increased. These eye irritation effects ranged from mild (<4% free phenol) to severe damage (26% free phenol). Skin irritation studies with rabbits produced minimal irritation with solid resins. Liquid resins evoked a stronger but more variable response ranging from minimal to severe. These responses did not appear to relate solely to free phenol content. Liquid resin test results compared to the results of aqueous phenol alone show the resins to be less irritating than would be predicted on the basis of their free phenol content. One liquid resin with 26% free phenol produced significant skin redness and swelling where as the corresponding concentration of aqueous phenol produced necrosis. Data suggests that liquid resins become more irritating to the skin as their water miscibility increases. Phenolic resins have been reported to produce allergic skin reactions after prolonged or repeated contact. Inhalation of phenolic resin dust or vapor may cause irritation of the eyes, throat and respiratory tract. Laboratory animals fed phenolic resin showed signs of gastrointestinal irritation. It is reported that certain phenolic resins were mutagenic in a number of in-vitro screening assays.

Methanol has acute oral (rat) and dermal (rabbit) LD50 values of >5600 mg/kg and 15800 mg/kg, respectively. The 4-hour inhalation exposure LC50 (rat) for methanol vapor is 64,000 ppm (83.78 mg/L). Acute exposure to methanol vapor may cause headache and gastrointestinal irritation. Chronic or extreme inhalation exposure to vapors can cause blurred vision, serious eye damage, central nervous depression and death. Ingestion and inhalation of methanol has caused blindness in humans. Ingestion can also cause harmful effects on the central nervous system and gastrointestinal systems and can lead to death in extreme cases. Absorption of methanol can cause systemic toxicity. It has been reported that chronic skin absorption of methanol has caused ocular disturbances and blindness. Methanol has also been reported to be a teratogen and fetotoxin in laboratory animals and has demonstrated mutagenic activity, in vivo, in mammalian cells. Methanol may cause moderate eye and skin irritation. Literature also reports an oral (rat) LD50 value of 13.0 ml/kg (10g/kg).

Formaldehyde is considered toxic if swallowed, in contact with skin and if inhaled. With acute oral (rat), acute dermal (rabbit) and acute (inhalation) 4-hr (rat-gas) LD/LC50 values of >50 <= 300 mg/kg, >500 <= 1000 mg/kg and >500 <= 2500 ppm mg/L, respectively. When formaldehyde is present in the air at levels exceeding 0.1 ppm, some individuals may experience adverse effects such as watery eyes; burning sensations in the eyes, nose, and throat; coughing; wheezing; nausea; and skin irritation. Some people are very sensitive to formaldehyde, whereas others have no reaction to the same level of exposure. Normal breathing may be seriously impaired at levels above 10 ppm and serious lung damage can occur at levels exceeding 50 ppm. Formaldehyde has been reported to cause pulmonary hypersensitivity in some individuals who were exposed to concentrations known to cause irritation; however, no pulmonary sensitization has been demonstrated in laboratory animal studies. Direct contact with formaldehyde solutions can cause severe eye irritation and corrosion to the skin. Repeated or prolonged exposure to this substance may cause dermal sensitization. Formaldehyde was found to be mutagenic in a number of in vitro genotoxicity tests and positive in certain in vivo screening tests for mutagenicity. Formaldehyde did not cause birth defects in rats inhaling concentrations up to 10 ppm. In an oral gavage study 29 -76 pregnant mice per dose group were exposed to 0, 74, 148, 185 mg/kg bw/day formaldehyde (concentration of applied solution: 0, 0.7, 1.5, 1.8%) once daily at gestation day 6-15 (termination at gestation day 19). Maternal toxicity was obvious at 74 mg/kg bw/day (decreased body weight gain); data on local effects in the gastro-intestinal tract are not available, however, these effects were expected even at the low dose level. No embryo- or fetotoxic effects and no teratogenic effects were reported at any dose level, although 185 mg/kg bw/day resulted in a high mortality rate in pregnant mice. There is no existing data (by any route) that conclusively show adverse reproductive or developmental effects in animals exposed to formaldehyde. The International Agency for Research on Cancer (IARC) has classified formaldehyde as a Group 1 (known) human carcinogen based on epidemiological evidence linking formaldehyde exposure to the occurrence of nasopharyngeal cancer, a rare type of cancer. IARC also found limited evidence of cancer of the nasal cavity and paranasal sinuses and sufficient evidence for an association between formaldehyde and leukemia.

California Proposition 65 Warning (applicable in California only) - This product contains (a) chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

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## 12. ECOLOGICAL INFORMATION

## 12. ECOLOGICAL INFORMATION

### TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

**Overall Environmental Toxicity:** Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

The ecological assessment for this material is based on an evaluation of its components.

### RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

### HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Algae	Toxicity to Fish	Toxicity to Water Flea
2-Butanone (Methyl ethyl ketone) 78-93-3	Not available	LC50 3130 - 3320 mg/L - Pimephales promelas (96h) flow- through	EC50 > 520 mg/L - Daphnia magna (48h) EC50 = 5091 mg/L - Daphnia magna (48h) EC50 4025 - 6440 mg/L - Daphnia magna (48h) Static
2-Ethoxyethanol 110-80-5	EC50 > 1000 mg/L - Desmodesmus subspicatus (72h)	LC50 > 0.1 mg/L - Pimephales promelas (96h) static LC50 > 10000 mg/L - Lepomis macrochirus (96h) static	EC50 > 10000 mg/L - Daphnia magna (48h)
Epoxy/Phenolic resin	Not available	Not available	Not available
Phenolic epoxy resin #1	Not available	Not available	Not available
Strontium chromate 7789-06-2	Not available	Not available	Not available
Phenolic Resin #2	Not available	Not available	Not available
Methanol 67-56-1	Not available	LC50 > 100 mg/L - Pimephales promelas (96h) static LC50 19500 - 20700 mg/L - Oncorhynchus mykiss (96h) flow- through LC50 = 28200 mg/L - Pimephales promelas (96h) flow- through LC50 18 - 20 mL/L - Oncorhynchus mykiss (96h) static LC50 13500 - 17600 mg/L - Lepomis macrochirus (96h) flow- through	Not available
Formaldehyde 50-00-0	EC50 estimated 10-100 mg/L	LC50 estimated 10-100 mg/L	EC50 estimated 10-100 mg/L

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## 13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this MSDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 3 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. The Company encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. The Company recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. The Company has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

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## 14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

### US DOT

Dangerous Goods? X

Proper Shipping Name: Flammable liquid, n.o.s

Hazard Class: 3

Packing Group: II

UN/ID Number: UN1993

Transport Label Required: Flammable Liquid

Technical Name (N.O.S.): 2-Butanone, 2-ethoxyethanol

<u>Component / CAS No.</u>	<u>Hazardous Substances / Reportable Quantity of Product (lbs)</u>
2-Ethoxyethanol	5434.783
Strontium chromate	555.5555
2-Butanone (Methyl ethyl ketone)	6666.667

Comments:

Hazardous Substances/Reportable Quantities - DOT requirements specific to Hazardous Substances only apply if the quantity in one package equals or exceeds the product reportable quantity.

### TRANSPORT CANADA

Dangerous Goods? X

Proper Shipping Name: Flammable liquid, n.o.s

Hazard Class: 3

Packing Group: II

UN Number: UN1993

Transport Label Required: Flammable Liquid

Technical Name (N.O.S.): 2-Butanone, 2-ethoxyethanol

### ICAO / IATA

Dangerous Goods? X

Proper Shipping Name: Flammable liquid, n.o.s.

Hazard Class: 3

Packing Group: II

UN Number: UN1993

Transport Label Required: Flammable Liquid

Technical Name (N.O.S.): 2-Butanone, 2-ethoxyethanol

## IMO

Dangerous Goods? X

Proper Shipping Name: Flammable liquid, n.o.s.

Hazard Class: 3

UN Number: UN1993

Packing Group: II

Transport Label Required: Flammable Liquid

Technical Name (N.O.S.): 2-Butanone, 2-ethoxyethanol

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## 15. REGULATORY INFORMATION

### Inventory Information

**United States (USA):** All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

This product contains a chemical substance that is subject to export notification under Section 12 (b) of the Toxic Substances Control Act, 15 U. S. C. 2601 et. seq. (This requirement applies to exports from the United States only.)

This product contains a substance subject to Significant New Use Rule (SNUR) 40 CFR Section 721.10001.

**Canada:** All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

**Australia:** All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS.

**China:** All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

**Japan:** All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

**Korea:** All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory.

**Philippines:** One or more components of this product are NOT included on the Philippine (PICCS) inventory.

### OTHER ENVIRONMENTAL INFORMATION

The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

Component / CAS No.	%	TPQ (lbs)	RQ(lbs)	S313	TSCA 12B
2-Ethoxyethanol 110-80-5	10 - 30	None	1000	Yes	Yes
2-Butanone (Methyl ethyl ketone) 78-93-3	60 - 75	None	5000	No	No

Component / CAS No.	%	TPQ (lbs)	RQ(lbs)	S313	TSCA 12B
Strontium chromate 7789-06-2	1 - 5	None	10	Yes	No
Methanol 67-56-1	0.1 - 1	None	5000	Yes	No

**PRODUCT HAZARD CLASSIFICATION UNDER SECTION 311 OF SARA**

- Acute
- Chronic
- Fire

**16. OTHER INFORMATION****NFPA Hazard Rating (National Fire Protection Association)**

Health: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

Fire: 3 - Liquids and solids that can be ignited under almost all ambient temperature conditions.

Instability: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

**Reasons For Issue:**

Revised Section 3  
Revised Section 11  
Revised Section 16

Date Prepared: 01/08/2015

Date of last significant revision: 01/08/2015

**Component Hazard Phrases****2-Butanone (Methyl ethyl ketone)**

- H225 - Highly flammable liquid and vapor.
- H316 - Causes mild skin irritation.
- H319 - Causes serious eye irritation.
- H336 - May cause drowsiness or dizziness.

**2-Ethoxyethanol**

- H226 - Flammable liquid and vapor.
- H302 - Harmful if swallowed.
- H316 - Causes mild skin irritation.
- H320 - Causes eye irritation.
- H331 - Toxic if inhaled.
- H360FD - May damage fertility. May damage the unborn child.

**Epoxy/Phenolic resin**

- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H411 - Toxic to aquatic life with long lasting effects.

**Phenolic epoxy resin #1**

- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H319 - Causes serious eye irritation.
- H411 - Toxic to aquatic life with long lasting effects.

**Strontium chromate**

- H302 - Harmful if swallowed.
- H350 - May cause cancer.
- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.

**Phenolic Resin #2**

- H317 - May cause an allergic skin reaction.
- H319 - Causes serious eye irritation.
- H413 - May cause long lasting harmful effects to aquatic life.

**Methanol**

- H225 - Highly flammable liquid and vapor.
- H301 - Toxic if swallowed.
- H311 - Toxic in contact with skin.
- H316 - Causes mild skin irritation.
- H320 - Causes eye irritation.
- H331 - Toxic if inhaled.
- H370 - Causes damage to organs.

**Formaldehyde**

- H301 - Toxic if swallowed.
- H311 - Toxic in contact with skin.
- H314 - Causes severe skin burns and eye damage.
- H317 - May cause an allergic skin reaction.
- H318 - Causes serious eye damage.
- H331 - Toxic if inhaled.
- H341 - Suspected of causing genetic defects.
- H350 - May cause cancer.

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