



COMPANY IDENTITY: T C I Products Company  
 PRODUCT IDENTITY: 4230 4:1:1 2K HIGH BUILD URETHANE PRIMER  
 SDS NUMBER: 4230

SDS DATE: 08/21/2014  
 ORIGINAL: 08/21/2014

**SAFETY DATA SHEET**

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements of the Global Harmonizing System.  
 THIS SDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)  
 IMPORTANT: Read this SDS before handling & disposing of this product.  
 Pass this information on to employees, customers, & users of this product.

**SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER**

PRODUCT IDENTITY: 4230 4:1:1 2K HIGH BUILD URETHANE PRIMER - GRAY  
 PRODUCT USES: Primer

COMPANY IDENTITY: T C I Products Company  
 COMPANY ADDRESS: 420 E Desoto  
 COMPANY CITY: St. Louis, MO 63147  
 COMPANY PHONE: 1-314-231-3075  
 EMERGENCY PHONES: CHEMTREC: 1-800-424-9300 (USA)  
 CANUTEC: 1-613-996-6666 (CANADA)

**SECTION 2. HAZARDS IDENTIFICATION**

**DANGER!!**

- 2.1 HAZARD STATEMENTS: (CAT = Hazard Category)**  
 (H200s) PHYSICAL: Flammable Liquids (CAT:1)  
**H224 EXTREMELY FLAMMABLE LIQUID AND VAPOR.**  
 (H300s) HEALTH: Aspiration Hazard (CAT:1)  
**H304 MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.**  
 (H300s) HEALTH: Skin Corrosion/Irritation (CAT:2)  
**H315 CAUSES SKIN IRRITATION.**  
 (H300s) HEALTH: Serious Eye Damage/Eye Irritation (CAT:2)  
**H320 CAUSES EYE IRRITATION.**  
 (H300s) HEALTH: Acute Toxicity, Inhalation (CAT:4)  
**H332 HARMFUL IF INHALED.**  
 (H300s) HEALTH: Target Organ Toxicity, Single Exposure (CAT:3)  
**H335 MAY CAUSE RESPIRATORY IRRITATION.**  
**H336 MAY CAUSE DROWSINESS OR DIZZINESS.**  
 (H300s) HEALTH: Target Organ Toxicity, Single Exposure (CAT:2)  
**H371 MAY CAUSE DAMAGE TO ORGANS.**  
 (H400s) ENVIRONMENT: Hazardous to Aquatic Environment, Acute (CAT:3)  
**H402 HARMFUL TO AQUATIC LIFE.**



**SECTION 2. HAZARDS IDENTIFICATION (CONTINUED)**

**2.2 PRECAUTIONARY STATEMENTS:**

**EXPOSURE PREVENTION: STRICT HYGIENE!**

**PREVENT DISPERSION OF MISTS OR DUST!**

**P100s = General, P200s = Prevention, P300s = Response, P400s = Storage, P500s = Disposal**

- P210 Keep away from heat/sparks/open flames/hot surfaces -- No Smoking.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash with soap & water thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302+352 IF ON SKIN: Wash with soap & water.
- P304+340 IF INHALED: Remove victim to fresh air & keep at rest in a position comfortable for breathing.
- P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present & easy to do - Continue rinsing.
- P309+311 If exposed or you feel unwell: Call a POISON CENTER or doctor/physician.
- P331 Do NOT induce vomiting.
- P332+313 If skin irritation occurs: Get medical advice/attention.
- P337+313 If eye irritation persists, get medical advice/attention.
- P361 Remove/Take off immediately all contaminated clothing.
- P363 Wash contaminated clothing before reuse.
- P405 Store locked up.
- P501 Dispose of contents/container complying with local/regional/federal regulations.

**SEE SECTIONS 8, 11 & 12 FOR TOXICOLOGICAL INFORMATION.**

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

MATERIAL	CAS#	EINECS#	WT %
Calcium Carbonate	1317-65-3	-	10-20
Talc	14807-96-6	-	10-20
Kaolin Clay	1332-58-7	-	10-20
Xylenes	1330-20-7	215-535-7	10-20
Acrylic Resin	Proprietary	-	10-20
Titanium Dioxide	13463-67-7	-	0-10
Ethylbenzene	100-41-4	202-849-4	0-5
Toluene	108-88-3	-	0-5
Acetone	67-64-1	200-662-2	0-5
Zinc Octoate	86338-28-5	-	0-1
1,2,4-Trimethylbenzene	95-63-6	202-436-9	0-1

TRACE COMPONENTS: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).

**SECTION 4. FIRST AID MEASURES**

**4.1 MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE & CHRONIC:**

See Section 11 for symptoms/effects, acute & chronic.

**4.2 GENERAL ADVICE:**

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists, refer to Section 8 for specific personal protective equipment.

**4.3 EYE CONTACT:**

If this product enters the eyes, check for and remove any contact lenses. Open eyes while under gently running water. Use sufficient force to open eyelids. "Roll" eyes to expose more surface. Minimum flushing is for 15 minutes. Seek immediate medical attention.

## SECTION 4. FIRST AID MEASURES (CONTINUED)

### 4.4 SKIN CONTACT:

If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove contaminated clothing, taking care not to contaminate eyes. If skin becomes irritated and irritation persists, medical attention may be necessary. Wash contaminated clothing before reuse, discard contaminated shoes.

### 4.5 INHALATION:

After high vapor exposure, remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration. If the heart has stopped, trained personnel should immediately begin cardiopulmonary resuscitation (CPR). Seek immediate medical attention.

### 4.6 SWALLOWING:

If swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, give two glasses of water to drink. DO NOT INDUCE VOMITING. Never induce vomiting or give liquids to someone who is unconscious, having convulsions, or unable to swallow. Seek immediate medical attention.

4.7 RESCUERS: Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take a copy of label and SDS to physician or health professional with victim.

### 4.8 NOTES TO PHYSICIAN:

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (such as: Gastric lavage after endotracheal intubation).

## SECTION 5. FIRE FIGHTING MEASURES

### 5.1 FIRE & EXPLOSION PREVENTIVE MEASURES:

NO open flames, NO sparks, & NO smoking. Above flash point, use a closed system, ventilation, explosion-proof electrical equipment, lighting. Do NOT use compressed air for filling, discharging, or handling.

### 5.2 SUITABLE (& UNSUITABLE) EXTINGUISHING MEDIA:

Use dry powder, AFFF, alcohol-resistant foam, water spray, carbon dioxide.

### 5.3 SPECIAL PROTECTIVE EQUIPMENT & PRECAUTIONS FOR FIRE FIGHTERS:

Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used. Do not enter confined fire-space without full bunker gear. (Helmet with face shield, bunker coats, gloves & rubber boots).

### 5.4 SPECIFIC HAZARDS OF CHEMICAL & HAZARDOUS COMBUSTION PRODUCTS:

EXTREMELY FLAMMABLE!! VAPORS CAN CAUSE FLASH FIRE  
Isolate from oxidizers, heat, sparks, electric equipment & open flame.  
Closed containers may explode if exposed to extreme heat.  
Applying to hot surfaces requires special precautions.  
Empty container very hazardous! Continue all label precautions!

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### 6.1 SPILL AND LEAK RESPONSE AND ENVIRONMENTAL PRECAUTIONS:

Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. No action shall be taken involving personal risk without suitable training. Keep unnecessary and unprotected personnel from entering spill area. Do not touch or walk through material. Avoid breathing vapor or mist. Provide adequate ventilation. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel. ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area).

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## SECTION 6. ACCIDENTAL RELEASE MEASURES (CONTINUED)

### 6.2 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, EMERGENCY PROCEDURES:

The proper personal protective equipment for incidental releases (such as: 1 Liter of the product released in a well-ventilated area), use impermeable gloves, they should be Level B: **triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard-hat, and Self-Contained Breathing Apparatus** specific for the material handled, goggles, face shield, and appropriate body protection. In the event of a large release, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard hat. Self-Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, select NIOSH/MSHA approved based on actual or potential airborne concentrations in accordance with latest OSHA and/or ANSI recommendations.

### 6.3 ENVIRONMENTAL PRECAUTIONS:

Stop spill at source. Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of the material. Close or cap valves and/or block or plug hole in leaking container and transfer to another container. Keep from entering storm sewers and ditches which lead to waterways, and if necessary, call the local fire or police department for immediate emergency assistance.

### 6.4 METHODS AND MATERIAL FOR CONTAINMENT & CLEAN-UP:

Absorb spilled liquid with polypads or other suitable absorbent materials. If necessary, neutralize using suitable buffering material, (acid with soda ash or base with phosphoric acid), and test area with litmus paper to confirm neutralization. Clean up with non-combustible absorbent (such as: sand, soil, and so on). Shovel up and place all spill residue in suitable containers. Dispose of at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal (see Section 13 - Disposal Considerations).

## SECTION 7. HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING:

Isolate from oxidizers, heat, sparks, electric equipment & open flame.  
Use only with adequate ventilation. Avoid breathing of vapor or spray mist.  
Avoid contact with skin & eyes. Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse.  
Avoid free fall of liquid. Ground containers when transferring. Do not flame cut, saw, drill, braze, or weld. Empty container very hazardous! Continue all label precautions!

### 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

Vapors may ignite explosively & spread long distances. Prevent vapor buildup. Put out pilot lights & turn off heaters, electric equipment & other ignition sources during use & until all vapors are gone. Keep in fireproof surroundings. Keep separated from strong oxidants, strong acids. Do not store above 49 C/120 F.  
Keep container tightly closed & upright when not in use to prevent leakage.  
Do not allow to evaporate to near dryness. Addition of water or proper reducing agents will lessen peroxide formation.

### 7.3 NONBULK: CONTAINERS:

Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Empty containers should be handled with care. Never store food, feed, or drinking water in containers which held this product.

### 7.4 BULK CONTAINERS:

All tanks and pipelines which contain this material must be labeled. Perform routine maintenance on tanks or pipelines which contain this product. Report all leaks immediately to the proper personnel.

**SECTION 7. HANDLING AND STORAGE (CONTINUED)**

**7.5 TANK CAR SHIPMENTS:**

Tank cars carrying this product should be loaded and unloaded in strict accordance with tank-car manufacturer's recommendation and all established on-site safety procedures. Appropriate personal protective equipment must be used (see Section 8, Engineering Controls and Personal Protective Equipment.). All loading and unloading equipment must be inspected, prior to each use. Loading and unloading operations must be attended, at all times. Tank cars must be level, brakes must be set or wheels must be locked or blocked prior to loading or unloading. Tank car (for loading) or storage tanks (for unloading) must be verified to be correct for receiving this product and be properly prepared, prior to starting the transfer operations. Hoses must be verified to be in the correct positions, before starting transfer operations. A sample (if required) must be taken and verified (if required) prior to starting transfer operations. All lines must be blown-down and purged before disconnecting them from the tank car or vessel.

**7.6 PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:**

Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Collect all rinsates and dispose of according to applicable Federal, State, Provincial, or local procedures.

**7.7 EMPTY CONTAINER WARNING:**

Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. **DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY BURST AND CAUSE INJURY OR DEATH.**

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 EXPOSURE LIMITS:**

MATERIAL	CAS#	EINECS#	TWA (OSHA)	TLV (ACGIH)
Calcium Carbonate	1317-65-3	-	None Known	None Known
Talc	14807-96-6	-	None Known	None Known
Kaolin Clay	1332-58-7	-	None Known	None Known
Xylenes	1330-20-7	215-535-7	100 ppm	100 ppm A4
Acrylic Resin	Proprietary	-	None Known	None Known
Titanium Dioxide	13463-67-7	-	None Known	None Known
Ethylbenzene	100-41-4	202-849-4	100 ppm	100 ppm A3
Toluene	108-88-3	-	200 ppm	50 ppm
Acetone	67-64-1	200-662-2	1000 ppm	500 ppm A4
Zinc Octoate	86338-28-5	-	None Known	None Known
1,2,4-Trimethylbenzene	95-63-6	202-436-9	25 ppm	25 ppm

MATERIAL	CAS#	EINECS#	CEILING	STEL (OSHA/ACGIH)	HAP
Xylenes	1330-20-7	215-535-7	None Known	150 ppm	Yes
Toluene	108-88-3	-	None Known	100 ppm	Yes
Ethylbenzene	100-41-4	202-849-4	None Known	125 ppm	Yes
Acetone	67-64-1	200-662-2	None Known	750 ppm	No

In addition, using manufacturers' data, based on EPA Method 311, the following EPA Hazardous Air Pollutants may be present in trace amounts (less than 0.1%): Benzene, Toluene, Polycyclic Aromatics

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

### 8.2 APPROPRIATE ENGINEERING CONTROLS:

#### RESPIRATORY EXPOSURE CONTROLS

Airborne concentrations should be kept to lowest levels possible. If vapor, dust or mist is generated and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH or MSHA approved air purifying or air-supplied respirator authorized in 29 CFR 1910.134, European Standard EN 149, or applicable State regulations, after determining the airborne concentration of the contaminant. Air supplied respirators should always be worn when airborne concentration of the contaminant or oxygen content is unknown. Maintain airborne contaminant concentrations below exposure limits. If adequate ventilation is not available or there is potential for airborne exposure above the exposure limits, a respirator may be worn up to the respirator exposure limitations, check with respirator equipment manufacturer's recommendations/limitations. For particulates, a particulate respirator (NIOSH Type N95 or better filters) may be worn. If oil particles (such as: lubricants, cutting fluids, glycerin, and so on) are present, use a NIOSH Type R or P filter. For a higher level of protection, use positive pressure supplied air respiration protection or Self-Contained Breathing Apparatus or if oxygen levels are below 19.5% or are unknown.

#### EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS

Positive pressure, full-face piece Self-Contained Breathing Apparatus; or positive pressure, full-face piece Self-Contained Breathing Apparatus with an auxiliary positive pressure Self-Contained Breathing Apparatus.

#### VENTILATION

LOCAL EXHAUST:	Necessary	MECHANICAL (GENERAL):	Necessary
SPECIAL:	None	OTHER:	None

Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

### 8.3 INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT:

#### EYE PROTECTION:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, chemical splash goggles should be worn, when a higher degree of protection is necessary, use splash goggles or safety glasses. Face-shields are recommended when the operation can generate splashes, sprays or mists.

#### HAND PROTECTION:

Use gloves chemically resistant to this material. Glove must be inspected prior to use. Preferred examples: Butyl rubber, Chlorinated Polyethylene, Polyethylene, Ethyl vinyl alcohol laminate ("EVAL"), Polyvinyl alcohol ("PVA"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"), Neoprene, Nitrile/butadiene rubber ("nitrile") or ("NBR"), Polyvinyl chloride ("PVC") or "vinyl", Viton. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good practices. Wash and dry hands.

#### BODY PROTECTION:

Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from impervious materials are generally acceptable, depending on the task.

#### WORK & HYGIENIC PRACTICES:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using toilet facilities and at the end of the working period. Provide readily accessible eye wash stations & safety showers. Remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

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## SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE:	Liquid, Gray
ODOR:	Ketone
ODOR THRESHOLD:	Not Available
pH (Neutrality):	Not Available
MELTING POINT/FREEZING POINT:	Not Available
BOILING RANGE (IBP,50%,Dry Point):	Not Available
FLASH POINT (TEST METHOD):	-16 C / -2 F (TCC) (Lowest Component)
EVAPORATION RATE (n-Butyl Acetate=1):	Not Applicable
FLAMMABILITY CLASSIFICATION:	Class I B
LOWER FLAMMABLE LIMIT IN AIR (% by vol):	1.2
UPPER FLAMMABLE LIMIT IN AIR (% by vol):	Not Available
VAPOR PRESSURE (mm of Hg)@20 C	24.3
VAPOR DENSITY (air=1):	3.5
GRAVITY @ 68/68F / 20/20C:	
DENSITY:	1.266
SPECIFIC GRAVITY (Water=1):	1.266
POUNDS/GALLON:	10.57
WATER SOLUBILITY:	Moderate
PARTITION COEFFICIENT (n-Octane/Water):	Not Available
AUTO IGNITION TEMPERATURE:	276C / 530F
DECOMPOSITION TEMPERATURE:	Not Available
VISCOSITY @ 20 C (ASTM D445):	Not Available

\* Using CARB (California Air Resources Board Rules).

## SECTION 10. STABILITY & REACTIVITY

- 10.1 REACTIVITY & CHEMICAL STABILITY:  
Stable under normal conditions, no hazardous reactions when kept from incompatibles.
- 10.2 POSSIBILITY OF HAZARDOUS REACTIONS & CONDITIONS TO AVOID:  
Isolate from oxidizers, heat, sparks, electric equipment & open flame.
- 10.3 INCOMPATIBLE MATERIALS:  
Reacts violently with strong oxidants, strong acids, causing fire & explosion hazard. Attacks many plastics, rubber, coatings.
- 10.4 HAZARDOUS DECOMPOSITION PRODUCTS:  
Carbon Monoxide, Carbon Dioxide, Calcium Oxide, Silicon Dioxide, Aluminum Oxide, Titanium Oxide from burning.
- 10.5 HAZARDOUS POLYMERIZATION:  
Will not occur.

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 ACUTE HAZARDS

#### 11.11 EYE & SKIN CONTACT:

Primary irritation to skin, defatting, dermatitis.  
Absorption thru skin increases exposure.  
Primary irritation to eyes, redness, tearing, blurred vision.  
Liquid can cause eye irritation. Wash thoroughly after handling.

#### 11.12 INHALATION:

Anesthetic. Irritates respiratory tract. Acute overexposure can cause serious nervous system depression. Vapor harmful.  
Acute overexposure can cause harm to affected organs by routes of entry.  
Use of alcoholic beverages enhances the harmful effect.

#### 11.13 SWALLOWING:

**ASPIRATION HAZARD!** Harmful or fatal if swallowed. Do NOT induce vomiting.  
If spontaneous vomiting occurs, keep victim's head below the waist to prevent aspiration. Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.  
The symptoms of chemical pneumonitis may not show up for a few days.

## SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

### 11.2 SUBCHRONIC HAZARDS/CONDITIONS AGGRAVATED

#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Pre-existing disorders of any target organs mentioned in this Document can be aggravated by over-exposure by routes of entry to components of this product. Persons with these disorders should avoid use of this product.

### 11.3 CHRONIC HAZARDS

#### 11.31 CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:

Potential Cancer Hazard based on tests with laboratory animals using Ethylbenzene. Lung tumors have been reported in laboratory mice. Overexposure may create cancer risk. Leukemia been reported in humans from Benzene. This product contains less than 21 ppm of Benzene. Not considered hazardous in such low concentrations. Absorption thru skin may be harmful. Studies with laboratory animals indicate this product can cause damage to fetus. Depending on degree of exposure, periodic medical examination is indicated. Some persons may be more sensitive to the substance's effect on blood cells. May contain crystalline silica (quartz), a known carcinogen.

### 11.3 CHRONIC HAZARDS (CONTINUED)

#### 11.31 CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:

##### 11.310 INHALATION:

##### 11.311 SILICOSIS:

The major concern is silicosis, caused by the inhalation and retention of respirable crystalline silica dust. Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute.

Chronic or Ordinary Silicosis is the most common form of silicosis, and can occur after many years of exposure to relatively low levels of airborne respirable crystalline silica dust. It is further defined as either simple or complicated silicosis. Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple Silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF). Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Although there may be no symptoms associated with complicated silicosis or PMF, the symptoms, if present, are shortness of breath, wheezing, cough, and sputum production. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease (cor pulmonale).

Accelerated Silicosis can occur with exposure to high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear with five (5) years of the initial exposure. The progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that the lung lesions appear earlier and the progression is more rapid. Acute Silicosis can occur with exposures to very high concentrations of respirable silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis is fatal.

##### 11.312 CANCER:

11.3121 IARC: The International Agency for Research on Cancer (IARC) concluded that there was "sufficient evidence in humans for the carcinogenicity of crystalline silica in the forms of quartz, or cristobalite from occupational sources", and there is "sufficient evidences in experimental animals for the carcinogenicity of quartz and cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstance studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation see "IARC Monographs on the Evaluation of Carcinogenic Risks in Humans" Volume 68, "Silica, Some Silicates." (1997).

11.3122 NTP: The National Toxicology Program in its Sixth Annual Report on Carcinogens, concluded that "silica, crystalline (respirable) may reasonably be anticipated to be a carcinogen, based on sufficient evidence in experimental animals and limited evidence in humans."



**SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)**

11.3123 OSHA: Crystalline silica (quartz) is not regulated by the U.S. Occupational Safety and Health Administration as a carcinogen. There is substantial literature on the issues of the carcinogenicity of crystalline silica, which the reader should consult for additional information. A summary of the literature is set forth in "Exposure to crystalline silica and risk of lung cancer; the epidemiological evidence", Thorax, Volume 51, pp. 97-102 (1996). The official statement of the American Thoracic Society on the issue of silica carcinogenicity was published in "Adverse Effects of Crystalline Silica Exposure", "American Journal of Respiratory and Critical Care Medicine, Volume 155, pp. 761-765 (1997). The official statement concluded that "The available data support the conclusion that silicosis produces increased risk for bronchogenic carcinoma. The cancer risk may also be increased by smoking and other carcinogens in the workplace. Epidemiologic studies provide convincing evidence for increased cancer risk among tobacco smokers with silicosis. Less information is available for never-smokers and for workers exposed to silica but who do not have silicosis. For workers with silicosis, the risks for lung cancer are relatively high and consistent among various countries and investigators. Silicosis should be considered a condition that predisposes workers to an increased risk of lung cancer."

11.313 SCLERODERMA:

There is evidence that exposure to respirable crystalline silica or that the disease silicosis is associated with the increased incidence of scleroderma, an immune system disorder manifested by a fibrosis (scarring) of the lungs, skin and other internal organs. Recently, the American Thoracic Society noted that "There is persuasive evidence relating scleroderma to occupational silica exposures in setting where there is appreciable silicosis risk." The following may be consulted for additional information on silica, silicosis and scleroderma (also known as progressive systemic sclerosis): "Occupational Lung Disorders", Third Edition, Chapter 12, entitled "Silicosis and Related Diseases", Parkes, W. Raymond (1994). "Adverse Effects of Crystalline Silica Exposure", American Journal of Respiratory and Critical Care Medicine, Volume 155, pp 761-765 (1997).

**11.3 CHRONIC HAZARDS (CONTINUED)**

11.314 TUBERCULOSIS:

Individuals with silicosis are at increased risk to develop tuberculosis, if exposed to persons with tuberculosis. The following may be consulted for further information: "Occupational Lung Disorders", Third Edition, Chapter 12, entitled "Silicosis and Related Diseases", Parkes, W. Raymond (1994). "Adverse Effects of Crystalline Silica Exposure", American Journal of Respiratory and Critical Care Medicine, Volume 155, pp. 761-765 (1997).

11.315 NEPHROTOXICITY:

There are several recent studies suggesting that exposure to respirable crystalline silica or that the disease silicosis is associated with the increased incidence of kidney disorders. The following may be consulted for additional information on silica, silicosis and nephrotoxicity: "Occupational Lung Disorders, Third Edition, Chapter 12, entitled "Silicosis and Related Diseases", Parkes, W. Raymond (1994). "Further evidence of human silica nephrotoxicity in occupationally exposed workers", "British Journal of Industrial Medicine, Vol. 50, #10, pp. 907-912 (1993). "Adverse Effects of Crystalline Silica Exposure", American Journal of Respiratory and Critical Care Medicine, Volume 155, pp. 761-765 (1997). Depending on degree of exposure, periodic medical examination is indicated.

11.32 TARGET ORGANS: May cause damage to target organs, based on animal data.

11.33 IRRITANCY: Irritating to contaminated tissue.

11.34 SENSITIZATION: No component is known as a sensitizer.

11.35 MUTAGENICITY: No known reports of mutagenic effects in humans.

11.36 EMBRYOTOXICITY: No known reports of embryotoxic effects in humans.

11.37 TERATOGENICITY: No known reports of teratogenic effects in humans.

11.38 REPRODUCTIVE TOXICITY: No known reports of reproductive effects in humans.

A MUTAGEN is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate across generational lines. An EMBRYOTOXIN is a chemical which causes damage to a developing embryo (such as: within the first 8 weeks of pregnancy in humans), but the damage does not propagate across generational lines. A TERATOGEN is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A REPRODUCTIVE TOXIN is any substance which interferes in any way with the reproductive process.

**11.4 MAMMALIAN TOXICITY INFORMATION**

MATERIAL	CAS#	EINECS#	LOWEST KNOWN LETHAL DOSE DATA LOWEST KNOWN LC50 (VAPORS)
Xylene	1330-20-7	-	5000 ppm (Mice)

**SECTION 12. ECOLOGICAL INFORMATION**

**12.1 ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.**

**12.2 EFFECT OF MATERIAL ON PLANTS AND ANIMALS:**

This product may be harmful or fatal to plant and animal life if released into the environment. Refer to Section 11 (Toxicological Information) for further data on the effects of this product's components on test animals.

**12.3 EFFECT OF MATERIAL ON AQUATIC LIFE:**

The most sensitive known aquatic group to any component of this product is: Mosquito Fish 13000 ppm or mg/L (48 hour exposure).  
The substance is toxic to aquatic organisms.  
Environmental effects of the substance have not been investigated adequately.

**12.4 MOBILITY IN SOIL**

Mobility of this material has not been determined.

**12.5 DEGRADABILITY**

This product is partially biodegradable.

**12.6 ACCUMULATION**

Bioaccumulation of this product has not been determined.

**SECTION 13. DISPOSAL CONSIDERATIONS**

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers and liners may retain some product residues. Vapor from some product residues may create a highly flammable or explosive atmosphere inside the container. **DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE USED CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY BURST AND CAUSE INJURY OR DEATH.** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Processing, use or contamination may change the waste disposal requirements. Do not dispose of on land, in surface waters, or in storm drains. Waste should be recycled or disposed of in accordance with regulations. Large amounts should be collected for reuse or consigned to licensed hazardous waste haulers for disposal. **ALL DISPOSAL MUST BE IN ACCORDANCE WITH ALL FEDERAL, STATE, PROVINCIAL, AND LOCAL REGULATIONS. IF IN DOUBT, CONTACT PROPER AGENCIES. EPA CHARACTERISTIC: D001**

**SECTION 14. TRANSPORT INFORMATION**

IF > 578 LB / 262 KG OF THIS PRODUCT IS IN 1 CONTAINER, IT EXCEEDS THE RQ OF XYLENES. "RQ" MUST BE PUT BEFORE THE DOT SHIPPING NAME.

MARINE POLLUTANT: No  
DOT/TDG SHIP NAME: UN1263, Paint Related Material  
(Contains: Xylene, Toluene), 3, PG-II  
DRUM LABEL: (FLAMMABLE LIQUID)  
IATA / ICAO: UN1263, Paint Related Material  
(Contains: Xylene, Toluene), 3, PG-II  
IMO / IMDG: UN1263, Paint Related Material  
(Contains: Xylene, Toluene), 3, PG-II  
EMERGENCY RESPONSE GUIDEBOOK NUMBER: 128



**SECTION 15. REGULATORY INFORMATION**

**15.1 EPA REGULATION:**

**SARA SECTION 311/312 HAZARDS: Acute Health, Fire**

All components of this product are on the TSCA list.

SARA Title III Section 313 Supplier Notification

This product contains the indicated <\*> toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material.

SARA TITLE III INGREDIENTS	CAS#	EINECS#	WT%	(REG. SECTION)	RQ(LBS)
*Xylenes	1330-20-7	215-535-7	10-20	(311,312,313,RCRA)	100
Toluene	108-88-3	-	0- 5	(311,312,313,RCRA)	1000
*Ethylbenzene	100-41-4	202-849-4	0- 5	(311,312,313,RCRA)	1000
Acetone	67-64-1	200-662-2	0- 5	(311,312)	5000

Any release equal to or exceeding the RQ must be reported to the National Response Center (800-424-8802) and appropriate state and local regulatory agencies as described in 40 CFR 302.6 and 40 CFR 355.40 respectively. Failure to report may result in substantial civil and criminal penalties. State & local regulations may be more restrictive than federal regulations.

**15.2 STATE REGULATIONS:**

CALIFORNIA SAFE DRINKING WATER & TOXIC ENFORCEMENT ACT (PROPOSITION 65):

This product contains the following chemicals known to the State of California to cause cancer: Ethylbenzene, Crystalline Silica (Quartz).

**15.3 INTERNATIONAL REGULATIONS**

The identified components of this product are listed on the chemical inventories of the following countries:

Australia (AICS), Canada (DSL or NDSL), China (IECSC), Europe (EINECS, ELINCS), Japan (METI/CSCL, MHLW/ISHL), South Korea (KECI), New Zealand (NZIoC), Philippines (PICCS), Switzerland (SWISS), Taiwan (NECSI), USA (TSCA).

**15.4 CANADA: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)**

B2: Flammable Liquid.

D2A: Contains substances known to cause serious chronic toxicity or death. Ethylbenzene, Crystalline Silica (Quartz).

D2B: Irritating to eyes/skin.

This product was classified using the hazard criteria of the Controlled Products Regulations (CPR). This Document contains all information required by the CPR.

**SECTION 16. OTHER INFORMATION**

**16.1 HAZARD RATINGS: HEALTH (NFPA): 2, HEALTH (HMIS): 2, FLAMMABILITY: 3, PHYSICAL HAZARD: 0**  
(Personal Protection Rating to be supplied by user based on use conditions.)

This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating systems.

**16.2 EMPLOYEE TRAINING**

See Section 2 for Risk & Safety Statements. Employees should be made aware of all hazards of this material (as stated in this SDS) before handling it.

**16.3 SDS DATE: 08/21/2014**

**NOTICE**

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency.

Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.

Unless updated, the Safety Data Sheet is valid until 02/23/2018.