SAFETY DATA SHEET

DynaTrol® I-XL Hybrid

1. PRODUCT IDENTIFICATION

IDENTIFICATION of the SUBSTANCE or PREPARATION

<table>
<thead>
<tr>
<th>TRADE NAME (AS LABELED):</th>
<th>DynaTrol® I-XL Hybrid</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCT DESCRIPTION:</td>
<td>STPU Silicone / Urethane One-Part Hybrid</td>
</tr>
<tr>
<td>CHEMICAL NAME/CLASS:</td>
<td>Silyl Terminated Polyurethane (STPU) Silicone / Urethane One-Part Hybrid</td>
</tr>
<tr>
<td>SYNONYMS:</td>
<td>None</td>
</tr>
<tr>
<td>RELEVANT USE:</td>
<td>General Purpose Polyurethane Sealant</td>
</tr>
<tr>
<td>USES ADVISED AGAINST:</td>
<td>Other Than Relevant Use</td>
</tr>
</tbody>
</table>

COMPANY/UNDERTAKING IDENTIFICATION:

| SUPPLIER/MANUFACTURER’S NAME: | Pecora Corporation |
| ADDRESS:                      | 165 Wambold Road, Harleysville, PA 19438 |
| EMERGENCY PHONE:              | 800-424-9300 (CHEMTREC, 24-hours) |
| BUSINESS PHONE:               | 215-723-6051 (Mon–Fri, 8 AM–5 PM ET) |
| PREPARATION DATE:             | June 26, 2017 |
| REVISION DATE:                | New |

This product is sold for commercial use. This SDS has been developed to address safety concerns of those individuals working with bulk quantities of this material, as well as those of potential users of this product in industrial/occupational settings. All United States Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards, Canadian WHMIS 2015 and the Global Harmonization required information is included in appropriate sections based on the Global Harmonization Standard format. This product has been classified in accordance with the hazard criteria of the countries listed above and the SDS contains all the information required by the Canadian WHMIS 2015 [HPR-GHS], the Global Harmonization Standard and OSHA 1910.120.

2. HAZARD IDENTIFICATION


Classification: Mutagenic Toxicity Cat. 2, Reproductive Toxicity Cat. 2, Acute Oral Toxicity Cat. 5, Eye Irritation Cat. 2, Skin Irritation Cat. 3, Skin Sensitization Cat. 1B, Respiratory Sensitization Cat. 1B, STOT (Immune System, Liver, Urinary System) RE Cat. 2, Aquatic Acute Toxicity Cat. 3, Aquatic Chronic Toxicity Cat. 3

Signal Word: Danger


Hazard Symbols/Pictograms: GHS07, GHS08

EMERGENCY OVERVIEW:

Physical Description: This product is a heavy paste with a slight odor and comes in several colors.

Health Hazards: WARNING! May cause eye and skin, especially if exposure is prolonged. May be harmful if ingested. May cause skin and respiratory sensitization in susceptible individuals. Contains compounds with potential adverse effects to organs by ingestion and/or inhalation. Contains trace compound with suspected adverse mutagenic and reproductive toxicity effects. The Titanium Dioxide component may cause cancer by inhalation of particles; however, due to the form of this product, this cancer hazard is not expected to be significant. Flammability Hazard: This product is expected to be combustible and may ignite if exposed to high temperature or direct flame. Reactivity Hazard: This product is not reactive. Exposure of containers to temperatures higher than 177°C (350°F) can cause pressure build-up and potential rupture.

Environmental Hazard: This product has not been tested for environmental impact. This product contains a trace compounds that can cause acute and chronic aquatic toxicity.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS®)

<table>
<thead>
<tr>
<th>Health</th>
<th>2*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>0</td>
</tr>
</tbody>
</table>

See Section 16 for definitions of ratings

0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Severe
* = Chronic

HMIS® is a registered trademark of the National Paint and Coatings Association.

CANADIAN WHMIS (HPR-GHS) 2015 CLASSIFICATION AND SYMBOLS: See Section 16 for in Classification and Symbols under HPR-GHS 2015.

U.S. OSHA REGULATORY STATUS: This material has a classification under the Global Harmonization Standard, as applied under OSHA regulations, as given earlier in this Section.
### 3. MATERIAL IDENTIFICATION

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>W/W%</th>
<th>LABEL ELEMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Carbonate (Limestone)</td>
<td>1317-65-3</td>
<td>40.0-60.0</td>
<td>NOTIFIED CLASSIFICATION</td>
</tr>
<tr>
<td>Calcium Carbonate, Synthetic</td>
<td>471-34-1</td>
<td>Classification: Skin Irritation Cat. 2</td>
<td></td>
</tr>
<tr>
<td>Disodexyl Phthalate</td>
<td>68515-49-1</td>
<td>20.0-30.0</td>
<td>Classification: Not Applicable</td>
</tr>
<tr>
<td>Proprietary Polyol Mixture</td>
<td>10.0-15.0</td>
<td>Classification: Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Proprietary Siloxanes</td>
<td>2.0-5.0</td>
<td>Classification: Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Vinyltrimethoxysilane</td>
<td>2768-02-7</td>
<td>1.0-5.0</td>
<td>NOTIFIED CLASSIFICATION</td>
</tr>
<tr>
<td>Amino Silane</td>
<td>3069-29-2</td>
<td>0.5-0.7</td>
<td>NOTIFIED CLASSIFICATION</td>
</tr>
<tr>
<td>Isophorone Diisocyanate</td>
<td>4098-71-9</td>
<td>0.5-0.7</td>
<td>HARMONISED CLASSIFICATION - ANNEX VI OF REGULATION (EC) NO 1272/2008 (CLP REGULATION)</td>
</tr>
<tr>
<td>Proprietary Methylated Sebacate Mixture</td>
<td>0.1-0.5</td>
<td>NOTIFIED CLASSIFICATION</td>
<td></td>
</tr>
<tr>
<td>Amino Alkoxysilane</td>
<td>1760-24-3</td>
<td>0.1-0.3</td>
<td>NOTIFIED CLASSIFICATION</td>
</tr>
<tr>
<td>Dibutyl Maleate</td>
<td>105-76-0</td>
<td>0.1-0.3</td>
<td>NOTIFIED CLASSIFICATION</td>
</tr>
<tr>
<td>Proprietary Organofunctional Silane</td>
<td>0.1-0.3</td>
<td>NOTIFIED CLASSIFICATION</td>
<td></td>
</tr>
<tr>
<td>Dibutyltin Dilaurate</td>
<td>77-58-7</td>
<td>0.1</td>
<td>NOTIFIED CLASSIFICATION</td>
</tr>
</tbody>
</table>

The following is component information for some of the individual pigmented colors of this product:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>W/W%</th>
<th>SELF-CLASSIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Oxide Pigment</td>
<td>Mixture</td>
<td>0.0-2.0</td>
<td>BASED ON MFG SDS</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>0.1-2.0</td>
<td>SELF-CLASSIFICATION</td>
</tr>
</tbody>
</table>

Other components. Each of the other components is present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens).

Classification: Not Applicable

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST-AID MEASURES

**PROTECTION OF FIRST AID RESPONDERS:** Rescuers should not attempt to retrieve victims of exposure to this material without adequate personal protective equipment. Rescuers should be taken for medical attention, if necessary.

**DESCRIPTION OF FIRST AID MEASURES:** Remove victim(s) to fresh air, as quickly as possible. Only trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation, if necessary. Remove and isolate contaminated clothing and shoes. Seek immediate medical attention. Take copy of label and MSDS to physician or other health professional with victim(s).

**INHALATION:** If dusts of this material are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions.

**SKIN EXPOSURE:** If the material contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 20 minutes. Do not interrupt flushing. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim must seek immediate medical attention.

**EYE EXPOSURE:** If this product enters the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 20 minutes. Do not interrupt flushing.

**INGESTION:** If this material is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. DO NOT INDUCE VOMITING, unless directly by medical personnel. Have victim rinse mouth with water or give several cupsful of water, if conscious. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration.
4. FIRST-AID MEASURES (Continued)

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Dermatitis or other pre-existing skin disorders may be aggravated by exposure to this product.

**INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT IF NEEDED:** Treat symptoms and eliminate exposure.

5. FIRE-FIGHTING MEASURES

**FLASH POINT:** > 93.2°C (> 200°F)  **AUTOIGNITION:** Unknown.

**FLAMMABLE LIMITS IN AIR:** Unknown.

**EXTINGUISHING MEDIA:**
- Suitable Extinguishing Media: Use extinguishing material suitable to the surrounding fire, including foam, halon, carbon dioxide and dry chemical.
- Unsuitable Extinguishing Media: None known.

**PROTECTION OF FIREFIGHTERS:**
- Special Hazards Arising From the Substance: This product is combustible and can be ignited when exposed to its flashpoint. Not sensitive to mechanical impact under normal conditions. Not sensitive to static discharge under normal conditions. At temperatures greater than 177°C (350°F), the trace isocyanate component forms carbodiimides with the release of CO2 which can cause pressure build-up; closed containers may develop pressure and rupture in event of fire.
- Special Protective Actions for Fire-Fighters: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES:** An accidental release can result in a fire if exposed to ignition source. Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. Use only non-sparking tools and equipment during the response. The atmosphere must at least 19.5 percent Oxygen before non-emergency personnel can be allowed in the area without Self-Contained Breathing Apparatus and fire protection.

**PERSONAL PROTECTIVE EQUIPMENT:** Responders should wear the level of protection appropriate to the type of chemical released, the amount of the material spilled, and the location where the incident has occurred.

- Small Spills: For releases of 1 drum or less, Level D Protective Equipment (gloves, chemical resistant apron, boots, and eye protection) should be worn.
- Large Spills: Minimum Personal Protective Equipment should be rubber gloves, rubber boots, face shield, and Tyvek suit. Minimum level of personal protective equipment for releases in which the level of oxygen is less than 19.5% or is unknown must be Level B: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit, fire-retardant clothing and boots, hard hat, and Self-Contained Breathing Apparatus.

**METHODS FOR CLEAN-UP AND CONTAINMENT:**
- All Spills: Access to the spill area should be restricted. Spread should be limited by gently covering the spill with polypads. Scrape up or pick-up spilled material, placing in suitable containers. Absorb any residual on appropriate material, such as sand. All contaminated absorbents and other materials should be placed in an appropriate container and seal. Do not mix with wastes from other materials. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations). Dispose of recovered material and report spill per regulatory requirements. Remove all residue before decontamination of spill area. Clean spill area with soap and copious amounts of water.

**ENVIRONMENTAL PRECAUTIONS:** Minimize use of water to prevent environmental contamination. Prevent spill or rinsate from contaminating storm drains, sewers, soil or groundwater. Place all spill residues in a suitable container and seal. Do not discharge effluent containing this product into streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**OTHER INFORMATION:** U.S. regulations may require reporting of spills of this material that reach surface waters if a sheen is formed. If necessary, the toll-free phone number for the US Coast Guard National Response Center is 1-800-424-8802.

**REFERENCE TO OTHER SECTIONS:** See information in Section 8 (Exposure Controls – Personal Protection) and Section 13 (Disposal Considerations) for additional information.

7. HANDLING and STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat or drink while handling this material. Avoid contact with eyes, skin, and clothing. Avoid breathing fumes, dusts, vapors or mist. Do not taste or swallow. Use only with adequate ventilation. Keep away from heat and flame. In the event of a spill, follow practices indicated in Section 6: ACCIDENTAL RELEASE MEASURES.

**CONDITIONS FOR SAFE STORAGE:** This product is stable under ordinary conditions of handling, use and storage. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Store away from incompatible materials (see Section 10: STABILITY AND REACTIVITY). Keep container tightly closed when not in use. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged.
8. EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/CONTROL PARAMETERS:

Ventilation And Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below.

Occupational/Workplace Exposure Limits/Guidelines:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>Guiding</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amino Alkoxyisilane</td>
<td>1760-24-3</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Amino Silane</td>
<td>3069-29-2</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Calcium Carbonate, Natural</td>
<td>1317-65-3</td>
<td>OSHA PEL TWA</td>
<td>15 mg/m³ total dust</td>
</tr>
<tr>
<td>Calcium Carbonate, Synthetic</td>
<td>471-34-1</td>
<td>NIOSH REL TWA</td>
<td>5 mg/m³ respirable fraction</td>
</tr>
<tr>
<td>Dibutyl Maleate</td>
<td>105-76-0</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Dibutyltin Dilaurate</td>
<td>77-58-7</td>
<td>DFG MAK TWA</td>
<td>0.004 ppm (skin; for n-butyltin compounds whose organic ligands were already designated 'SA' or 'SH', these designations also apply</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DFG MAK PEAK</td>
<td></td>
</tr>
<tr>
<td>Disodecyl Phthalate</td>
<td>68515-49-1</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Isophorone Polysuccinate</td>
<td>4098-71-9</td>
<td>ACGIH TLV TWA</td>
<td>0.005 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL TWA</td>
<td>0.005 ppm (vacated 1989 PEL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA REL TWA</td>
<td>0.02 ppm [skin] (vacated 1989 PEL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH REL TWA</td>
<td>0.005 ppm [skin]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH REL STEL</td>
<td>0.02 ppm [skin]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DFG MAK TWA</td>
<td>0.005 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DFG MAK PEAK</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>DFG MAK Pregnancy Risk Classification</td>
<td></td>
</tr>
<tr>
<td>Proprietary Iron Oxide</td>
<td></td>
<td>ACGIH TLV TWA</td>
<td>5 mg/m³ (respiratory fraction)</td>
</tr>
<tr>
<td>Exposure limits given as for CAS# 1309-37-1</td>
<td>OSHA PEL TWA</td>
<td>10 mg/m³ (fume)</td>
<td>5 mg/m³ (dust and fume, as Fe)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH REL TWA</td>
<td>With the exception of Iron Oxides which are not biologically available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DFG MAKs TWA/PEAK</td>
<td></td>
</tr>
<tr>
<td>Proprietary Methylated Sebacate Mixture</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Proprietary Organofunctional Silane</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Proprietary Polyol</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Proprietary Siloxanes</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Proprietary Silicas and Siloxanes</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Proprietary Iron Oxide</td>
<td></td>
<td>ACGIH TLV TWA</td>
<td>5 mg/m³ (respiratory fraction)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL TWA</td>
<td>10 mg/m³ (fume)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH REL TWA</td>
<td>15 mg/m³ total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DFG MAK TWA</td>
<td>Lowest feasible concentration (LOQ 0.2 mg/m³)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DFG MAK PEAK</td>
<td>1.5 mg/m³ respirable fraction</td>
</tr>
<tr>
<td>Vinyl Trimethoxysilane</td>
<td>2768-02-7</td>
<td>NE</td>
<td>NE</td>
</tr>
</tbody>
</table>

NE = Not Established. See Section 16 for Definitions of Terms Used.

**Biological Exposure Indices (BEIs):** Currently, no BEIs have been established for components of this product.


**Eye/Face Protection:** Use approved safety goggles or safety glasses. If necessary, refer to appropriate regulations and standards.

**Skin Protection:** Wear chemical impervious gloves (e.g., Nitrile or Neoprene). Use triple gloves for spill response. If necessary, refer to appropriate regulations and standards.

**Body Protection:** Use body protection appropriate for task (e.g., lab coat, coveralls, Tyvek suit). If necessary, refer to the OSHA Technical Manual (Section VII: Personal Protective Equipment) or appropriate Standards of Canada. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee’s feet may be exposed to electrical hazards, use foot protection, as described in appropriate regulations and standards.

**Respiratory Protection:** If mists or sprays from this product are created during use, use appropriate respiratory protection. If necessary, use only respiratory protection authorized in appropriate regulations. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure-demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under appropriate regulations and standards. The following NIOSH respiratory equipment guidelines for components that present an inhalation hazard are presented for additional assistance in respiratory protective equipment selection.

**POLYISOCYANATE**

**CONCENTRATION**

**RESPIRATORY PROTECTION**

- **Up to 0.05 ppm:** Any Supplied-Air Respirator (SAR).
- **Up to 0.125 ppm:** Any SAR operated in a continuous-flow mode.
- **Up to 0.25 ppm:** Any Self-Contained Breathing Apparatus (SCBA) with a full facepiece, or any SAR with a full facepiece.
- **Up to 1 ppm:** Any SAR that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.
- **Emergency or Planned Entry into Unknown Concentrations or IDLH Conditions:** Any SCBA that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode, or any SAR that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary SCBA operated in pressure-demand or other positive-pressure mode.

**Escape:** Any Air-Purifying, Full-Facepiece Respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister, or any appropriate escape-type, SCBA.
FORM: Heavy paste.
MOLECULAR WEIGHT: Mixture.
ODOR: Mild
SPECIFIC GRAVITY: 1.3-1.4
SOLUBILITY IN WATER: Insoluble.
MELTING/FREEZING POINT: Not available.
VOC: < 15 g/L
FLASH POINT: > 93.2°C (> 200°F)

pH: Not available.
FLAMMABLE LIMITS (in air by volume, %): Lower: Not established; Upper: Not established.
COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT): Not established.

HOW TO DETECT THIS SUBSTANCE (IDENTIFYING PROPERTIES): The appearance of this product may act as an identifying property in the event of an accidental release.

10. STABILITY and REACTIVITY

CHEMICAL STABILITY: Stable under normal circumstances of use and handling. Will slowly cure upon exposure to air.
CONDITIONS TO AVOID: Avoid contact with incompatible chemicals and exposure to extreme temperatures. Keep containers sealed to avoid spontaneous curing.
INCOMPATIBLE MATERIALS: This product is not compatible with strong acids and oxidizers and may have some incompatibility with aluminum, ammonium salts and mercury/hydrogen mixtures.
HAZARDOUS DECOMPOSITION PRODUCTS: Combustion: Thermal decomposition of this product can generate formaldehyde, furans, aluminum, propylene, carbon and nitrogen oxides, methanol, hydrogen cyanide, isocyanates and isocyanic acid. Hydrolysis: Not known.
Possibility of Hazardous Reactions/Polymerization: This product is not expected to undergo hazardous polymerization, decomposition, condensation, or self-reactivity as this product contains stabilizers. Product slowly cures upon contact with moisture in air. At temperatures greater than 177°C (350°F), the isocyanate component forms carbodiimides with the release of CO2 which can cause pressure build-up; closed containers may develop pressure and rupture in event of fire or exposure to high temperature.

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS: The most significant routes of occupational exposure are inhalation and contact with skin and eyes.
The symptoms of exposure to this product are as follows:
Contact with Skin or Eyes: Contact may mildly irritate the skin and cause redness and discomfort. Prolonged or repeated skin contact may cause dermatitis (dry, red skin). Eye contact may cause redness, pain, and tearing.
Skin Absorption: The components of this product are not known to be absorbed through intact skin. Skin contact may cause sensitization and allergic reaction in susceptible individuals. Symptoms may include redness, itching and rash.
Ingestion: If the product is swallowed, it may mildly irritate the mouth, throat, and other tissues of the gastro-intestinal system and may cause nausea, vomiting, and diarrhea. Chronic ingestion may cause adverse effects on the kidneys, liver and immune and urinary systems.
Inhalation: Exposure to vapors of this product generated during curing, or dusts of this product generated during use after curing may mildly irritate the respiratory tract and cause coughing and sneezing. Vapors or fumes when used in an enclosed space, if heated or during curing may cause irritation of the respiratory system. Symptoms include nose irritation, dry or sore or burning throat, runny nose, shortness of breath, dizziness, incoordination. Inhalation may cause respiratory sensitization and allergic reaction.
Injection: Accidental injection of this product (e.g. puncture with a contaminated object) may cause burning, redness, and swelling in addition to the wound.
Target Organs: Acute: Skin, eyes, central nervous system. Chronic: Skin, respiratory system.
Chronic Effects: Prolonged or repeated skin contact may cause dermatitis (dry, red skin), sensitization to the skin and respiratory system or adverse liver, kidney, immune and urinary system effects.

TOXICITY DATA: There are currently no toxicity data available for this product; the following toxicology information is available for components greater than 1% in concentration. Due to the large amount of data available for Titanium Dioxide, only available irritation data and mutagenic data are presented (no human data, LD50 or LC50 data are available). Carcinogenic data for rats by inhalation are also presented, but not for other routes of exposure.

**CALCIUM CARBONATE, NATURAL:**
TDLo (Intravenous-Rat) 30 mg/kg: Vascular: BP lowering not characterized in autonomic section; Lungs, Thorax, or Respiration: changes in lung weight; Blood: other changes
TCLo (Inhalation-Rat) 84 mg/m³/4 hours/20 weeks-intermittent: Lungs, Thorax, or Respiration: fibrosis (interstitial); Liver: other changes; Kidney/Ureters/Bladder: other changes
TCLo (Inhalation-Rat) 250 mg/m³/24 hours-intermittent: Lungs, Thorax, or Respiration: fibrosis, focal (pneumocooniosis)
**CALCIUM CARBONATE, SYNTHETIC:**
Standard Draize Test (Eye-Rabbit) 350 µg/24 hours: Moderate
TDLo (Inhalation-Rat) 4.08 mg/m³/30 days-intermittent: Vascular: BP elevation not characterized in autonomic section; Gastrointestinal: changes in structure or function of endocrine pancreas; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation
LDLo (Oral-Rat) 6450 mg/kg
TDLo (Oral-Rat) 60 mg/kg: Gastrointestinal: hypermotility, diarrhea, other changes
TDLo (Oral-Rat) 10 mg/kg: Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

**PROPRIETARY SILICONES & SILOXANES:**
TCLo (Inhalation-Rat) 30 mg/kg/6 hours/4 weeks-intermittent: Lungs, Thorax, or Respiration: other changes; Blood: hemorrhage; Related to Chronic Data: death
TITANIUM DIOXIDE:
Standard Draize Test (Skin-Human) 300 µg/3 days-intermittent: Mild
TC (Inhilation-Rat) 10 mg/kg/2 hours/2 years-intermittent: Tumorigenic: carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration: tumors
TCLo (Inhalation-Rat) 1 mg/kg: Lungs, Thorax, or Respiration: other changes; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation
TCLo (Inhalation-Rat) 250 mg/m³/6 hours/4 weeks-intermittent: Lungs, Thorax, or Respiration: chronic pulmonary edema, other changes
TCLo (Inhalation-Rat) 50 mg/m³/18 hours/13 weeks-intermittent: Lungs, Thorax, or Respiration: structural or functional change in trachea or bronchi
TCLo (Inhalation-Rat) 10 mg/m³/6 hours/13 weeks-intermittent: Lungs, Thorax, or Respiration: fibrosis (interstitial), other changes; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation
11. TOXICOLOGICAL INFORMATION (Continued):

TOXICITY DATA (continued):

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>EPA</th>
<th>IARC</th>
<th>NTP</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>DFG</th>
<th>PROP 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amino Alkoxyisilane</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<td>No</td>
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<td>Amino Silane</td>
<td>No</td>
<td>No</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Proprietary Methylated Sebacate Mixture</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Calcium Carbonate</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Dibutyl Maleate</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Dibutyltin Dilaurate (as a Di-n-compound, as Sn)</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Disisocetyl Phthalate</td>
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<td>No</td>
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<td>Isophorone Disiocyanate</td>
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<td>No</td>
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<td>Proprietary Iron Oxides</td>
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<td>3</td>
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<td>No</td>
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<td>No</td>
<td>3B</td>
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<td>Proprietary Organofunctional Silane</td>
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<td>No</td>
<td>No</td>
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<tr>
<td>Proprietary Silicones and Siloxanes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<td>Titanium Dioxide</td>
<td>No</td>
<td>2B</td>
<td>No</td>
<td>Ca</td>
<td>A4</td>
<td>No</td>
<td>3A</td>
<td>Unbound Particles of Respirable Size</td>
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<tr>
<td>Vinyl Trimethoxysilane</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>


IRRITANT OF PRODUCT: This product may mildly irritate contaminated tissue, especially if contact is prolonged. Eye irritation may be more pronounced.

SENSITIZATION TO THE PRODUCT: This product contains a diisocyanate compound, which is a known human skin and respiratory sensitizer and other components that are skin sensitizers. Exposure can cause allergic reactions. Cross-sensitization between different isocyanates may occur.

Respiratory Sensitization: Initial symptoms of respiratory reactions may appear to be a cold or mild hay fever. However, severe asthmatic symptoms can develop and include wheezing, chest tightness, shortness of breath, difficulty breathing and/or coughing. Fever, chills, general feelings of discomfort, headache, and fatigue can also occur. Symptoms may occur immediately upon exposure (within an hour), several hours after exposure or both, and/or at night. Typically, the asthma improves with removal from exposure (e.g. weekends or vacations) and returns, in some cases, in the form of an “acute attack”, on renewed exposure. Sensitized people who continue to work with diisocyanates may develop symptoms sooner after each exposure. The number and severity of symptoms may increase. Death has occurred in sensitized individuals accidentally exposed to relatively low concentrations of diisocyanates. Following removal from exposure, some sensitized workers may continue to show a slow decline in lung function and have persistent respiratory problems such as asthmatic symptoms, chronic bronchitis and hypersensitivity for months or years. Exposure to isocyanates is likely to aggravate existing respiratory disease, such as chronic bronchitis, and emphysema.

Skin Sensitization: Repeated skin contact with diisocyanates has caused skin sensitization in humans, although the condition is not common. Once a person is sensitized, contact with even a small amount can cause outbreaks of dermatitis with symptoms such as redness, rash, itching and swelling. This can spread from the hands or arms to the face and body. Some people who have inhaled diisocyanate developed extensive skin rashes can last weeks.

Additional information is available on some other components.

Dibutyl Maleate: Dibutyl Maleate may be a sensitizer based on human and animal information. A positive patch test to 10% Dibutyl Maleate in acetone for 72 hours was obtained in 10/20 workers occupationally exposed to Dibutyl Maleate containing polyvinyl acetate glue (11/20 workers had dermatitis). Negative results were obtained in 20 volunteers as controls. In a Guinea Pig Maximization Test using Freund's Complete Adjuvant, a strong sensitizing effect was obtained in guinea pigs following a challenge application of 0.2 mL Dibutyl Maleate. A positive response (erythema (grade 1-2) was seen in 16/20 guinea pigs after 24 hours and in 14/20 after 48 hours. No response was seen in the controls.

Proprietary Methylated Sebacate Mixture: Suspected skin sensitizer: CAESAR skin sensitization model in VEGA (Q)SAR platform predicts that the chemical is Sensitive (good reliability). (Guinea pigs) Strong skin sensitizing potential, with 20/209 animals sensitized in epidermal challenge.
11. TOXICOLOGICAL INFORMATION (Continued)

TOXICOLOGICAL SYNERGISTIC PRODUCTS: None known.

REPRODUCTIVE TOXICITY INFORMATION: This product has not been tested for reproductive toxicity.

Mutagenicity/Embryotoxicity/ Teratogenicity/Reproductive Toxicity: Some reproductive studies of Dibutyltin Dilaurate on rats and mice have indicated exposure may cause reduced fetal weight increase in fetal deaths skeletal malformations by exposure via ingestion, inhalation and skin contact.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: This product has not been tested for mobility in soil.

Dibutyltin Dilaurate: Dibutyltin Dilaurate is expected to dissociate in water forming the cation, dibutyltin. Volatilization from moist soil and water surfaces is not expected to be an important fate process because the cation is not expected to volatilize. Dibutyltin Dilaurate is not expected to volatilize from dry soil surfaces based upon an estimated vapor pressure of 4.5X10^-9 mm Hg, determined from a fragment constant method.

PERSISTENCE AND BIODEGRADABILITY: This product has not been tested for persistence or biodegradability. The following information is available for some components.

Dibutyltin Dilaurate: If released to air, an estimated vapor pressure of 4.5X10^-9 mm Hg at 25°C indicates Dibutyltin Dilaurate will exist solely in the particulate phase in the ambient atmosphere. Particulate-phase Dibutyltin Dilaurate will be removed from the atmosphere by wet and dry deposition. In soil and water, Dibutyltin Dilaurate may dissociate forming the cation, dibutyltin. If released to soil, dibutyltin is expected to adsorb to organic carbon and clay. Volatilization from moist soil surfaces is not expected to be an important fate process because the cation will not volatilize. Dibutyltin Dilaurate may also biodegrade in soil and water since tributyltins are converted to dibutyltin and monobutyltin. If released into water, dibutyltin is expected to adsorb to suspended solids and sediment. Volatilization from water surfaces will not be an important fate process because the cation will not volatilize.

Proprietary Methylated Sebacate Mixture: Components suspected persistent in the environment: The Danish QSAR database contains information indicating that these substances are predicted as non readily biodegradable.

Bio-ACCUMULATION POTENTIAL: This product has not been tested for bio-accumulation potential.

Dibutyltin Dilaurate: The observed BCF for Dibutyltin Dilaurate in round crucian carp (Carassius carassius grandoculis) muscle, vertebra, liver, and kidney tissue were 31, 54, 813, and 50.

The chemical has a 96h LC 50 of 5.05 mg/L (moderate reliability); Fish toxicity classification (SarPy/IRFMN) model in VEGA (Q)SAR platform predicts that the chemical has a 48h EC 50 of <1 mg/L. The Danish QSAR database contains information indicating that the substance has a 96h EC 50 of 31 mg/L for mobility in soil.

ECOTOXICITY: This product has not been tested for aquatic or animal toxicity. Although no data are not available, under the Global Harmonization Standard, the Isophorone Diisocyanate component is classified as having chronic aquatic toxicity. Additionally, the following information is available for other components.

Dibutyltin Dilaurate: EC 50 (Daphnia water flea) 24 hours = 0.66 mg/L; LC 50 (Leuciscus idus) 48 hours = 2 mg/L.

Proprietary Methylated Sebacate Mixture Component #1: Suspected hazardous to the aquatic environment: DEMETRA Daphnia Magna toxicity model in VEGA (Q)SAR platform predicts that the chemical has a 48h EC 50 of 0.0077 mg/L (moderate reliability); Fathead Minnow toxicity model (EPA) in VEGA (Q)SAR platform predicts that the chemical has a 96h LC 50 of 1.82 mg/L (moderate reliability); Fish toxicity classification (SarPy/IRFMN) model in VEGA (Q)SAR platform predicts that the chemical is Toxic -2 (between 1 and 10 mg/L) (good reliability). The Danish QSAR database contains information indicating that the substance has a 96h EC 50 to green algae of <1 mg/L.

Proprietary Methylated Sebacate Mixture Component #2: Suspected hazardous to the aquatic environment: DEMETRA Daphnia Magna toxicity model in VEGA (Q)SAR platform predicts that the chemical has a 48h EC 50 of 0.1405 mg/L (moderate reliability); Fathead Minnow toxicity model (EPA) in VEGA (Q)SAR platform predicts that the chemical has a 96h LC 50 of 3.05 mg/L (moderate reliability); Fish toxicity classification (SarPy/IRFMN) model in VEGA (Q)SAR platform predicts that the chemical is Toxic -2 (between 1 and 10 mg/L) (good reliability). The Danish QSAR database contains information indicating that the substance has a 96h EC 50 to green algae of <1 mg/L.

OTHER ADVERSE EFFECTS: This material is not expected to have any ozone depletion potential.

ENVIRONMENTAL EXPOSURE CONTROLS: Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: As supplied, this product would not be a hazardous waste as defined by U.S. federal regulation (40 CFR 261) if discarded or disposed. State and local regulations may differ from federal regulations. The generator of the waste is responsible for proper waste determination and management.

U.S. EPA WASTE NUMBER: Not applicable.

14. TRANSPORTATION INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: This product is NOT classified as Dangerous Goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This product is NOT classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA): This product is NOT classified as dangerous goods, per the International Air Transport Association.

INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO): This product is not classified as dangerous goods, per the International Maritime Organization.

15. REGULATORY INFORMATION

U.S. REGULATIONS:

U.S. SARA Reporting Requirements: The following components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>SECTION 302 EHS (TPQ)</th>
<th>SECTION 304 RQ</th>
<th>SECTION 313 TRI (threshold)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isophorone Diisocyanate</td>
<td>Yes</td>
<td>Yes</td>
<td>Member of EPCRA Section 313 diisocyanate category.</td>
</tr>
</tbody>
</table>

U.S. SARA 302 Extremely Hazardous Threshold Planning Quantity (TPQ): Isophorone Diisocyanate: 500 lb (227 kg)

U.S. SARA 304 Extremely Hazardous Reportable Quantity (RQ): Isophorone Diisocyanate: 500 lb (227 kg)

U.S. SARA Hazard Categories (Section 311/312, 40 CFR 370-21): ACUTE: Yes; CHRONIC: Yes; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No
15. REGULATORY INFORMATION (Continued)

U.S. REGULATIONS:  
U.S. TSCA Inventory Status: All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory. 
U.S. CERCLA Reportable Quantity (RQ): Not applicable. 
U.S. Clean Air Act (CA 112r) Threshold Quantity (TO): Not applicable. 
California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product also contains Titanium Dioxide, a suspect carciogen which is on the list. Due to the form of the product, the Proposition 65 warning for Titanium Dioxide is not applicable. However, this product also contains trace amounts of Diisodeyl Phthalate, which is on the list as a developmental toxin. This product can expose you to chemicals including Diisodeyl Phthalate, which is known to the State of California to cause cancer. For more information go to P65Warnings.ca.gov. 
In addition, to the warning text provided above, the following symbol must be displayed. Where the sign, label or shelf tag for the product is not printed using the color yellow, the symbol may be printed in black and white. The symbol shall be placed to the left of the text of the warning, in a size no smaller than the height of the word “WARNING”. The symbol and new warning text are required to be included by August 2018.

CANADIAN REGULATIONS:  
Canadian DSL/NDSSL Inventory Status: The components of this product listed by CAS# in Section 3 are on the DSL Inventory. 
Canadian Environmental Protection Act (CEPA) Priorities Substances Lists: No component is on the CEPA Priority Substances lists. 
Canadian WHMIS (HPR-GHS) 2015 Classification and Symbols: See Section 16 in Classification and Symbols under HPR-GHS 2015. 
MEXICAN REGULATIONS:  
Mexican Workplace Regulations (NOM-018-STPS-2000): This product is not classified as hazardous.

16. OTHER INFORMATION

WARNINGS (per ANSI Z129.1): WARNING! MAY CAUSE EYE AND SKIN, ESPECIALLY IF EXPOSURE IS PROLONGED. MAY BE HARMFUL IF INGESTED. MAY CAUSE SKIN AND RESPIRATORY SENSITIZATION IN SUSCEPTIBLE INDIVIDUALS. CONTAINS COMPOUNDS WITH POTENTIAL ADVERSE EFFECTS TO ORGANS BY INGESTION AND/OR INHALATION. CONTAINS TRACE COMPOUND WITH SUSPECTED ADVERSE MUTAGENIC AND REPRODUCTIVE TOXICITY EFFECTS. THE TITANIUM DIOXIDE COMPONENT MAY CAUSE CANCER BY INHALATION OF PARTICLES; HOWEVER, DUE TO THE FORM OF THIS PRODUCT, THIS CANCER HAZARD IS NOT EXPECTED TO BE SIGNIFICANT. CONTAINS TRACE COMPOUNDS THAT MAY CAUSE ACUTE AND CHRONIC AQUATIC ADVERSE EFFECTS. COMBUSTIBLE – MAY IGNITE IF EXPOSED TO DIRECT FLAME. Avoid contact with eyes, skin, and clothing. Avoid breathing fumes, dusts, vapors or mist. Do not taste or swallow. Wash thoroughly after handling. Keep container tightly closed. Use only with adequate ventilation. Keep away from heat and flame. Wear gloves, eye protection, respiratory protection, and appropriate body protection. FIRST-AID: In case of contact, immediately flush skin and eyes with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops or persists. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, do not induce vomiting. Get medical attention. IN CASE OF FIRE: Use water fog, foam, dry chemical, or CO2. IN CASE OF SPILL: Absorb spilled product with poly pads or other suitable absorbing material. Place all spill residue in an appropriate container and seal. Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada.

GLOBAL HARMONIZATION LABELING AND CLASSIFICATION: Classified in accordance with the Global Harmonization Standard.

Classification: Mutagenic Toxicity Category 2, Reproductive Toxicity Category 2, Acute Oral Toxicity Category 5, Eye Irritation Category 2, Skin Irritation Category 3, Skin Sensitization Category 1B, Respiratory Sensitization Category 1B, Specific Target Organ Toxicity (Immune System, Liver, Urinary System) Repeated Exposure Category 2, Aquatic Acute Toxicity Category 3, Aquatic Chronic Toxicity Category 3

Signal Word: Danger


Precautionary Statements:


Storage: P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

Disposal: P501: Dispose of contents/container in accordance with all local, regional, national and international regulations.

Hazard Symbols/Pictogram: GHS07, GHS08

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The information presented in this Material Safety Data Sheet is presented in good faith based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale.
DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these, which are commonly used, include the following:

KEY ACRONYMS:
CHEMTREC: Chemical Transportation Emergency Center, a 24-hour emergency information and/or emergency response source.
CEILING LEVEL: The concentration that shall not be exceeded during any part of the working exposure.
DFG MAKs: Federal Republic of Germany Maximum Concentration Values in the workplace.
Exposure limits are given as TWA (Time-Weighted Average) or PEAK (short-term exposure) values.
DFG MAK Germ Cell Mutagen Categories: 1: Germ cell mutations that have been shown to increase the mutation frequency in the progeny of exposed mammals. 2: Germ cell mutations that have been shown to increase the mutation frequency in the progeny of exposed mammals. 3B: Substances that have been shown to induce genetic damage in germ cells of humans, or which produce mutagenic effects in somatic cells of mammals in vivo and have been shown to react the germ cells in an active form. 3B: Substances that are suspected of being germ cell mutations because of their genotoxic effects in mammalian somatic cell in vivo, in exceptional cases, substances for which there are no in vivo data, but that are clearly mutagenic in vitro and structurally related to known in vivo mutagens. 4: Germ cell mutagens, category 4: cancer, tumors, other adverse effects mechanisms of action. By definition, germ cell mutations are genotoxic. Therefore, a Category 4 for germ cell mutations cannot apply. At some time in the future, it is conceivable that a Category 4 could be established for substances with properties considered to be similar to or more powerful than those in Group 1E [e.g. alkylating substances] if research results make this seem sensible. 5G: Germ cell mutagens, the potency of which is considered to be so low that, provided the MAK value is observed, their contribution to genetic risk for humans is considered to be negligible.
DFG MAK Pregnancy Risk Group Classification: Group A: A risk of damage to the developing embryo or fetus has been unequivocally demonstrated. Exposure of pregnant women can lead to damage of the developing organism, even when MAK and BAT (Biological Tolerance Value for Working Men) values are not exceeded. Group B: Carcinogenic information indicates a risk of damage to the developing embryo or fetus must be considered to be probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are not exceeded. Group C: There is no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are observed. Group D: Classification in one of the groups A-C is not yet possible because, although the available data indicate a trend, they are not sufficient for final evaluation.
IDLH: Immediately Dangerous to Life and Health. This level represents a concentration from which one can escape within 30 minutes without suffering escape-preventing or permanent injury.
LOQ: Limit of Quantification. No established.
NCE: Not Established. When no exposure guidelines are established, an entry of NE is made for reference.
NIC: Notice of Intended Change.
NOSO CEILING: The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.
NOSO REL: Permissible Exposure Limit. PEL: OSHA’s Permissible Exposure Limits. This exposure value means exactly the same as the TWA, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants (Federal Register: 58: 33383-3351 and 58: 40391). Before the new PELs are adopted, the indicated PELs are placed next to the PEL that was vacated by Court Order.
SKIN: Used when there is a danger of cutaneous absorption.
STEEL: Standard steel is usually a 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a workday, even if the 8-hour TWA is within the TWA-TWA, TWA-TWA, RELE-TWA.
TWA: Time Weighted Average exposure concentration for a conventional 8- hour (TWA) or up to a 10-hour (REL) workday and 40-hour week.
WEEL: Workplace Environmental Exposure Limits from the AIHA.
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS:

This rating system was developed by the National Paint and Coating Association and has been adopted by DynaTrol, Inc. It will not define the degree of health or systemic toxicity. HEALTH HAZARD: 0 Minimal Hazard: No significant health risk, irritation of skin or eyes not anticipated. Skin Irritation: Essentially non-irritating. Mechanical irritation may occur. PII or Draize = 0.
Ocular irritation: Essentially non-irritating, minimal effects clearing in 8-21 days. Mechanical irritation may occur. Draize = 0. Oral Toxicity LD50: Rat or rabbit > 5000 mg/kg. Inhalation Toxicity LC4 hr: Rat or rabbit > 20-200 mg/kg. Inhalation Toxicity LC4 hr: Rat or rabbit > 20-200 mg/kg. Inhalation Toxicity LC4 hr: Rat or rabbit > 50-500 mg/kg. Dermal Toxicity LD50: Rat or rabbit > 200-1000 mg/kg. Inhalation Toxicity LC4 hr: Rat or rabbit > 0-5.2 mg/L. 3 Serious Hazard: Major injury likely unless prompt action is taken and medical treatment is given. High level of toxicity; certain materials are hazardous to life or limb. Severe poisoning or corrosive; respiratory involvement or irritation clearing in 8-21 days.
Eye Irritation: Corrosive, irreversible destruction of visual organ or irrigating fluid persisting for more than 21 days. Draize = 80 with effects irreversible in 21 days.

II FLAMMABILITY HAZARD: 0 Minimal Hazard: Materials that will not burn in air when exposure to a temperature of 815.0°C (1500°F) for a period of 5 minutes. 1 Slight Hazard: Materials that must be pre-heated before ignition can occur. Material requires considerable pre-heating, under all ambient temperature conditions before ignition and combustion can occur. This usually includes the following: Materials that will burn in air when exposed to a temperature of 815.0°C (1500°F) for a period of 5 minutes or less. Liquids, solids and semisolids having a flash point at or above 93.3°C (200°F) (i.e. OSHA Class III A). Materials that are flammable at working temperatures. 2 Moderate Hazard: Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree will not, under normal conditions, form flammable atmospheres in air, but under high ambient temperatures or moderate heating may release sufficient quantities of flammable vapors to produce explosive mixtures with air. This usually includes the following: Liquids having a flash-point at or above 73.8°C (165°F).

16. OTHER INFORMATION

DISCLAIMER OF EXPRESS AND IMPLIED WARRANTIES (continued)

All materials may present hazards and should be used with caution. Because many factors may affect processing or applications, we recommend that you make tests to determine the suitability of your particular purpose prior to any actual use. No responsibility is assumed for improper use or for lack failure to adhere to the recommended practices or applicable federal, state, or local laws or regulations. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

DATE OF PRINTING
June 29, 2017

REFERENCES AND DATA SOURCES: Contact the supplier for information.

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DEFINITIONS OF TERMS (Continued)

Hazardous Materials Identification System Hazard Ratings

Physical Hazard (continued): 3 (continued): Pyrophoric: No Rating. Oxidizer: Packing Group I oxidizers. Solids: any material that, in either concentration tested, exhibits a mean burning time less than 5 seconds or, if exposed to one of a number of flame sources of sufficient intensity, or if the temperature of the material through hot surfaces, or if exposed to a gas jet, forms a flame which readily propagates through the material at a mean burning rate of 5 cm/min or greater. Liquid: any material that spontaneously ignites when mixed with cellulose in a 1:1 ratio, or which exhibits a mean pressure rise rate of less than 10 MPa/s and a mean temperature rise of greater than 20°C at 100°C. Unstable Reactions: Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a potential (or high risk) to cause significant heat generation or explosion. Water Reactivity: Materials that react explosively with water without requiring heat or ignition. Premises: Materials that burn rapidly and create flash fires in large amounts or in enclosed spaces; or that burn rapidly and create flash fires by reacting with water or other materials in contact with water. Explosives: Division 1.1 & 1.2 explosives. Explosive substances that have a mass explosion hazard or a projection hazard. A mass explosion is one that affects almost the entire load instantaneously. Compressed Gases: No Rating. Pressure: Materials that, when subjected to a pressure rise time of 0.5 second or less, or under moderate heating, can cause serious or irreversible tissue damage. Materials containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. Nodules: Materials that will not burn under typical fire conditions, including temperatures or under moderate heat, if tests are performed with a 5.2 pound sample size of material in an air atmosphere at an ambient temperature of 816°C (1500°F) for a period of 5 minutes in accordance with Annex D of NFPA 704. Liquids, solids, and semisolids having a flash point at or above 93°C (200°F) (i.e. Class IIIB liquids). Liquids with a flash point greater than or equal to 95°F (35°C) that do not exhibit combustion when tested using the Method of Testing for Combustibility of Liquids, per 49 CFR 173.117, Appendix H or the UN Recommendations on the Transport of Dangerous Goods, Model Regulations (current edition) and the related Manual of Tests and Criteria (current edition). Liquids with a flash point greater than 35°F (95°C) in a water-miscible solvent or a water non-miscible solvent in which the density of the liquid is greater than or equal to 80 kg/m³, with a solubility of less than or equal to 0.5% by weight. Liquids that have no fire point when tested by ASTM D 92, Standard Test Method for Flash and Fire Points by Cleveland Open Cup, up to the boiling point of the liquid or up to a temperature at which the sample being tested shows an obvious physical change. Combustible solids with a representative diameter of greater than 2 mm (10 mesh). Most ordinary combustible materials. Semisolids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent.

National Fire Protection Association Hazard Ratings (continued)

Flammability Hazard (continued): 3 Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air at temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and exhibiting an exothermic power density (product of heat of reaction and reaction rate) at 250°C (482°F) below 0.01 W/mL. Materials that do not exhibit an exotherm at temperatures less than or equal to 50°C (93°F) when tested by differential scanning calorimetry. Materials that in themselves are normally stable, but that can become unstable at elevated pressures and temperatures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 0.01 W/mL. 2 Materials that readily undergo violent chemical change at elevated temperatures and pressures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 10 W/mL and below 100 W/mL. 1 Materials with a representative diameter between 420 microns (40 mesh) and 2 mm (10 mesh) that burn rapidly and create flash fires in large amounts or in enclosed spaces; or that burn rapidly and create flash fires by reacting with water or other materials in contact with water. Nodules containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. INSTABILITY HAZARD: 0 Materials that in themselves are normally stable, even under fire conditions. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) below 0.01 W/mL. Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). Flash Point: Minimum temperature at which a liquid gives off sufficient vapor to form an ignitable mixture with air at atmospheric pressure and with the surface of the liquid or within the test vessel used. Autoignition Temperature: Minimum temperature of a solid, liquid, or gas required to cause self-sustained combustion in air with no other source of ignition. UEL: Lowest concentration of a flammable or volatile material in air at which the lower flammable limit of air can combine with the material, by weight, administered to a test subject, based on their body weight in kg. LD: Lowest dose to cause a symptom. TC: Lowest concentration to cause a symptom. TLm: Lowest concentration of a flammable or volatile material in air that will ignite, and burn with a flame. UEL: Highest concentration of a flammable vapor or gas/mixture that will ignite and burn with a flame.

Toxicological Information: Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. LD: Lethal Dose (solids & liquids) that kills 50% of the exposed animals. LC: Lethal Concentration (gases) that kills 50% of the exposed animals. ppm: Concentration expressed in parts of material per million parts of air or water. EC: Effect concentration in water. BCF: Bioconcentration Factor, which is used to determine if a substance will concentrate in life forms that consume contaminated plant or animal matter. TLM: Median threshold limit. for cats or for rabbits. Coefficient of Oil/Water Distribution is used to assess a material's ability to partition between oil and water. BCF: Bioconcentration Factor.

Reproductive Information: A teratogen is a chemical that causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embroyotoxin is a chemical that causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A keratogenic is a chemical that causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance that interferes in any way with the reproductive process.

Ecological Information: Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). Flash Point: Minimum temperature at which a liquid gives off sufficient vapor to form an ignitable mixture with air at atmospheric pressure and with the surface of the liquid or within the test vessel used. Autoignition Temperature: Minimum temperature of a solid, liquid, or gas required to cause self-sustained combustion in air with no other source of ignition. UEL: Lowest concentration of a flammable or volatile material in air at which the lower flammable limit of air can combine with the material, by weight, administered to a test subject, based on their body weight in kg. LD: Lowest dose to cause a symptom. TC: Lowest concentration to cause a symptom. TLm: Lowest concentration of a flammable or volatile material in air that will ignite, and burn with a flame. UEL: Highest concentration of a flammable vapor or gas/mixture that will ignite and burn with a flame.

Regulatory Information: This section explains the impact of various laws and regulations on the material.