SECTION 1: IDENTIFICATION

1.1. Product Identifier
Product Form: Mixture
Product Name: Polyurethane Primer-Part A

1.2. Intended Use of the Product
Use of the Substance/Mixture: Primer.

1.3. Name, Address, and Telephone of the Responsible Party
Company
Metacrylics
365 Obata Ct.
Gilroy, CA 95020
408-280-7733
www.metacrylics.com

1.4. Emergency Telephone Number
Transportation: CHEMTEL Tel. 800-255-3924, +1 813-248-0585 (International)
Medical: CHEMTEL Tel. 800-255-3924, +1 813-248-0585 (International)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture
GHS-US Classification
Aquatic Acute, 3 H402
Carcinogenicity, 2 H351
Aquatic Chronic, 3 H413
Eye irritation, 2A H319
Flammable Liquid, 3 H226
Reproductive Toxicity, 2 H361
Skin irritation, 2 H315
Skin sensitizer, 1 H317
STOT, 2 H373

Full text of hazard classes and H-statements: see section 16

2.2. Label

Elements GHS-US
Labeling
Hazard Pictograms (GHS-US):

Signal Word (GHS-US): Warning
Hazard Statements (GHS-US):
H226 - Flammable liquid and vapor
H351 - Suspected of causing cancer.
H319 - Causes serious eye irritation
H361 - Suspected of damaging fertility or the unborn child.
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H402 - Harmful to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements (GHS-US):
P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P273 - Avoid release to the environment.
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P264 - Wash thoroughly after handling.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof [electrical/ventilating/lighting/] equipment.
P242 - Use only non-sparking tools.
P243 - Take action to prevent static discharges.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P308 + P313 - IF exposed or concerned: Get medical advice/attention.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.
  Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice/attention.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P370 + P378 - In case of fire: Use dry chemical, carbon dioxide, foam to extinguish.
For detailed information, see Section-5 (Fire Fighting Measures)
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P321 - Specific treatment (see section 4 on this SDS).
P332 + P313 - If skin irritation occurs: Get medical advice/attention.
P362 + P364 - Take off contaminated clothing. And wash it before reuse.
P333 + P313 - If skin irritation or a rash occurs: Get medical advice/attention.
P314 - Get Medical advice/attention if you feel unwell.
P405 - Store locked up.
P403 + P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents/container to an approved waste disposal plant.

2.3. Unknown Acute Toxicity (GHS-US)
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance
Not applicable
3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol A epoxy resin</td>
<td>(CAS-No.) 25068-38-6</td>
<td>32-58</td>
</tr>
<tr>
<td>Kaolin</td>
<td>(CAS-No.) 1332-58-7</td>
<td>12-23</td>
</tr>
<tr>
<td>Crystalline silica</td>
<td>(CAS No.) 14808-60-7</td>
<td>9-17</td>
</tr>
<tr>
<td>Ethyl hexyl glycidyl ether, 2-</td>
<td>(CAS no.) 2461-15-6</td>
<td>8-15</td>
</tr>
<tr>
<td>Xylene</td>
<td>(CAS no.) 1330-20-7</td>
<td>4-8</td>
</tr>
<tr>
<td>Benzene-1-chloro-4 (trifluoromethyl)</td>
<td>(CAS no.) 98-56-6</td>
<td>3-5</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>(CAS no.) 100-41-4</td>
<td>1.2-2</td>
</tr>
<tr>
<td>Carbon black</td>
<td>(CAS no.) 1333-86-4</td>
<td>0.3-0.5</td>
</tr>
<tr>
<td>Toluene</td>
<td>(CAS no.) 108-88-3</td>
<td>Trace</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16
The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200].

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Ingestion: Remove source of exposure or move person to fresh air and keep comfortable for breathing. If exposed/ feel unwell/ concerned: Call a poison center/ doctor.

First-aid Measures After Skin Contact: Rinse/ wash with lukewarm, gently flowing water and mild soap for 15-20 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/ attention. If exposed or concerned: get medical advice/ attention.

First-aid Measures After Eye Contact: Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to
do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If vomiting occurs naturally, lie on your side, in the recovery position. Give 1 or 2 glasses of water to drink. Never give anything by mouth to an unconscious person.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media
Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide, fog.
Unsafe Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture
Fire Hazard: Yes
Explosion Hazard: Excessive pressure or temperature may cause explosive ruptured of containers.

5.3. Advice for Firefighters
Precautionary Measures Fire: Exercise caution when fighting any chemical fire.
Firefighting Instructions: Use water spray or fog for cooling exposed containers.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Emergency Procedure:
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

6.2. Recommended Equipment:
Appropriate dust or face mask to eliminate breathing foam dust particulates.

6.3. Personal Precautions:
Avoid breathing vapors. Avoid contact with skin, eyes or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

6.4. Environmental Precautions:
Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

6.5. Methods and Materials for Containment and Cleaning up:
Soak up material with absorbent and shovel into a chemical waste container. Cover container, but do not seal, and remove from work area. Residues from spill cleanup may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, call CHEMTEL at 800-255-3924.

SECTION 7: HANDLING AND STORAGE

7.1. General:
Wash hands after use. Do not get in eyes, on skin or on clothing. Do not breathe vapors or mists. Use good personal hygiene practices. Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas. Eyewash stations and showers should be available in areas where this material is used and stored. Individuals with existing respiratory disease such as chronic bronchitis, emphysema, or asthma should not be exposed.

7.2. Ventilation Requirements:
Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

7.3. Storage Room Requirements:
Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and
incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.
Store in tightly sealed containers to protect from atmospheric moisture. Store in a cool dry area. Store liquid in containers above ground and surround by dikes to contain spills or leaks.
Do not cut, drill, grind, weld, or perform similar operations on or near containers.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

#### 8.2. Exposure Controls

**Appropriate Engineering Controls**: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA TWA ppm</th>
<th>OSHA TWA mg/m³</th>
<th>OSHA STEL Ppm</th>
<th>OSHA STEL mg/m³</th>
<th>OSHA Tables Z1, 2, 3</th>
<th>OSHA Carcinogen</th>
<th>OSHA Skin designation</th>
<th>NIOSH TWA ppm</th>
<th>NIOSH TWA mg/m³</th>
<th>NIOSH STEL Ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bezene-1-chloro-4 (trifluoromethyl)-98-56-6</td>
<td>2.5</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Carbon black 1333-86-4</td>
<td>3.5</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.5a</td>
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<tr>
<td>Ethylbenzene 100-41-4</td>
<td>100</td>
<td>435</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
<td>435</td>
<td>125</td>
</tr>
<tr>
<td>Kaolin 1332-58-7</td>
<td>[15]; [5 (a)];</td>
<td>1</td>
<td>[1,3]; [3]</td>
<td>0.05e</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystalline silica 14808-60-7</td>
<td>a</td>
<td>10 mg/m³ percent SiO₂+2/ 250 percent SiO₂+5 mppcf; [30 mg/m³ percent SiO₂+2];</td>
<td>500ppm/10 minutes (a)</td>
<td>1,2</td>
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<td>375</td>
<td>150</td>
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<tr>
<td>Toluene 108-88-3</td>
<td>200</td>
<td>0.2</td>
<td>500ppm/10 minutes (a)</td>
<td>1,2</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
<td>375</td>
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<td></td>
<td>100</td>
<td>435</td>
<td>150</td>
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</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>NIOSH STEL mg/m³</th>
<th>NIOSH Carcinogen</th>
<th>ACGIH TWA ppm</th>
<th>ACGIH TWA mg/m³</th>
<th>ACGIH STEL ppm</th>
<th>ACGIH STEL mg/m³</th>
<th>ACGIH Carcinogen</th>
<th>ACGIH TLV Basis</th>
<th>ACGIH Notations</th>
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<tr>
<td>Bezene-1-chloro-4 (trifluoromethyl)-98-56-6</td>
<td></td>
<td></td>
<td>2.5</td>
<td></td>
<td>A4</td>
<td></td>
<td>Bone dam; fluorosis</td>
<td>A4, BEI</td>
<td></td>
</tr>
<tr>
<td>Carbon black 1333-86-4</td>
<td></td>
<td>1</td>
<td>3 (I)</td>
<td></td>
<td>A3</td>
<td></td>
<td>Bronchitis</td>
<td>A3</td>
<td></td>
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<tr>
<td>Ethylbenzene 100-41-4</td>
<td>545</td>
<td></td>
<td>20</td>
<td></td>
<td>A3</td>
<td></td>
<td>URT irr, Kidney dam (nephropathy); cochlear impair</td>
<td>A3, BEI</td>
<td></td>
</tr>
<tr>
<td>Kaolin 1332-58-7</td>
<td></td>
<td>2 (E, R)</td>
<td>0.025 (R)</td>
<td></td>
<td>A2</td>
<td></td>
<td>Pulmonary fibrosis; lung cancer</td>
<td>A2</td>
<td></td>
</tr>
<tr>
<td>Crystalline silica 14808-60-7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Eye and Face Protection: Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin and Body Protection: Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory Protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Use either an atmosphere supplying respirator or an air-purifying respirator for organic vapors.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

- **Density**: 10.82 lbs/gal
- **Specific Gravity**: 1.10
- **VOC Regulatory**: 0.00 g/L
- **VOC Part A & B Combined**: 0.83 lb/gal
- **Appearance**: Thin pigmented liquid
- **Odor Threshold**: N.A.
- **Odor Description**: Aromatic
- **pH**: N.A.
- **Water Solubility**: N.A.
- **Flammability**: N/A
- **Flash Point Symbol**: N.A.
- **Flash Point**: 113°F (45°C)
- **Viscosity**: N.A.
- **Lower Explosion Level**: N.A.
- **Upper Explosion Level**: N.A.
- **Vapor Pressure**: N.A.
- **Vapor Density**: Heavier than air
- **Freezing Point**: N.A.
- **Melting Point**: N.A.
- **Low Boiling Point**: 250°F (121°C)
- **High Boiling Point**: N.A.
- **Auto Ignition Temp**: N.A.
- **Decomposition Pt**: N.A.
- **Evaporation Rate**: Slower than ether
- **Coefficient Water/Oil**: N.A.

9.2. Other Information: No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Hazardous reactions will not occur under normal conditions.
10.2. **Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).

10.3. **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur but aliphatic amine will cause irreversible polymerization with considerable heat build up.

10.4. **Conditions to Avoid:** Heat, high temperature, open flame, sparks, moisture. Contact with incompatible materials in a closed system will cause buildup of pressure.

10.5. **Incompatible Materials:** Amines, alkalis, acids, strong oxidizing agents. Some reactions can be violent.

10.6. **Hazardous Decomposition Products:** Organic vapors and thermal decomposition fragments

### SECTION 11: TOXICOLOGICAL INFORMATION

11.1. **Information on Toxicological Effects**

**Acute Toxicity:** Irritation or chemical burns of the mouth, pharynx, esophagus, and stomach can develop following ingestion. No data available.

**Skin Corrosion/Irritation:** Repeated skin contact may cause a persistent irritation or dermatitis. May also aggravate an existing skin condition. Causes skin irritation.

**Serious Eye Damage/Irritation:** Causes serious eye irritation.

**Respiratory or Skin Sensitization:** Exposure may cause mucous membrane and respiratory tract irritation, tightness of chest, headache, shortness of breath, and a dry cough. The effects of acute exposure may be delayed in onset up to 12-24 hours. Repeated exposure above current occupational limits may cause an allergic sensitization of the respiratory tract. This is characterized by an asthma-like response upon re-exposure to the chemical. The symptoms may include coughing, wheezing, shortness of breath and chest tightness. May cause an allergic skin reaction.

**Germ Cell Mutagenicity:** No data available.

**Carcinogenicity:** Suspected of causing cancer.

**Reproductive Toxicity:** Suspected of damaging fertility or the unborn child.

**Specific Target Organ Toxicity (Single Exposure):** No data available.

**Specific Target Organ Toxicity (Repeated Exposure):** Repeated exposure generally aggravates the following medical conditions: Cardiovascular disease and Chronic respiratory disease. May cause damage to organs through prolonged or repeated exposure.

**Aspiration Hazard:** No data available.

**Chronic Exposure**

**Ethylbenzene (CAS no.) 100-41-4**

CARCINOGENIC EFFECTS: Ethyl Benzene has been listed by IARC as Group 2B, Possibly Carcinogenic to Humans.

TERATOGENIC EFFECTS: Ethyl Benzene has been Classified as POSSIBLE for humans.

**Toluene (CAS no.) 108-88-3**

TERATOGENIC EFFECTS:Toluene has been Classified as POSSIBLE for humans.

**Xylene (CAS no.) 1330-20-7**

High exposure to Xylenes in some animal studies have been reported to cause health effects on the developing embryo/fetus. Xylene in high concentrations has caused embryotoxic effects in laboratory animals.

**Carbon Black (CAS no.) 1333-86-4**

CARCINOGENIC EFFECTS: In 1996, the IARC reevaluated Carbon Black as a Group 2B carcinogen. This evaluation is given to carbon black for which there is inadequate human evidence, but sufficient animal evidence. Prolonged inhalation of Carbon black can result in lung disease. Symptoms include coughing, shortness of breath, wheezing and reduced pulmonary function.

**Crystalline silica (CAS no.) 14808-60-7**

Prolonged inhalation of respirable crystalline silica dust can result in lung disease (i.e. silicosis and/or lung cancer). Symptoms include coughing, shortness of breath, wheezing and reduced pulmonary function.

<table>
<thead>
<tr>
<th>Carbon Black (CAS no.) 1333-86-4</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 Rat</td>
<td>6750 mg/m³ (4-hour exposure); cited as 27000 mg/m³ (27 mg/L) (1-hour exposure) (3)</td>
</tr>
<tr>
<td>Xylene (CAS no.) 1330-20-7</td>
<td></td>
</tr>
<tr>
<td>LC50 Rat</td>
<td>6350 ppm (4-hour exposure) (unspecifed isomers and ethylbenzene) (1)LC50 (rat): 6700 ppm (4-hour exposure) (65% m-xylene, 7.6% o-xylene, 7.8% p-xylene, 19.3% ethylbenzene) (2) ethylbenzene) (1)</td>
</tr>
<tr>
<td>LC50 Rat</td>
<td>6700 ppm (4-hour exposure) (65% m-xylene, 7.6% o-xylene, 7.8% p-xylene, 19.3% ethylbenzene) (2)</td>
</tr>
<tr>
<td>LD50 Oral-rat</td>
<td>5400 mg/kg (52% m-, 19% o-, 24% p-) (1)LD50 (oral, female mouse): 5251 mg/kg (60.2% m-, 9.1% o- 14.6% p-, 17.0% ethylbenzene) (4)</td>
</tr>
</tbody>
</table>
classifies Xylene as a developmental toxin as high exposures to repeated or prolonged inhalation may cause any of the following: liver and kidney injury. High airborne levels have produced irregular heart beats in animals and occasional palpitations in humans. Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. The significance of this to man is unknown. Repeated or prolonged skin contact may cause any of the following: irritation, dryness, cracking of the skin. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: skin. Prolonged or repeated exposure may cause damage to any of the following organs/systems: kidneys, liver, thyroid. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin. Ingestion may cause any of the following: gastrointestinal irritation. Eye contact may cause any of the following: permanent eye injury. Inhalation may cause any of the following: stupor (central nervous system depression), respiratory tract irritation.

Toluene (CAS no. 108-88-3). Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: bone marrow, cardiovascular system, central nervous system, kidneys, liver, lungs. Recurrent overexposure may result in liver and kidney injury. High exposures may produce irregular heart beats. Canada classifies Xylene as a developmental toxin as high exposures to xylenes in some animal studies have been reported to cause health effects on the developing fetus/embryo. These effects were often at levels toxic to the adult animal. The significance of these effects to humans is not known. Repeated or prolonged skin contact may cause any of the following: irritation, dryness, cracking of the skin.

Xylene (CAS no.) 1330-20-7. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: lung injury. High exposures may produce irregular heart beats. Canada classifies Xylene as a developmental toxin as high exposures to xylenes in some animal studies have been reported to cause health effects on the developing fetus/embryo. These effects were often at levels toxic to the adult animal. The significance of these effects to humans is not known. Repeated or prolonged skin contact may cause any of the following: irritation, dryness, cracking of the skin.

Kaolin (CAS no.) 1332-58-7. The following medical conditions may be aggravated by exposure: asthma, dermatitis. Repeated or prolonged inhalation may cause any of the following: lung injury.

Carbon Black (CAS no.) 1333-86-4. Is an IARC, NTP or OSHA carcinogen. Has shown carcinogenic activity in laboratory animals at high doses. Significance to man is unknown. The following medical conditions may be aggravated by exposure: asthma, respiratory disease. WARNING: This chemical is known to the State of California to cause cancer.

Crystalline silica (CAS no.) 14808-60-7. Is an IARC, NTP or OSHA carcinogen. Repeated overexposure to crystalline silica may lead to x-ray changes and chronic lung disease. Inhalation of high dust concentrations may cause: breathing difficulties, lung injury. WARNING: This chemical is known to the State of California to cause cancer.

LD50 Oral-male mouse 5627 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4)
LD50 Dermal-rabbit 12180 mg/kg (m-xylene); greater than 1700 mg/kg (mixed xylenes - undefined composition) (3)
LD50 Oral-female 5251 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4)
LD50 Oral-male mouse 5627 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4)
LD50 Dermal-Rabbit 12180 mg/kg (m-xylene); greater than 1700 mg/kg (mixed xylenes - undefined composition) (3)

LD50 Dermal-Rabbit 12,225 mg/kg (reported as 14.1 ml/kg) (1)

LD50 Oral-rat 3.5 g/kg (1,3,5,10)
LD50 Oral-rat 4.72 g/kg (3,5,7,8)
LD50 Dermal-rabbit 17.8 g/kg (11)

Ethylbenzene (CAS no.) 100-41-4.

LD50 Oral-rat 3.5 g/kg (1,3,5,10)
LD50 Oral-rat 4.72 g/kg (3,5,7,8)
LD50 Dermal-rabbit 17.8 g/kg (11)

Ethylbenzene (CAS no.) 100-41-4. Is an IARC, NTP or OSHA carcinogen. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, kidneys, liver, lungs. Recurrent overexposure may result in liver and kidney injury. Studies in laboratory animals have shown reproductive, embryotoxic and developmental effects. WARNING: This chemical is known to the State of California to cause cancer.

Toluene (CAS no.) 108-88-3. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: skin. Prolonged or repeated exposure may cause damage to any of the following organs/systems: kidneys, liver, thyroid. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin. Ingestion may cause any of the following: gastrointestinal irritation. Eye contact may cause any of the following: permanent eye injury. Inhalation may cause any of the following: stupor (central nervous system depression), respiratory tract irritation.
Bisphenol A epoxy resin (CAS no.) 25068-38-6. The following medical conditions may be aggravated by exposure: skin disorders. Laboratory studies with rats have shown that petroleum distillates can cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guin.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecology - General: Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

12.2. Persistence and Degradaability
Carbon black (CAS no.) 1333-86-4. Carbon black’s insolubility in water results in it not being biodegradable in any medium or any biota. It is considered persistent in the natural environment.

12.3. Bioaccumulative Potential
Carbon black (CAS no.) 1333-86-4. A relevant bioaccumulation potential of carbon black is not expected based on its insolubility in organic solvents and in water. Furthermore, since the aggregate diameter of carbon black varies between 80 nm and 810 nm, bioaccumulation of particulate carbon black is not likely owing to the large diameter of the solid aggregate particles.

12.4. Mobility in Soil
No data available.

12.5. Other Adverse Effects
No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods
Under RCRA, it is the responsibility of the user of the product, to determine a the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws. Empty containers retain product residue, which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT
Not regulated for transport

14.2. In Accordance with IMDG
UN/NA #: 1263
UN Proper Shipping Name: PAINT
Hazard Class: 3
Packing Group: III
Placard: Flammable
Marine Pollutant: No data available

14.3. In Accordance with IATA
UN/NA #: 1263
UN Proper Shipping Name: PAINT
Hazard Class: 3
Packing Group: III
Placard: Flammable

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
<th>Listing Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol A epoxy resin</td>
<td>25068-38-6</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory, SARA 312, DSL</td>
</tr>
<tr>
<td>Kaolin</td>
<td>1332-58-7</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory, SARA 312, DSL</td>
</tr>
<tr>
<td>Crystalline silica</td>
<td>14808-60-7</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory, SARA 312, DSL</td>
</tr>
<tr>
<td>Ethyl hexyl glycidyl ether-2</td>
<td>2461-15-6</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory, SARA 312, DSL</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory, SARA 312, DSL</td>
</tr>
</tbody>
</table>

California Prop 65
Listed on the United States TSCA (Toxic Substances Control Act) inventory, SARA 312, SARA 313, DSL, CERCLA, HAPS, VHAPS, RCRA, VOC

**Benzene-1-chloro-4 (trifluoromethyl) (CAS no.) 98-56-6**
Listed on the United States TSCA (Toxic Substances Control Act) inventory, SARA 312, DSL

**Ethylbezene (CAS no.) 100-41-4**
Listed on the United States TSCA (Toxic Substances Control Act) inventory, SARA 312, SARA 313, DSL, CERCLA, HAPS, VHAPS, VOC, California Prop 65

**Carbon black (CAS no.) 1333-86-4**
Listed on the United States TSCA (Toxic Substances Control Act) inventory, SARA 312, California Prop 65

**Toluene (CAS no.) 108-88-3**
Listed on the United States TSCA (Toxic Substances Control Act) inventory, SARA 312, SARA 313, DSL, CERCLA, HAPS, VHAPS, RCRA, VOC, California Prop 65

**SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION**

| Date of Preparation or Latest Revision | 08/18/2017 |
| Other Information | This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)
SECTION 1: IDENTIFICATION

1.1. Product Identifier
Product Form: Mixture
Product Name: Polyurethane Primer-Part B

1.2. Intended Use of the Product
Use of the Substance/Mixture: Primer.

1.3. Name, Address, and Telephone of the Responsible Party
Company
Metacrylics
365 Obata Ct.
Gilroy, CA 95020
408-280-7733

www.metacrylics.com

1.4. Emergency Telephone Number
Transportation: CHEMTEL Tel. 800-255-3924, +1 813-248-0585 (International)
Medical: CHEMTEL Tel. 800-255-3924, +1 813-248-0585 (International)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture
GHS-US Classification
Aquatic Acute, 3 H402
Acute Dermal, 3 H311
Acute Oral, 5 H303
Carcinogenicity, 2 H351
Aquatic Chronic, 3 H413
Eye Irritation, 2 H319
Flammable Liquid, 3 H226
Reproductive Toxicity, 2 H361
Skin irritation, 2 H315
Skin sensitizer, 1B H314
STOT, 2 H317

Full text of hazard classes and H-statements : see section 16

2.2 Label
Elements GHS-US
Labeling
Hazard Pictograms (GHS-US)
: Warning
H226 - Flammable liquid and vapor
H313 - May be harmful in contact with skin
H303 - May be harmful if swallowed
H351 - Suspected of causing cancer.
H319 - Causes serious eye irritation
H361 - Suspected of damaging fertility or the unborn child.
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H373 - May cause damage to organs through prolonged or repeated exposure.
H402 - Harmful to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements (GHS-US)
: P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.
P273 - Avoid release to the environment.
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
2.3. Unknown Acute Toxicity (GHS-US)
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline silica</td>
<td>(CAS No.) 14808-60-7</td>
<td>20-38</td>
</tr>
<tr>
<td>Barium sulfate</td>
<td>(CAS no.) 7727-43-7</td>
<td>14-26</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>(CAS no.) 13463-67-7</td>
<td>8-15</td>
</tr>
<tr>
<td>Benzoyl alcohol</td>
<td>(CAS no.) 100-51-6</td>
<td>7-13</td>
</tr>
<tr>
<td>Formaldehyde, polymer with benzamine, hydrogenated</td>
<td>(CAS no.) 135108-88-2</td>
<td>7-12</td>
</tr>
<tr>
<td>Fatty acids, tall-oil, reaction products with Xylene</td>
<td>(CAS no.) 68953-36-6</td>
<td>3-6</td>
</tr>
<tr>
<td>-Benzene-1-chloro-4 (trifluoromethyl)</td>
<td>(CAS no.) 98-56-6</td>
<td>1.8-3</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>(CAS no.) 100-41-4</td>
<td>0.8-1.4</td>
</tr>
<tr>
<td>Tetraethylenepentamine</td>
<td>(CAS no.) 112-57-2</td>
<td>0.7-1.2</td>
</tr>
<tr>
<td>Methylamine, M-phenylene BIS</td>
<td>(CAS no.) 1477-55-0</td>
<td>0.5-0.9</td>
</tr>
<tr>
<td>Toluene</td>
<td>(CAS no.) 108-88-3</td>
<td>Trace</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16
The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200].
SECTION 4: FIRST AID MEASURES

4.1 Description of First-aid Measures
First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: Remove source of exposure or move person to fresh air and keep comfortable for breathing. If exposed/ feel unwell/ concerned: Call a poison center/ doctor.

First-aid Measures After Skin Contact: rinse/ wash with lukewarm, gently flowing water and mild soap for 15-20 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/ attention. If exposed or concerned: get medical advice/ attention.

First-aid Measures After Eye Contact: Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If vomiting occurs naturally, lie on your side, in the recovery position. Give 3 or 4 glasses of water to drink. Never give anything by mouth to an unconscious person.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing Media
Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide, fog.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2 Special Hazards Arising From the Substance or Mixture
Fire Hazard: Yes
Explosion Hazard: Excessive pressure or temperature may cause explosive ruptured of containers.

5.3 Advice for Firefighters
Precautionary Measures Fire: Exercise caution when fighting any chemical fire.
Firefighting Instructions: Use water spray or fog for cooling exposed containers.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Emergency Procedure:
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
Do not touch or walk through spilled material.
Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.
If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

6.2 Recommended Equipment:
Appropriate dust or face mask to eliminate breathing foam dust particulates.

6.3 Personal Precautions:
Avoid breathing vapors. Avoid contact with skin, eyes or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

6.4 Environmental Precautions:
Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

6.5 Methods and Materials for Containment and Cleaning up:
Soak up material with absorbent and shovel into a chemical waste container. Cover container, but do not seal, and remove from work area. Residues from spill cleanup may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, call CHEMTEL at 800-255-3924.

SECTION 7: HANDLING AND STORAGE

7.1 General:
Wash hands after use.
Do not get in eyes, on skin or on clothing.
Do not breathe vapors or mists.
Use good personal hygiene practices. Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas. Eyewash stations and showers should be available in areas where this material is used and stored. Individuals with existing respiratory disease such as chronic bronchitis, emphysema, or asthma should not be exposed.

### 7.2 Ventilation Requirements:
Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

### 7.3 Storage Room Requirements:
Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous. Store in tightly sealed containers to protect from atmospheric moisture. Store in a cool dry area. Store liquid in containers above ground and surround by dikes to contain spills or leaks. Do not cut, drill, grind, weld, or perform similar operations on or near containers.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control Parameters
For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

#### 8.2 Exposure Controls

**Appropriate Engineering Controls**: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA TWA ppm</th>
<th>OSHA TWA mg/m³</th>
<th>OSHA STEL ppm</th>
<th>OSHA STEL mg/m³</th>
<th>OSHA Tables Z1, 2, 3</th>
<th>OSHA Carcinogen</th>
<th>OSHA Skin designation</th>
<th>NIOSH TWA ppm</th>
<th>NIOSH TWA mg/m³</th>
<th>NIOSH STEL Ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium sulfate 7727-43-7</td>
<td>[15]; [5 (a)]</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzene-1-chloro-4 (trifluoromethyl)-98-56-6</td>
<td>2.5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethylbenzene 100-41-4</td>
<td>100</td>
<td>435</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
<td>435</td>
<td>125</td>
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<tr>
<td>Methylamine,M-phenylene BIS 1477-5-0</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystalline silica 14808-60-7</td>
<td>A</td>
<td>[10 mg/m³ percent SiO2+2 / 250 percent SiO2+5 mppcf]; [30 mg/m³ percent SiO2+2];</td>
<td>[1,3];[3]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.05e</td>
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<tr>
<td>Titanium dioxide 13463-67-7</td>
<td>15</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Toluene 108-88-3</td>
<td>200 (a)/300 ceiling</td>
<td>0.2</td>
<td>500ppm/10 minutes (a)</td>
<td>1,2</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
<td>375</td>
<td>150</td>
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<tr>
<td>Xylene 1330-20-7</td>
<td>100</td>
<td>435</td>
<td>1</td>
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<td></td>
<td></td>
<td></td>
<td>100</td>
<td>435</td>
<td>150</td>
</tr>
</tbody>
</table>
Polyurethane Primer-Part B
Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of Issue: 08/18/2017
Version 1.0

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>NIOSH STEL mg/m³</th>
<th>NIOSH Carcinogen</th>
<th>ACGIH TWA ppm</th>
<th>ACGIH TWA mg/m³</th>
<th>ACGIH STEL ppm</th>
<th>ACGIH STEL mg/m³</th>
<th>ACGIH Carcinogen</th>
<th>ACGIH TLV Basis</th>
<th>ACGIH Notations</th>
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<tbody>
<tr>
<td>Barium sulfate</td>
<td>7727-43-7</td>
<td></td>
<td>5 (I)(E)</td>
<td>A4</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Bezene-1-chloro-4 (trifluoromethyl)-98-56-6</td>
<td></td>
<td></td>
<td>2.5</td>
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<tr>
<td>Ethylbenzene 100-41-4</td>
<td>545</td>
<td>20</td>
<td>A3</td>
<td>URT irr; Kidney dam (nephropathy); cochlear impair</td>
<td>A4, BEI</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Methylamime,M-phenylene BIS 1477-5-0</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystalline silica 14808-60-7</td>
<td>1</td>
<td>0.025 (R)</td>
<td>A2</td>
<td>Pulmonary fibrosis; lung cancer</td>
<td>A2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium dioxide 13463-67-7</td>
<td>1</td>
<td>10</td>
<td>A4</td>
<td>Visual impair; female repro; pregnancy loss</td>
<td>A4, BEI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toluene 108-88-3</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Xylene 1330-20-7</td>
<td>655</td>
<td>100</td>
<td>434</td>
<td>150</td>
<td>651</td>
<td>A4</td>
<td>URT and eye irr; CNS impair</td>
<td>A4, BEI</td>
<td></td>
</tr>
</tbody>
</table>

Eye and Face Protection: Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin and Body Protection: Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced.

Respiratory Protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Use either an atmosphere supplying respirator or an air-purifying respirator for organic vapors.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
9.1. Information on Basic Physical and Chemical Properties

Density: 15.52 lbs/gal
Specific Gravity: 1.86
VOC Regulator: 0.00 g/L
VOC Part A & B Combined: 0.83 lb/gal
Appearance: Thin white liquid
Odor Threshold: N.A.
Odor Description: Aromatic
pH: N.A.
Water Solubility: N.A.
Flammability: N/A
Polyurethane Primer-Part B
Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of Issue: 08/18/2017
Version 1.0

Flash Point Symbol: N.A.
Flash Point: 104°F (40°C)
Viscosity: N.A.
Lower Explosion Level: N.A.
Upper Explosion Level: N.A.
Vapor Pressure: N.A.
Vapor Density: N.A.
Freezing Point: N.A.
Melting Point: N.A.
Low Boiling Point: 250°F (121°C)
High Boiling Point: N.A.
Auto Ignition Temp: N.A.
Decomposition Pt: N.A.
Evaporation Rate: N.A.
Coefficient Water/Oil: N.A.

9.2. Other Information  No additional information available

SECTION 10: STABILITY AND REACTIVITY
10.1. Reactivity: Hazardous reactions will not occur under normal conditions.
10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).
10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not.
10.4. Conditions to Avoid: Heat, high temperature, open flame, sparks, moisture. Contact with incompatible materials in a closed system will cause buildup of pressure.
10.5. Incompatible Materials: Epoxies, isocyanates, strong oxidizing agents. Some reactions can be violent.
10.6. Hazardous Decomposition Products: Organic vapors and thermal decomposition fragments

SECTION 11: TOXICOLOGICAL INFORMATION
11.1. Information on Toxicological Effects
Acute Toxicity: Irritation or chemical burns of the mouth, pharynx, esophagus, and stomach can develop following ingestion. May be harmful in contact with skin. May be harmful if swallowed.
Skin Corrosion/Irritation: Causes skin irritation.
Serious Eye Damage/Irritation: Causes serious eye irritation. Any contact should not be left untreated.
Respiratory or Skin Sensitization: Exposure may cause mucous membrane and respiratory tract irritation, tightness of chest, headache, shortness of breath, and a dry cough. The effects of acute exposure may be delayed in onset up to 12-24 hours. Repeated exposure above current occupational limits may cause an allergic sensitization of the respiratory tract. This is characterized by an asthma-like response upon re-exposure to the chemical. The symptoms may include coughing, wheezing, shortness of breath and chest tightness. May cause an allergic skin reaction.
Germ Cell Mutagenicity: No data available.
Carcinogenicity: Suspected of causing cancer.
Reproductive Toxicity: Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity (Single Exposure): No data available.
Specific Target Organ Toxicity (Repeated Exposure): Repeated exposure generally aggravates the following medical conditions: Cardiovascular disease and Chronic respiratory disease. May cause damage to organs through prolonged or repeated exposure.
Aspiration Hazard: No data available.
Chronic Exposure

<table>
<thead>
<tr>
<th>Ethylbenzene (CAS no.) 100-41-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARCINOGENIC EFFECTS: Ethyl Benzene has been listed by IARC as Group 2B, Possibly Carcinogenic to Humans.</td>
</tr>
<tr>
<td>TERATOGENIC EFFECTS: Ethyl Benzene has been Classified as POSSIBLE for humans.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toluene (CAS no.) 108-88-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>TERATOGENIC EFFECTS:Toluene has been Classified as POSSIBLE for humans</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Xylene (CAS no.) 1330-20-7</th>
</tr>
</thead>
<tbody>
<tr>
<td>High exposure to Xylenes in some animal studies have been reported to cause health effects on the developing embryo/fetus. Xylene in high concentrations has caused embryotoxic effects in laboratory animals.</td>
</tr>
<tr>
<td>Crystalline silica (CAS no.) 14808-60-7</td>
</tr>
</tbody>
</table>
Prolonged inhalation of respirable crystalline silica dust can result in lung disease (i.e. silicosis and/or lung cancer). Symptoms include coughing, shortness of breath, wheezing and reduced pulmonary function.

### Xylene (CAS no.) 1330-20-7

<table>
<thead>
<tr>
<th>LC50 Rat</th>
<th>6350 ppm (4-hour exposure) (unspecified isomers and ethylbenzene) (1)</th>
<th>LC50 (rat): 6700 ppm (4-hour exposure) (65% m-xylene, 7.6% o-xylene, 7.8% p-xylene, 19.3% ethylbenzene) (2) ethylbenzene) (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Oral-rat</td>
<td>5400 mg/kg (52% m-, 19% o-, 24% p-) (1)</td>
<td>LD50 (oral, female mouse): 5251 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4)</td>
</tr>
<tr>
<td>LD50 Oral-male mouse</td>
<td>5627 mg/kg (60.2% m-, 9.1% o-, 14.6% p-, 17.0% ethylbenzene) (4)</td>
<td></td>
</tr>
<tr>
<td>LD50 Dermal-rabbit</td>
<td>12180 mg/kg (m-xylene); greater than 1700 mg/kg (mixed xylenes - undefined composition) (3)</td>
<td></td>
</tr>
</tbody>
</table>

### Toluene (CAS no.) 108-88-3

<table>
<thead>
<tr>
<th>LC50 Rat</th>
<th>8800 ppm (4-hour exposure) (2)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 Rat</td>
<td>6000 ppm (6-hour exposure) (3)</td>
<td></td>
</tr>
<tr>
<td>LD50 Oral-rat</td>
<td>2600 to 7500 mg/kg (3,5,11,17)</td>
<td></td>
</tr>
<tr>
<td>LD50 Oral-neonatal rat</td>
<td>less than 870 mg/kg (3)</td>
<td></td>
</tr>
<tr>
<td>LD50 Dermal-rabbit</td>
<td>12,225 mg/kg (reported as 14.1 ml/kg) (1)</td>
<td></td>
</tr>
</tbody>
</table>

### Ethylbenzene (CAS no.) 100-41-4

| LC50 Inhalation-rat           | 4000 ppm; 4-hour exposure (3) | |
| LD50 Oral-rat                 | 3.5 g/kg (1,3,5,10) | |
| LD50 Oral-rat                 | 4.72 g/kg (3,5,7,8) | |
| LD50 Dermal-rabbit            | 17.8 g/kg (11) | |

### Benzyl alcohol (CAS no.) 100-51-6

| LD50 Oral-rat                 | 1230 mg/kg; Toxic effects: Behavioral - somnolence (general depressed activity) Behavioral - excitement | |

**Potential Health Effects – Miscellaneous:**

Benzene-1-chloro-4 (trifluoromethyl) (CAS no.) 98-56-6. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: skin. Prolonged or repeated exposure may cause damage to any of the following organs/systems: kidneys, liver, thyroid. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin. Ingestion may cause any of the following: gastrointestinal irritation. Eye contact may cause any of the following: permanent eye injury. Inhalation may cause any of the following: stupor (central nervous system depression), respiratory tract irritation.

Ethylbenzene (CAS no.) 100-41-4. Is an IARC, NTP or OSHA carcinogen. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, kidneys, liver, lungs. Recurrent overexposure may result in liver and kidney injury. Studies in laboratory animals have shown reproductive, embryotoxic and developmental effects. WARNING: This chemical is known to the State of California to cause cancer.

Toluene (CAS no.) 108-88-3. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, kidneys, liver, respiratory system, skin. Can be absorbed through the skin in harmful amounts. Recurrent overexposure may result in liver and kidney injury. High airborne levels have produced irregular heart beats in animals and occasional palpitations in humans. Rats exposed to very high airborne levels have exhibited high frequency
hearing deficits. The significance of this to man is unknown. WARNING: This chemical is known to the State of California to cause birth defects or other reproductive harm.

Xylene (CAS no.) 1330-20-7. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: bone marrow, cardiovascular system, central nervous system, kidneys, liver, lungs. Recurrent overexposure may result in liver and kidney injury. High exposures may produce irregular heart beats. Canada classifies Xylene as a developmental toxin as high exposures to xylenes in some animal studies have been reported to cause health effects on the developing fetus/embryo. These effects were often at levels toxic to the adult animal. The significance of these effects to humans is not known. Repeated or prolonged skin contact may cause any of the following: irritation, dryness, cracking of the skin.

Titanium dioxide (CAS no.) 13463-67-7. Is an IARC, NTP or OSHA carcinogen. In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m3 respirable titanium dust. Analysis of the titanium dioxide concentrations in the rat’s lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m3 level are not relevant to the workplace. Results of a DuPont epidemiology study showed that employees who had been exposed to Titanium Dioxide were at no greater risk of developing lung cancer than were employees who had not been exposed to Titanium dioxide. No pulmonary fibrosis was found in any of the employees and no association was observed between Titanium dioxide exposure and chronic respiratory disease or x-ray abnormalities. Based on the results of this study DuPont concludes that titanium dioxide will not cause lung cancer or chronic respiratory disease in humans at concentrations experienced in the workplace.

Crystalline silica (CAS no.) 14808-60-7. Is an IARC, NTP or OSHA carcinogen. Repeated overexposure to crystalline silica may lead to x-ray changes and chronic lung disease. Inhalation of high dust concentrations may cause: breathing difficulties, lung injury. WARNING: This chemical is known to the State of California to cause cancer.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecology - General : Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

12.2. Persistence and Degradability
No data available.

12.3. Bioaccumulative Potential
No data available.

12.4. Mobility in Soil
No data available.

12.5. Other Adverse Effects
No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods
Under RCRA, it is the responsibility of the user of the product, to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws. Empty containers retain product residue, which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT
Not regulated for transport
UN/NA #: 1263
UN Proper Shipping Name: PAINT
Hazard Class: 3
Packaging Group: III
Placard: Flammable
Marine Pollutant: No data available

14.2. In Accordance with IMDG
UN/NA #: 1263
UN Proper Shipping Name: PAINT
Hazard Class: 3
Packaging Group: III

14.3. In Accordance with IATA
UN/NA #: 1263
UN Proper Shipping Name: PAINT
Hazard Class: 3
Packaging Group: III
SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

<table>
<thead>
<tr>
<th>Substance Description</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline silica (CAS no.) 14808-60-7</td>
<td></td>
</tr>
<tr>
<td>Barium sulfate (CAS no.) 7727-43-7</td>
<td></td>
</tr>
<tr>
<td>Titanium dioxide (CAS no.) 1343-67-7</td>
<td></td>
</tr>
<tr>
<td>Benzyl alcohol (CAS no.) 100-51-6</td>
<td></td>
</tr>
<tr>
<td>Formaldehyde polymer with benzamine, hydrogenated (CAS no.) 135108-88-2</td>
<td></td>
</tr>
<tr>
<td>Fatty acids, tall-oil, reaction products with tetraethylenepentamine (CAS no.) 68953-36-6</td>
<td></td>
</tr>
<tr>
<td>Xylene (CAS no.) 1330-20-7</td>
<td></td>
</tr>
<tr>
<td>Benzene-1-chloro-4 (trifluoromethyl) (CAS no.) 98-56-6</td>
<td></td>
</tr>
<tr>
<td>Ethylbezene (CAS no.) 100-41-4</td>
<td></td>
</tr>
<tr>
<td>Tetraethylenepentamine (CAS no.) 112-57-2</td>
<td></td>
</tr>
<tr>
<td>Toluene (CAS no.) 108-88-3</td>
<td></td>
</tr>
<tr>
<td>Methylamine, M-phenylene bis (CAS no.) 1477-55-0</td>
<td></td>
</tr>
</tbody>
</table>

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of Issue: 08/18/2017

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 08/18/2017

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)