SECTION 2 - HAZARDS IDENTIFICATION

ROUTES OF ENTRY: Entry through inhalation and skin most likely.

EFFECTS OF EXPOSURE:

Eyes: Can cause irritation, redness, tearing and blurred vision.
Skin: Prolonged or repeated contact can cause moderate irritation, drying of the skin and dermatitis.
Inhalation: Excessive inhalation of vapors may be fatal and can cause respiratory irritation, headache, drowsiness and fatigue. High concentration of vapors are anesthetic and may cause central nervous system effects such as dizziness.
Ingestion: May be fatal and can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

**GHS02 Flame**
Flam. Liq. 2  H225  Highly flammable liquid and vapor.

**GHS08 Health Hazard**
Repr. 2  H361  Suspected of damaging fertility or the unborn child.
STOT RE 2  H373  May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1  H304  May be fatal if swallowed and enters airways.

**GHS07 Exclamation Mark**
Skin Irrit. 2  H315  Causes skin irritation.
STOT SE 3  H336  May cause drowsiness or dizziness.
GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms:

- GHS02
- GHS07
- GHS08

Signal word: Danger

Hazard statements:
- Highly flammable liquid and vapor.
- Causes skin irritation.
- Suspected of damaging fertility or the unborn child.
- May cause drowsiness or dizziness.
- May cause damage to organs through prolonged or repeated exposure.
- May be fatal if swallowed and enters airways.

Precautionary statements:
- If medical advice is needed, have product container or label at hand.
- Keep out of reach of children.
- Read label before use.
- Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- Use explosion-proof electrical/ventilating/lighting/equipment.
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

CLASSIFICATION SYSTEM:

NFPA Ratings (scale 0 - 4)

- Health = 2
- Fire = 2
- Reactivity = 0

HMIS Ratings (scale 0 - 4)

- Health = 2
- Fire = 2
- Physical Hazard = 0

Other Hazards:

Results of PBT and vPvB assessment:  
PBT: Not applicable  
vPvB: Not applicable
SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Ingredient Name</th>
<th>CAS Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), solvent-refined light</td>
<td>64741-84-0</td>
<td>25 - 50</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>2.5 - 10</td>
</tr>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>2.5 - 10</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>≤ 2.5</td>
</tr>
</tbody>
</table>

Notes: Remaining ingredients are not considered OSHA hazardous.

SECTION 4 - FIRST AID MEASURES

Eyes: Flush eyes gently with water for at least 15 minutes, lifting eyelids occasionally; get prompt medical attention.

Skin: Wash thoroughly with soap and water; apply a mild skin cream. Remove contaminated clothing.

Inhalation: Move affected person to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. In case of unconsciousness place patient stably in side position for transportation. Get medical attention.

Ingestion: Rinse out mouth with water. Drink 1 -2 glasses of water but DO NOT INDUCE VOMITING. Do not give liquids to a drowsy, convulsing or unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Get immediate medical attention.

SECTION 5 - FIRE FIGHTING MEASURES (Flash, UEL, LEL for solvent only)

Extinguishing Media: Carbon dioxide, sand, extinguishing powder. Do not use water.

Special Fire-fighting Procedures: Use self-contained breathing apparatus with full face-piece operated in pressure demand with full protective equipment.

Unusual Fire and Explosion Hazards: Any closed container may rupture when exposed to extreme heat. Solvent vapors are heavier than air and travel along the ground. Vapors given off are flammable and may be ignited in air explosively.

Protective Equipment: Coveralls

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Wear protective equipment. Keep unprotected persons away.

Environmental precautions: Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste in accordance with federal state and local regulations. Ensure adequate ventilation.

Reference to other sections:
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
SECTION 7 - HANDLING AND STORAGE

HANDLING:

Precautions for safe handling:
- Avoid prolonged or repeated contact with skin.
- Avoid contact with eyes.
- Wash thoroughly after handling.
- Prevent formation of aerosols.

Information about protection against explosions and fires:
- Keep ignition sources away - Do not smoke.
- Protect against electrostatic charges.
- Keep container closed when not in use.

STORAGE:
- Store in a cool location away from direct heat.
- Store away from oxidizing agents.
- Keep receptacle tightly sealed.
- Store in cool, dry conditions in well-sealed receptacles.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Components With Limit Values That Require Monitoring at the Workplace</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>108-88-3 Toluene (2.5-10%)</strong></td>
</tr>
<tr>
<td><strong>PEL</strong>&lt;br&gt;Long-term value: 200 ppm&lt;br&gt;Ceiling Limit Value: 300: 500* ppm&lt;br&gt;10-min peak per 8-hr shift</td>
</tr>
<tr>
<td><strong>REL</strong>&lt;br&gt;Short-term value: 560 mg/m³, 150 ppm&lt;br&gt;Long-term value: 375 mg/m³, 100 ppm</td>
</tr>
<tr>
<td><strong>TLV</strong>&lt;br&gt;Long-term value: 75 mg/m³, 20 ppm&lt;br&gt;BEI</td>
</tr>
<tr>
<td><strong>67-64-1 Acetone (2.5-10%)</strong></td>
</tr>
<tr>
<td><strong>PEL</strong>&lt;br&gt;Long-term value: 2400 mg/m³, 1000 ppm</td>
</tr>
<tr>
<td><strong>REL</strong>&lt;br&gt;Long-term value: 590 mg/m³, 250 ppm</td>
</tr>
<tr>
<td><strong>TLV</strong>&lt;br&gt;Short-term value: (1782) NIC-1187 mg/m³, (750) NIC-500 ppm&lt;br&gt;Long-term value: (1188) NIC-475 mg/m³, (500) NIC-200 ppm&lt;br&gt;BEI</td>
</tr>
<tr>
<td><strong>13463-67-7 Titanium Dioxide (≤2.5%)</strong></td>
</tr>
<tr>
<td><strong>PEL</strong>&lt;br&gt;Long-term value: 15* mg/m³&lt;br&gt;total dust</td>
</tr>
<tr>
<td><strong>REL</strong>&lt;br&gt;See Pocket Guide App. A</td>
</tr>
<tr>
<td><strong>TLV</strong>&lt;br&gt;Long-term value: (10) NIC-1* mg/m³&lt;br&gt;respirable fraction, NIC-A3</td>
</tr>
</tbody>
</table>
Ingredients With Biological Limit Values:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>BEI</th>
<th>Medium</th>
<th>Time</th>
<th>Parameter</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3 Toluene (2.5-10%)</td>
<td>0.02 mg/L</td>
<td>blood</td>
<td>prior to last shift of workweek</td>
<td>Toluene</td>
<td>0.03 mg/L</td>
</tr>
<tr>
<td></td>
<td>0.03 mg/L</td>
<td>urine</td>
<td>end of shift</td>
<td>Toluene</td>
<td>0.3 mg/g creatinine</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Medium: urine</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Parameter: o-Cresol with hydrolysis (background)</td>
</tr>
<tr>
<td>67-64-1 Acetone (2.5-10%)</td>
<td>50 mg/L</td>
<td>urine</td>
<td>end of shift</td>
<td>Acetone (nonspecific)</td>
<td></td>
</tr>
</tbody>
</table>

Additional Occupational Exposure Limit Values for possible hazards during processing:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>PEL</th>
<th>REL</th>
<th>TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>110-54-3 n-Hexane</td>
<td>Long-term value: 1800 mg/m³, 500 ppm</td>
<td>REL Long-term value: 180 mg/m³, 50 ppm</td>
<td>TLV Long-term value: 176 mg/m³, 50 ppm</td>
</tr>
<tr>
<td></td>
<td>Skin; BEI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110-82-7 Cyclohexane</td>
<td>Long-term value: 1050 mg/m³, 300 ppm</td>
<td>Long-term value: 1050 mg/m³, 300 ppm</td>
<td>Long-term value: 344 mg/m³, 100 ppm</td>
</tr>
<tr>
<td>142-82-5 Heptane</td>
<td>Long-term value: 2000 mg/m³, 500 ppm</td>
<td>Long-term value: 350 mg/m³, 85 ppm</td>
<td>Short-term value: 2050 mg/m³, 500 ppm</td>
</tr>
<tr>
<td></td>
<td>Ceiling limit value: 1800 mg/m³, 440 ppm (15-min)</td>
<td>Long-term value: 1640 mg/m³, 400 ppm</td>
<td></td>
</tr>
</tbody>
</table>

Additional information: The lists that were valid during the creation were used as basis.
EXPOSURE CONTROLS:

General protective and hygienic measures:

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.

Breathing equipment: Not necessary if room is well-ventilated.

Protective gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Nitrile rubber (NBR) or Chloroprene rubber (CR) are sufficient.

Eye protection: Safety glasses with side shields or tightly sealed goggles.

Ventilation: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV. Ventilate during application and curing of this product.

Respiratory Protection: If TLV of the product is exceeded, a NIOSH/MSHA jointly approved air supply respirator is advised in the absence of proper ventilation. OSHA regulations also permit the use of other types of NIOSH/MSHA respirators under specified conditions. See your safety equipment supplier for more information.

Protective Clothing: Wear impervious clothing and shoes.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form: Paste
Color: Gray
Odor: Slight, hydrocarbon
Melting Point: Undetermined
Boiling Point: 60° C (140° F)
Flash Point: -17° C (1° F)
Ignition Temperature: 465.0° C (869° F)
Auto Igniting: Product is not self-igniting
Danger of Explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
Specific Gravity: 1.070
Solubility in Water: Insoluble in water
Organic Solvent Content: 32.5%
Solids Content: 67.5%
VOC: 2.75 LBS/GAL OR 340 G/L
SCAQMD: 332 G/L
Weight per Gallon: 8.93 LBS/GAL
SECTION 10 - STABILITY AND REACTIVITY

Stability: This product is stable.

Thermal Decomposition/Conditions to be Avoided:
No decomposition if used according to specifications.

Possibility of hazardous Reactions:
No dangerous reactions known.

Incompatible materials:
Strong oxidizers, acids, and bases.

Hazardous decomposition Products:
Hydrogen Chloride, oxides of Carbon and Nitrogen under burning conditions.

Conditions to Avoid:
Keep away from heat, spark, open flames and any ignition source.

SECTION 11 - TOXICOLOGICAL INFORMATION

LD/LC50 Values that are relevant for classification:

<table>
<thead>
<tr>
<th>108-88-3 Toluene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>LD50</td>
</tr>
<tr>
<td>5000 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
</tr>
<tr>
<td>LD50</td>
</tr>
<tr>
<td>12124 mg/kg (rabbit)</td>
</tr>
<tr>
<td>Inhalative</td>
</tr>
<tr>
<td>LC50/4h</td>
</tr>
<tr>
<td>5320 mg/l (mouse)</td>
</tr>
</tbody>
</table>

Primary Irritant Effect:
- On the skin: Skin irritant
- On the Eye: Irritating effect. Vapors may be irritating to the eyes.
- Sensitization: No sensitizing effects known.

Additional toxicological information:
- The product shows the following dangers according to internally approved calculation methods for preparations: Harmful; Irritant
- Listed as a carcinogen by the IARC (International Agency for Research on Cancer)

CHRONIC HAZARDS:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain, nervous system, liver or kidney damage and cardiac arrhythmia. INTENTIONAL misuse of this product by deliberately inhaling its vapors may be harmful or fatal.

N-HEXANE can cause peripheral neuropathy (arm and leg damage) and central nervous system damage. Prolonged and repeated exposure has been suggested as a cause of the following effects in lab animals: liver and reproductive abnormalities, kidney, spleen, lung or eye damage.

May aggravate pre-existing disorders of these organs in humans.
May be harmful if absorbed through skin.
Repeated overexposure to TOLUENE may cause liver damage.
Toluene has been found to cause kidney, lung and spleen damage in laboratory animals.
SECTION 12 - ECOLOGICAL INFORMATION

TOXICITY:
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.

BEHAVIOR IN ENVIRONMENTAL SYSTEMS:
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.

ADDITIONAL ECOLOGICAL INFORMATION:
General notes: At present there are no ecotoxicological assessments.
PBT Assessment: Not applicable.
vPvB: Not applicable.

SECTION 13 - DISPOSAL CONSIDERATIONS
Waste Disposal Method: Dispose of following local, state, and federal regulations.

SECTION 14 - TRANSPORT INFORMATION

GROUND TRANSPORT (DOT) - DOMESTIC

Units less than 5 L (1.3 gallons liquid) i.e., 10.3 fl. oz. cartridge
Proper Shipping Name: CONSUMER COMMODITY, LIMITED QUANTITY
Classification: ORM-D
DOT Label Required: ORM-D
Shipping Document: CONSUMER COMMODITY, ORM-D, LIMITED QUANTITY
ERG Code: 171

Units GREATER than 5 L i.e., 50 gal. drum

UN-Number
DOT: UN1133
ADR: 1133

UN proper shipping name
DOT, ADR: Adhesives

Transport Hazard Classes
DOT: CLASS 3 Flammable Liquids
ADR: CLASS 3 FLAMMABLE LIQUIDS

Packing Group: DOT Class III

Environmental hazards: Product contains environmentally hazardous substances: Naphtha (petroleum), solvent-refined light

Marine pollutant: Yes

Symbol (fish and tree)

Special marking (ADR): Symbol (fish and tree)

Special precautions for user Warning: Flammable liquids

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

Transport/Additional information: DOT - Special marking with the symbol (fish and tree).

UN “Model Regulation”: UN1133, Adhesives, ENVIRONMENTALLY HAZARDOUS, 3, II

SECTION 15 - REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE:

SARA Section 355 (extremely hazardous substances): None of the ingredients is listed.

SARA Section 313 (Specific toxic chemical listings): 108-88-3 toluene

TSCA (Toxic Substances Control Act): All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

Proposition 65:

Chemicals known to cause cancer:

- 64741-84-0 Naphtha (petroleum), solvent-refined light (textile spirits)

Chemicals known to cause reproductive toxicity:

- 108-88-3 Toluene
- 64741-84-0 Naphtha (petroleum), solvent-refined light (textile spirits)

(DSL) Canada Domestic Substance List: All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.

Carcinogenity Categories:

EPA (Environmental Protection Agency):

- 108-88-3 Toluene D
- 67-64-1 Acetone D

TLV (Threshold Limit Value established by ACGIH):

- 108-88-3 Toluene A4
- 67-64-1 Acetone A4
MAK (German Maximum Workplace Concentration): None of the ingredients is listed.
NIOSH-Ca (National Institute for Occupational Safety and Health): None of the ingredients is listed.
OSHA-Ca (Occupational Safety & Health Administration): None of the ingredients is listed.

NATIONAL REGULATIONS:
Water hazard class: Water hazard class 3 (Self-assessment) extremely hazardous for water.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16 - OTHER INFORMATION

DISCLAIMER: The information contained herein is based on data available as of the date of preparation of this MSDS and which we believe to be reliable. However, no warranty is expressed or implied regarding the accuracy of the data. We shall not be responsible for the use of this information, or of any product, method or apparatus mentioned. User must make his/her own investigation to determine the suitability of the information or products for his/her particular purpose, for the protection of the environment and the health and safety of the users of this material.

Abbreviations & Acronym:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
DOT: US Department of Transportation
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
Asp. Tox. 1: Aspiration hazard, Hazard Category 1
SARA: The Superfund Amendments and Reauthorization Act
N/A: Not Applicable
N/D: Not Determined
N/Est: Not Established