1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer
NIC Industries, Inc
7050 6th Street
White City, OR 97503

Phone: 541.826.1922
Fax: 541.830.6522
Email: johnw@nicindustries.com
Web: www.nicindustries.com

Product Name: H Series Coatings (Part A)
Revision Date: 11/29/2016
Version: 3.5
Common Name: Heat Curable Polymer-Ceramic Composite Coating
CAS Number: 98-56-6
Chemical Family: HS Code: 3208900000

EMERGENCY CONTACT: CALL PERS: 1-800-633-8253 (USA & Canada) or 001-1-801-629-0667 (International).

The information contained in this Safety Data Sheet (SDS) is, to the best of our knowledge, true and accurate and presented in good faith. NIC Industries, Inc. makes no warranties, expressed or implied, as to the accuracy and adequacy of this information. Because many factors may affect processing or application/use of this product, this data is offered solely for the user's consideration, investigation and verification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or process. Regulatory requirements are subject to change and may differ from one location to another. It is the responsibility of the buyer/user to ensure its activities comply with all local, state and federal regulations.

2 HAZARDS IDENTIFICATION

Route of Entry: Eyes, Ingestion, Inhalation, Skin
Target Organs: Central Nervous System, Kidneys, Liver.
Inhalation: Not expected to be a relevant route of exposure, however under conditions where exposure to vapors or mists is possible, could cause respiratory tract infection.
Skin Contact: May be mildly irritating to the skin. May cause skin sensitization, rashes, exzema, and redness. Prolonged or repeated exposure may aggravate existing conditions.
Eye Contact: May be irritating to the eyes.
Ingestion: Not likely to be a relevant route of exposure, however, ingestion may cause damage to the lining of the gastrointestinal tract.
NFPA: Health = 2, Fire = 2, Reactivity = 1
HMIS III: H^2/F2/PH0

GHS Signal Word:
WARNING

GHS Hazard Pictograms:

GHS Classifications:
- Health, Acute toxicity, 5 Oral
- Health, Acute toxicity, 5 Inhalation
- Health, Respiratory or skin sensitization, 1 Skin
- Health, Skin corrosion/irritation, 3
- Health, Serious Eye Damage/Eye Irritation, 2 B
- Health, Specific target organ toxicity - Repeated exposure, 2

GHS Phrases:
- H303 - May be harmful if swallowed
- H333 - May be harmful if inhaled
- H317 - May cause an allergic skin reaction
- H316 - Causes mild skin irritation
- H320 - Causes eye irritation
- H373 - May cause damage to organs through prolonged or repeated exposure

GHS Precautionary Statements:
- P101 - If medical advice is needed, have product container or label at hand.
- P102 - Keep out of reach of children.
- P201 - Obtain special instructions before use.
- P2010 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
- P233 - Keep container tightly closed.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
- P262 - Do not get in eyes, on skin, or on clothing.
- P271 - Use only outdoors or in a well-ventilated area.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P302+350 - IF ON SKIN: Gently wash with soap and water.
- P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
**FIRST AID MEASURES**

**Inhalation:** Remove to fresh air. If breathing is difficult, have trained person administer oxygen.

**Skin Contact:** Wash thoroughly with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash all clothing before re-use. If irritation persists, seek medical attention.

**Eye Contact:** Immediately flush with water for at least 15 minutes. If irritation persists, seek medical attention.

**Ingestion:** Do not induce vomiting. Seek medical attention immediately.

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**COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredients:

<table>
<thead>
<tr>
<th>Cas #</th>
<th>Percentage</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>98-56-6</td>
<td>70-85%</td>
<td>p-chlorobenzotrifluoride</td>
</tr>
<tr>
<td>*Trade Secret</td>
<td>5-10%</td>
<td>Heat-curable, high-temperature resin(s)</td>
</tr>
<tr>
<td>*Trade Secret</td>
<td>10-20%</td>
<td>Ceramic and/or metallic pigments and colorants</td>
</tr>
<tr>
<td>*Trade Secret</td>
<td>0-1%</td>
<td>Silicone-based rheology modifiers</td>
</tr>
</tbody>
</table>

*In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200(i), the specific chemical identity and/or exact percentage of composition has been withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as significantly hazardous to health or the environment and hence require reporting in this section.
Flammability: Will burn under fire conditions but will not sustain combustion.
Flash Point: CLOSED CUP: 42.8 °C (109.04 °F)
Flash Point Method: Tagliabue
Extinguishing Media:
Carbon dioxide, dry chemical powder, or appropriate foam.

Fire Fighting Procedures:
Evacuate all unnecessary personnel. Shut down motors, pumps, electrical service, and eliminate sources of ignition. Use water spray to cool containers and avoid pressure build-up. Wear self-contained breathing apparatus and full protective clothing.

Fire and Explosion Hazard:
Combustible Liquid. Over-heated containers may rupture.

Sensitivity of Static Charge:
Electrostatic charge may build up during handling. Grounding of equipment is recommended.

Personal Precautions:
Evacuate all unnecessary personnel and eliminate all sources of ignition.

Environmental Precautions:
Contain liquids and prevent discharge into streams and sewers, control or stop the loss of volatile material to the atmosphere. Do not apply water to the spill. Spills should be reported, if required, to the appropriate local, state, or federal agencies.

Small Spills:
Cover with an inorganic absorbent, such as vermiculite, perlite, ground clay, or sand; sweep up, and dispose of appropriately. Clean contaminated area with soap and water.

Large Spills:
Dike to contain and pump into drums for disposal. Add vermiculite absorbent to remaining material (as above).
### Handling Precautions:

- Avoid breathing fumes.
- Avoid bodily contact with material.
- Wear appropriate personal protective equipment (PPE).
- Wash thoroughly after handling.
- Keep away from heat, sparks, pilot lights, welding operations, and open flames.
- Flammable vapors may form explosive mixtures in air.
- Do not eat, drink, or smoke in areas where this material is used.
- Do not get in eyes, clothing, or on skin.
- Do not eat, drink, or smoke in areas where this material is used.
- This material is not rated as flammable; however, caution is recommended as solvents contained in certain H-Series formulations are considered flammable.
- Ground all equipment and use non-sparking tools.

### Storage Requirements:

- Isolate, vent, drain, wash and purge systems or equipment before maintenance or repair.
- Clean spills immediately.
- Avoid vapor formations and use with adequate ventilation. Vapors are heavier than air and will tend to collect in low areas. Avoid use in confined spaces. Areas of poor ventilation could contain concentrations high enough to cause unconsciousness and death. Use approved air respirator following manufacturer's recommendations where vapors may be generated.
- Avoid shock and friction.
- Do not allow cross-contamination, and keep away from incompatible materials.
- Do not store near food or drinks.
- Avoid excessive aging.
- Store in accordance with local regulations.

### Exposure Controls/Personal Protection

#### Engineering Controls:

General room ventilation plus local exhaust at points of emission to maintain levels of airborne contaminates below exposure limits.

#### Personal Protective Equipment:


### Appropriate Hygienic Practices:

- Avoid contact with eyes, skin, and clothing. Avoid breathing vapors, fumes, and mists. Avoid prolonged or repeated exposure. Wash thoroughly after handling, and before eating, drinking or smoking.
- If mists or aerosols are generated during handling wear a respirator equipped with an organic vapor cartridge.

### Other:

Emergency shower and eyewash facility should be in close proximity.
## PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Color varies with product number.</td>
</tr>
<tr>
<td>Physical State:</td>
<td>Viscous Liquid</td>
</tr>
<tr>
<td>Spec Grav./Density:</td>
<td>Varies with color: 1.34 - 1.353 (Water = 1)</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>Varies with product number.</td>
</tr>
<tr>
<td>Flammability:</td>
<td>Flammable (Will burn under fire conditions)</td>
</tr>
<tr>
<td>Odor:</td>
<td>Slight (less than 1ppm)</td>
</tr>
<tr>
<td>Solubility:</td>
<td>Solubility in Water: Negligible</td>
</tr>
<tr>
<td>Percent Volatile:</td>
<td>100% (w/w)</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>42.8 C (109.04 F)</td>
</tr>
<tr>
<td>VOC:</td>
<td>Exempt</td>
</tr>
<tr>
<td>Auto-Ignition Temp:</td>
<td>500 C (932 F)</td>
</tr>
</tbody>
</table>

Exposure Limits:
OSHA: None Established
PEL (Permissible Exposure Limit): No exposure standard allocated.
ACGIH TLV (Threshold Limit Value): None established.

## STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability:</td>
<td>Stable</td>
</tr>
<tr>
<td>Conditions to Avoid:</td>
<td>Extreme temperatures, moisture, vapor formation and sources of ignition.</td>
</tr>
<tr>
<td>Materials to Avoid:</td>
<td>Strong oxidizing agents, strong acids, water and alkalines.</td>
</tr>
<tr>
<td>Hazardous Decomposition:</td>
<td>Chlorine-containing gases, fluorine-containing gases may be preserved in products containing p-chlorobenzotrifluoride, Carbon dioxide and silicon oxides may be produced from all coating formulations.</td>
</tr>
<tr>
<td>Hazardous Polymerization:</td>
<td>Will not occur.</td>
</tr>
</tbody>
</table>
TOXICOLOGICAL INFORMATION

GENERAL INFORMATION:
Acute oral toxicity: Low toxicity, LD50 > 2000 mg/kg
Acute dermal toxicity: Low toxicity, LD50 > 2000 mg/kg

COMPONENTS:
H-Series (Part A) Resin; Trade Secret: Heat-Curable, High-Temperature resin(s)

H-SERIES SUPPLEMENTAL INFORMATION:
Contains < 11 wt% Cr(III) oxide-based pigments.

Toxicity information for chromium (III) oxide-based pigments:
Acute toxicity (Oral LD50) >/= 5.41 mg/l (dust/mist).

Carcinogenic Effects:
NTP: Not Listed
ACGIH: A4 - Not classifiable for human or animal.
IARC: 3 - Not classifiable for human.
OSHA: Not Listed.

NOTE: NTP, IARC and ACGIH found that "there is sufficient evidence for the carcinogenicity of chromium and certain chromium compounds both in humans and experimental animals." The chromium compounds that are considered carcinogenic are hexavalent chromium compounds [Cr(VI)]. The chromium oxide-based pigments present in the NIC products listed above are all trivalent, refractory chromium compounds [Cr(III)], each containing 1ppm or less of leachable hexavalent chromium (<- 0.0001%). The toxicity information stated above are for Cr(III) oxide-based C.I. Pigments as stated in SDS's provided by the pigment suppliers.

Mutagenic Effects:
Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause damage to the following organs: upper-respiratory tract, skin.

REGULATION: US, IARC Monographs on Occupational Exposures to Chemical Agents.

REMARKS:
U.S. IARC Monographs on Occupational Exposures to Chemical Agents: Not classified by the International Agency for Research on Cancer (IARC).

SENSITIZATION: May cause skin sensitization.

CARCINOGENICITY: Recent 2-year bioassays in rats and mice exposed by the dermal route to H-Series (Part A) Resin type compositions yielded NO EVIDENCE of carcinogenicity to the skin or any other organs.

MUTAGENICITY: Inactive when tested by vivo mutagenicity assays.

POTENTIAL HEALTH EFFECTS:
Inhalation: Not expected to be a relevant route of exposure; however, under conditions where exposure to vapors or mists is possible, could cause respiratory tract irritation.
Skin: May be mildly irritating to the skin.
May cause skin sensitization.

Eyes: May be mildly irritating to the eyes.

Ingestion: Not likely to be a relevant route of exposure.

COMPONENTS:

TRADE SECRET: Ceramic and/or metallic pigments and colorants.

REGULATIONS:
NTP Carcinogen: No
IARC Monographs: No
OSHA Regulated: No

Not known to contain any ingredients recognized as carcinogens by the National Toxicology Program (NTP), the International Agency for Cancer Research or the Occupational Safety and Health Administration (OSHA).

SENSITIZATION: May cause an allergic skin reaction.

CARCINOGENICITY: Not listed as a carcinogen by NTP.

POTENTIAL HEALTH EFFECTS: No human studies have been conducted with this material. The use of recommended protective equipment should prevent any adverse effects.

Inhalation: May cause irritation of the respiratory tract. Prolonged or repeated exposure may cause lung damage.

Skin: May be mildly irritating to the skin.

Eyes: Dust may cause irritation and inflammation.

Ingestion: Not likely to be a relevant form of exposure.

ECOLOGICAL INFORMATION

Ecotoxicity Effects:
Toxicity to fish: Acute LC 50 1.3 mg/l Fish 96h
203 Fish, Acute Toxicity Test.
Acute LC 50 > 11 mg/l Aquatic plants/Algae 72h

Ceramic and/or metallic pigments and colorants:
Oral LD50, rat: 200-2000 mg/kg
Skin irritation, rabbit; severe erythema with signs of necrosis after 1-hour exposure.
**DISPOSAL CONSIDERATIONS**

Do not mix this product with aqueous or other protic waste streams. Incineration of combustible waste material in a permitted facility in accordance with the local, state and federal regulations is the recommended disposal method.

This product is not regulated by the EPA. It is the waste generator's responsibility to determine how disposal must occur. Disposal should be made in accordance with federal, state and local regulations. Minimize or avoid the generation of waste whenever possible. Dispose of waste, unused material and empty containers in a licensed facility.

DO NOT DISCHARGE INTO DRAINS, SURFACE WATERS OR GROUNDWATER.

**TRANSPORT INFORMATION**

DOT Class: Not regulated
US DOT: Not Regulated for Transport
IATA: Not Regulated for Transport
ICAO: Not Regulated for Transport

(p-chlorobenzotrifluoride does not sustain combustion as determined by ASTM D 4206. It is therefore excepted from classification as a flammable liquid (see 49 CFR 173.20(a)(3))

**REGULATORY INFORMATION**

NIC Industries, Inc. coatings meet all air quality and regulatory requirements with respect to manufacturing and application. Specifically the hardened finished product does not release any "volatile organic compounds" (VOC) under any ambient conditions.

TSCA: All components of this product that are required to be on the TSCA Inventory are listed on the Inventory.

SARA/TITLE III HAZARD CATEGORIES:
Immediate (Acute) Health: YES
Delayed (Chronic) Health: YES
Sudden Release of Pressure: NO
Fire Hazard: YES
Reactive Hazard: NO

CERCLA: Hazardous Substances: tert-Butyl acetate: 5000 lbs. (2268 kg):
Parachlorobenzotrifluoride was designated by the Interagency Testing Committee for action by the EPA under Section 4(e) of the Toxic Substance Control Act. As a result of data submitted under a negotiated testing program, the EPA subsequently concluded that the information provided adequately characterized the Health, Environmental and Chemical fate effects of parachlorobenzotrifluoride and issued a decision not to require further testing.

Other Regulations:
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 20-2.681-1).

STATE REGULATIONS: Consult local laws for applicability:
California Proposition 65 Warnings:
California prop. 65. This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

INTERNATIONAL REGULATIONS: Consult the regulations of the importing country.

Canada: WHMIS Hazard Class: B3
Australia: Listed on AICS
Philippines: Listed on National Inventory (PICCS).
China: Listed on National Inventory.
Japan: Listed on National Inventory (ENCS).
Korea: Listed on National Inventory (PICCS).

DSCL (EEC):
R37/38-Irritating to respiratory system and skin.
R41-Risk of serious damage to eyes.

COMPONENT / (CAS/PERC) / CODES

*Chromium (III) oxide (1308309 n/a/%) MASS, TSCA.
Parachlorobenzotrifluoride (98-56-6 70-85%)

REGULATORY KEY DESCRIPTIONS

TSCA = Toxic Substances Control Act
CERCLA = Superfund clean up substance
CSWHS = Clean Water Act Hazardous substances
MASS = MA Massachusetts Hazardous Substances List
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TXAIR = TX Air Contaminants with Health Effects Screening Level

U.S. TOXIC SUBSTANCES CONTROL ACT: All components of this product are on the TSCA Inventory or are exempt from the TSCA Inventory requirements under 40 CFR 720.30.

16 OTHER INFORMATION

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

U.S. Federal Regulations:

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to all your employees.

NON-WARRANTY: The information presented in this publication is based upon the research and experience of NIC Industries, Inc. No representation or warranty is made, however, concerning the accuracy or completeness of express or
implied, including without limitation any warranty of merchantability or fitness for any particular purposes, and no warranty or representation shall be implied by law or otherwise. Any products sold by NIC Industries, Inc. are not warranted as suitable for any particular purpose to the buyer. The suitability of any products for any purpose particular to the buyer is for the buyer to determine. NIC Industries, Inc. assumes no responsibility for the section of products suitable to the particular purposes of any particular buyer. NIC Industries, Inc shall in no way be liable for any special, incidental, or consequential damages.
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Phone: 541.826.1922
Email: johnw@nicindustries.com
Web: www.nicindustries.com

Product Name: H Series Coatings (Part B)
Revision Date: 11/29/2016
Version: 3.5
Product Code: H-Series Coating Catalyst
Chemical Family: HS Code: 3208900000

Emergency Contact: Call PERS: 1-800-633-8253 (USA and Canada) or 001-801-629-0667 (International).

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2 HAZARDS IDENTIFICATION

Route of Entry: Inhalation, Ingestion, Skin, Eyes.
Target Organs: Central Nervous System, Kidneys, Liver.
Inhalation: May cause irritation to the respiratory system and breathing difficulties.
Skin Contact: Causes moderate skin irritation. May cause severe skin burns, rashes, eczema and redness. Prolonged or repeated exposure may aggravate existing conditions.
Eye Contact: Causes severe eye irritation and severe eye damage.
Ingestion: Harmful if swallowed. Ingestion may cause damage to the lining of the gastrointestinal tract.
NFPA: Health = 2, Fire = 2, Reactivity = 1
HMIS III: H*2/F2/PH1

GHS Signal Word: WARNING

GHS Hazard Pictograms:

GHS Classifications:
- Health, Specific target organ toxicity - Single exposure, 2
- Health, Specific target organ toxicity - Repeated exposure, 2
- Health, Serious Eye Damage/Eye Irritation, 2 B
- Health, Specific target organ toxicity - Single exposure, 3
- Health, Acute toxicity, 5 Dermal
- Health, Respiratory or skin sensitization, 1 Skin
- Health, Acute toxicity, 5 Oral

GHS Phrases:
- H371 - May cause damage to organs
- H373 - May cause damage to organs through prolonged or repeated exposure
- H320 - Causes eye irritation
- H335 - May cause respiratory irritation
- H313 - May be harmful in contact with skin
- H317 - May cause an allergic skin reaction
- H303 - May be harmful if swallowed

GHS Precautionary Statements:
- P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
- P211 - Do not spray on an open flame or other ignition source.
- P232 - Protect from moisture.
- P240 - Ground/bond container and receiving equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
- P262 - Do not get in eyes, on skin, or on clothing.
- P264 - Wash hands thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P281 - Use personal protective equipment as required.
P284 - Wear respiratory protection.
P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+352 - IF ON SKIN: Wash with soap and water.
P303+361+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P304 - IF INHALED: Seek immediate medical attention.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 - IF IN EYES: Seek immediate medical attention.
P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do.
P306+360 - IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P313 - Get medical advice/attention.
P322 - If skin irritation occurs: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P364+380 - In case of fire: Evacuate area.
P370 - IF INHALED: Use CO2, dry chemical powder, foam, alcohol foam or water spray for extinguition.
P370+380 - In case of fire: Evacuate area.
P374 - Fight fire with normal precautions from a reasonable distance.
P380 - If skin irritation occurs: Get medical advice/attention.
P402 - Store in a dry place. Store in a closed container.
P403+233 - Store in a well ventilated place. Keep container tightly closed.
P403+235 - Store in a well ventilated place. Keep cool.
P410+403 - Protect from sunlight. Store in a well ventilated place.
P420 - Store away from other materials.
P501 - Dispose of contents/container to licensed waste facility.
P102 - Keep out of reach of children.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

<table>
<thead>
<tr>
<th>Cas #</th>
<th>Percentage</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Trade Secret</td>
<td>100%</td>
<td>Metal-modified organic base</td>
</tr>
</tbody>
</table>

*In compliance with OSHA Hazard Communication Standard 29 CFR 1910.1200(i), the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a Trade Secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as significantly hazardous to health or the environment and hence require reporting in this section.

4 FIRST AID MEASURES

Inhalation: Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If breathing stops, have trained person administer artificial respiration. Maintain an open airway. Loosen tight clothing. Seek immediate medical attention.

Skin Contact: Remove all contaminated clothing and shoes. Wash thoroughly with soap and water for at least 15 minutes. Wash all clothing before re-use. If symptoms develop, seek medical attention.

Eye Contact: Remove any contact lenses. Immediately flush with water for at least 15 minutes, forcibly holding eyelids apart. Seek immediate medical attention.

Ingestion: Rinse mouth out and then drink plenty of water. Moved exposed person to fresh air and keep at rest. Only induce vomiting at the instruction of medical personnel. Vomiting may be dangerous. Keep head low so vomit does not enter the lungs. Never induce vomiting or give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention.
5  FIRE FIGHTING MEASURES

Flammability: Combustible Liquid Formulation
Flash Point: Not Available

Extinguishing Media:
Carbon dioxide, dry chemical powder, foam or alcohol foam.

Fire Fighting Procedures:
Evacuate all unnecessary personnel. Shut down motors, pumps, electrical service, and eliminate sources of ignition if safe to do so. Use water spray to cool containers and avoid pressure build-up (do not allow water to mix with product). If fire occurs, isolate area, contain and eliminate fire, then dispose of debris in accordance with official regulations. Stay upwind of material at all times. Wear butyl rubber boots, gloves and body suit with SCBA. May generate toxic and irritating combustion products. Use DOT Response Guide #153.

Contains possibly combustible materials. Over-heated containers may rupture. Vapors may travel a significant distance to a source of ignition and flash back.

Sensitivity of Static Charge:
Electrostatic charge may build up during handling. Grounding of equipment is required.

6  ACCIDENTAL RELEASE MEASURES

Personal Precautions:
Evacuate all unnecessary personnel and surrounding areas, and eliminate all sources of ignition if safe to do so. Wear proper personal protective equipment, especially a self-contained breathing apparatus. Do not touch or walk through spilled material. Provide adequate ventilation and avoid breathing vapors.

Environmental Precautions:
Contain liquids and prevent discharge into streams, soil, waterways, drains and sewers. Control or stop the loss of volatile material to the atmosphere. Do not apply water to the spill. Spills should be reported to the appropriate local, state, or federal agencies. In case of major release or road spill notify PERS: 1-800-633-8253 (USA and Canada) or 001-1-801-629-0667 (International).

Remove all sparking devices or ignition sources. Stop leak if without risk. Move containers from spill area. Approach spill from upwind. Cover with an inorganic absorbent, such as vermiculite, perlite, ground clay, or sand; sweep up, and dispose according to local, state and federal regulations. Contaminated absorbent may pose the same hazard as spilled material does. Use spark proof tools and explosion proof equipment. Dispose of via a licensed waste disposal contractor.

7  HANDLING AND STORAGE

Handling Precautions:
This material is not rated as flammable.
Avoid vapor formations and use with adequate ventilation.
Avoid breathing fumes.
Vapors are heavier than air and will tend to collect in low areas. Avoid use in confined spaces.
Avoid bodily contact with material.
Wear appropriate personal protective equipment.
Wash thoroughly after handling, avoid contact with eyes.
No eating, drinking or smoking near areas where substance is handled, processed or stored.
Ground coating equipment and containers at all times.
Use non sparking tools.
Isolate, vent, drain, wash and purge systems or equipment before maintenance or repair.
Clean spills immediately.

Storage Requirements:
Keep away from heat and all sources of ignition.
Avoid moisture and extreme temperatures.
Avoid moisture and static electricity discharges.
Avoid shock and friction.
Store in a cool, dry area away from direct sunlight (do not store in temperatures below 50F or above 77F), avoid freezing.
Do not allow cross-contamination, and keep away from incompatible materials.
Keep tightly closed when not being used.
Label all containers appropriately.
Do not reuse containers.
Do not store near food or drinks.
Avoid excessive aging.
Store in accordance with local regulations.

**EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Engineering Controls:**
Adequate room ventilation plus local exhaust at points of emission to maintain levels of airborne contaminants below exposure limits. Assure ACGIH TWA and OSHA PEL limits (varies by product) are maintained. Use of fume hoods or closed booths required when product is used in a manner that may generate mist or aerosol.

**Personal Protective Equip:**
HMIS PP, H | Splash Goggles, Gloves, Apron, Vapor Respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times. Solvent resistant (neoprene, nitrile or other nonporous) recommended.

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Chemical splash safety glasses should be worn at a minimum.

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Impervious work clothing such as long sleeves, long pants, lab coat, chemical boots and chemical resistant (solvent resistant) apron recommended.

Emergency shower and eyewash facility should be in close proximity. Employ proper hygienic measures after working with material and before eating, smoking or using the lavatory. Fully wash any contaminated clothing.

Emissions from ventilation or work process equipment should be checked to ensure they comply with the regulations of environmental protection legislation.

Completely isolate and thoroughly clean all equipment, piping or vessels with a solvent before beginning maintenance or repairs.

**PHYSICAL AND CHEMICAL PROPERTIES**

- **Appearance:** Liquid that varies in color from yellow-orange to dark orange
- **Physical State:** Liquid
- **Spec Grav./Density:** 1.02/1.07 g/cm³
- **Odor:** Ammoniacal
- **VOC:** Exempt

**STABILITY AND REACTIVITY**

- **Stability:** Stable.
- **Conditions to Avoid:** None known.
- **Materials to Avoid:** Strong oxidizing agents, strong acids, strong alkaline materials, alcohols, amines, water, moisture and contact with other unpolymerized monomers or polymers.
- **Hazardous Decomposition:** May contain carbon monoxide, carbon dioxide, nitrogen oxide(s), corrosive gases/vapours, hydrogen, ammonia and hydrocarbons.
Hazardous Polymerization: Will not occur.

**TOXICOLOGICAL INFORMATION**

NTP Carcinogen: No  IARC Monographs: No  OSHA Regulated: No

Not known to contain any ingredients recognized as carcinogens by the National Toxicology Program (NTP), the International Agency for Cancer Research (IARC) or the Occupational Safety and Health Administration (OSHA).

Contains materials that are believed to be possible skin sensitizers. Contains materials harmful to eyes and skin with an LD50 Oral rating of > 200-2,000 mg/kg.

**ECOLOGICAL INFORMATION**

Water hazard class 2: Avoid disposal in landfills and sewage systems. Avoid release into water sources. Product has not been tested for environmental effects.

**DISPOSAL CONSIDERATIONS**

This product is not regulated by the EPA. It is the waste generator's responsibility to determine how disposal must occur. Disposal should be made in accordance to federal, state, and local regulations. Minimize or avoid the generation of waste whenever possible. Dispose of waste, unused material and empty containers in a licensed facility. Do not discharge into drains, surface waters or groundwater.

**TRANSPORT INFORMATION**

DOT Class: Not regulated

US DOT: Not Regulated for Transport

IATA: Not Regulated for Transport

ICAO: Not Regulated for Transport

**REGULATORY INFORMATION**

HCS Classification: Not Regulated.

U.S. Federal Regulations: TSCA All components are listed or exempted.

SARA 302/304/311/312: No products found.

This product contains no toxic chemicals subject to the reporting requirements of SARA 313.

California Proposition 65:

This product contains no chemicals known to the state of California to cause cancer and birth defects, or other reproductive harm.

Canadian DSL Inventory Status: This product may contain materials not listed on the Canadian DSL but listed on the Canadian NDSL.

**OTHER INFORMATION**

U.S. Federal Regulations:

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of
hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you (as it is your legal duty to) make all information in this Safety Data Sheet available to all your employees.

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