Section 1
Identification

Chemical Product Name/Identifier
SKYBOND® 7621 Polyimide Resin

CAS Number
Mixture

Trade Names and Synonyms
Solution of aromatic polyimide precursor in ethanol, xylene, and n-methyl pyrrolidone (NMP)

Recommended Use and Restrictions on Use
Polyimide Resin

Company Information
Industrial Summit Technology Corporation
250 Cheesequake Road
Parlin, NJ 08859

Telephone
Product and Sales Information: 732-238-2211

Emergency Phone
CHEMTREC: 1-800-424-9300

Section 2
Hazards Identification

OSHA HCS Status
This product is a hazardous chemical, as defined by OSHA at 29 CFR 1910.1200. Hazards identified are based on hazards of the ingredients.

Relevant Route of Exposure/Target Organs
Dermal, Eyes, Inhalation, Respiratory System

OSHA/GHS Signal Word and Hazard Statements
DANGER: Flammable liquid and vapor. Causes skin irritation. Causes eye irritation. Toxic in contact with skin. May cause an allergic skin reaction. Suspected of causing genetic defects. May damage fertility of the unborn child. Causes damage to organs (respiratory system). May damage organs (liver, kidney, blood) through prolonged or repeated exposure. Harmful if inhaled. Toxic if swallowed. May be fatal if swallowed and enters airways. May cause cancer. Harmful to aquatic life with long lasting effects.

OSHA/GHS Classification and Pictograms
Flammable liquid (Category 3) H226
Acute toxicity, inhalation (Category 3) H331
Acute toxicity, oral (Category 3) H302
Acute toxicity, dermal (Category 3), H311
Skin irritation (Category 2) H315
Eye irritation (Category 2A) H319
Skin sensitization (Category 1) G370
Germ cell mutagenicity (Category 2) H341
Aspiration hazard (Category 1), H304
Carcinogenicity (Category 2) H351
Reproductive toxicity (Category 1B) H360
Specific target organ toxicity - single exposure (Category 3, respiratory system) H335
Specific target organ toxicity - repeated exposure (Category 2, liver) H373
Acute aquatic toxicity (Category 2) H401
Chronic aquatic toxicity (Category 2) H411

For the full text of the H-Statements mentioned in this Section, see Section 16

OSHA/GHS Precautionary Statements

Prevention
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Wear protective gloves/eye protection/face protection specified in Section 8. Wash hands and exposed skin thoroughly after handling. Wear protective gloves, eye and face protection. Avoid breathing mist, vapors, and spray. Use only outdoors or in well-ventilated area. Obtain special instructions before use. Contaminated work clothing must not be allowed out of the workplace.

Response
In case of fire: Use water spray, foam, dry chemical, carbon dioxide, or any Class B extinguishing agent. If exposed or concerned: get medical advice/attention.
If on skin (or hair): Take off immediately all contaminated clothing and wash it before reuse. Wash skin with plenty of water/shower. Specific treatment: see Section 4 for First Aid instructions. If skin irritation or rash occurs: Get medical advice/attention. Call a poison center/doctor if you feel unwell.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. Rinse mouth.
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

Storage

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

GHS Hazard and Precautionary Statement Codes
See Section 16.

---

Section 3
Composition/Information on Ingredients

Chemical Product Name
SKYBOND® 7621 Polyimide Resin

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-methyl-2-pyrrolidone</td>
<td>872-50-4</td>
<td>17</td>
</tr>
<tr>
<td>1,2-Benzenedicarboxylic acid, 4,4'-carbonylbis-ar, ar'-diethyl ester,</td>
<td>65701-07-7</td>
<td>56.7</td>
</tr>
<tr>
<td>compd with 1,3-benzenediamine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>13</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>2.5</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>1.3</td>
</tr>
<tr>
<td>1,3 -Diaminobenzene (m-phenylenediamine)</td>
<td>108-45-2</td>
<td>13</td>
</tr>
</tbody>
</table>

Section 4
First-Aid Measures

Skin Contact
Immediately was skin with soap and water. Remove contaminated clothing. Get medical attention. Wash contaminated clothing before reuse.

Eye Contact
Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Inhalation
Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get medical attention. Remove material from eyes, skin, and clothing.
Ingestion
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most Important Symptoms/Effects
Skin and eye irritation. May cause respiratory irritation or distress. May cause cancer and damage fertility or the unborn child. Repeated or prolonged contact may cause allergic skin reaction in some people. May cause liver damage.

Indication of Immediate Medical Attention and Special Treatment Needed
Get medical attention immediately if product comes into contact with skin or eyes, or if it is inhaled or ingested.

Section 5
Fire-Fighting Measures

Extinguishing Media
water spray, foam, dry chemical, carbon dioxide, or any Class B extinguishing agent.

Hazardous Combustion Products
Oxides of carbon produced when burned.

Protective Equipment
Firefighters and others who may be exposed to products of combustion (see Hazardous Decomposition Products in Section 10) should be equipped with self-contained breathing apparatus and full protective gear. Equipment should be thoroughly decontaminated after use.

Fire Fighting Procedures/Precautions
Keep away from heat/sparks/open flames/hot surfaces. Keep personnel removed and upwind of fire. Closed containers exposed to heat may build up pressure. Use water spray to keep exposed containers and equipment cool. Use water spray to cool containers and tanks.

Section 6
Accidental Release Measures

Personal Precautions
Review Firefighting Measures and Handling sections before proceeding with clean up. Take precautions to avoid eye, skin, and respiratory exposure. Should exposure occur, see Section 4 for first aid measures. Flammable vapors can accumulate in low areas and form explosive concentrations.

Protective Equipment
Use appropriate personal protective equipment during clean up. See Section 8.

Emergency Procedures
Maintain adequate ventilation. Shut off all sources of ignition. No heat, sparks, or flame in the area.
Methods/Materials for Containment and Cleaning Up
Dike spill. Remove sources of sparks, flame, or hot surfaces. Absorb spill with commercial absorbent material and place in suitable containers for disposal. Dispose of as hazardous waste (see section 13). Do not discharge into waterways or sewer systems without proper authority. Dispose of in accordance with government regulations.

Section 7
Handling and Storage

Precautions
Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Keep away from heat, sparks and flames.

Storage
Keep container in a cool place. Store below 50 C (122 F). Keep container tightly closed. Store in accordance with National Fire Protection Association recommendations.

NFPA Rating
Health: 2
Flammability: 3
Reactivity: 0

Section 8
Exposure Controls/Personal Protection

Exposure Limits

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>OARS/WEEL**</th>
<th>I.S.T/AEL*</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-methyl-2-pyrrolidone</td>
<td>NA</td>
<td>NA</td>
<td>10 ppm 8 hr TWA</td>
<td>25 ppm 8 hr TWA</td>
</tr>
<tr>
<td>1,2-Benzenedicarboxylic acid, 4,4'-carbonylbis-( ar,) ar'-diethyl ester, compd with with 1,3-benzenediamine</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Xylene</td>
<td>100 ppm 435 mg/m3</td>
<td>100 ppm 150 ppm STEL</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100 ppm 435 mg/m3</td>
<td>20 ppm 125 STEL</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
Table showing the concentration of chemicals:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>AEL (ppm)</th>
<th>STEL (ppm)</th>
<th>TWA (mg/m3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>125</td>
<td>1000</td>
<td>1900</td>
</tr>
<tr>
<td>1,3-Diaminobenzene (m-phenylenediamine)</td>
<td>NA</td>
<td>0.1</td>
<td>NA</td>
</tr>
</tbody>
</table>

* AEL is I.S.T's acceptable limit. Where governmentally imposed occupational exposure limits, which are lower than the AEL are in effect, such shall take precedence.

** Occupational Alliance for Risk Science, workplace environmental exposure level.

** Engineering Controls
Use ventilation that is adequate to keep employee exposure to airborne concentrations below recommended exposure limits. Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits (see section 6 above). If practical use, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult NFPA Standard 91 for design of exhaust system.

** Personal Protection Measures/Equipment

** Skin Protection
Wear appropriate chemical resistant gloves and clothing to prevent skin contact. Consult glove manufacturer to determine appropriate type of glove for given application. Wear chemical safety goggles, a face shield and a chemical resistant apron when splashing is likely. Wash immediately if skin is contaminated. Remove contaminated clothing promptly and launder before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash hands and exposed skin thoroughly after handling. Repeated or prolonged contact may cause allergic skin reaction in some people.

** Eye Protection
Wear eye and face protection. Wear chemical goggles that meet ANSI Z87 standards and/or are tested and approved under appropriate government standards. Eyewash stations should be easily accessible.

** Respiratory Protection
Avoid breathing vapor and/or mist. Use NIOSH/MSHA approved respiratory protection equipment (full face piece recommended) when airborne exposure limits (see below) are exceeded. If used, full face piece replaces need for face shield and chemical goggles. Consult respirator manufacturer to determine the appropriate type of equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 CFR 1910.134.

** Section 9
** Physical and Chemical Properties

** Appearance (physical state, color, etc.)
Brown viscous liquid
Odor
Amine-like

Odor Threshold
Not known

pH
Not known

Melting Point/Freezing Point
Not known

Initial Boiling Point
Not known

Flash Point
76°F

Evaporation Rate
Not known

Flammability
Flammable liquid

Upper/Lower Flammability or Explosive Limits
Not known

Vapor Pressure
24 mm Hg

Vapor Density
2.7

Relative Density/Specific Gravity
1.13 – 1.16

Solubility
Slight in water

Partition Coefficient
Not known

Auto-ignition Temperature
Not known

Decomposition Temperature
Section 10
Stability and Reactivity

Reactivity
Not known

Chemical Stability
Not known

Hazardous Reactions
Not known

Conditions to Avoid

Incompatible Materials
Strong oxidizing agents, strong alkali

Hazardous Decomposition Products
Carbon monoxide, nitrogenous products

Hazardous Polymerization
Does not occur

Section 11
Toxicological Information

Relevant Route of Exposure/Target Organs
Dermal, Eyes, Inhalation, Respiratory System

**Symptoms**
Causes skin irritation. Causes serious eye irritation. Toxic if inhaled. May cause respiratory tract irritation. May damage fertility or the unborn child.

**Delayed and Immediate Effects**

**Eye effects**
N-methyl-2-pyrrolidone
Eye contact with the liquid or vapor may initially result in irritation with discomfort, tearing, or blurring of vision. Low vapor concentrations caused eye irritation in some individuals.

**Skin effects**
Skin contact may initially result in irritation with discomfort or rash.

N-methyl-2-pyrrolidone
Human experience has demonstrated severe dermatitis (blistering, cracking, edema, redness) upon prolonged or repeated skin contact. There are inconclusive or unverified reports of human sensitization.

**Respiratory effects**
Inhalation may result in irritation of the upper respiratory passages, with coughing, discomfort and headache.

**Health Effects Summary**

**Chronic Effects (Following Short and Long Term Exposure)**
The following information summarizes experience and results of scientific investigations reviewed by health professionals for hazard evaluation of SKYBOND® 7621 polyimide resin and development of Precautionary Measures and Occupational Control Procedures recommended in this document. Industrial Summit Technology Corp has not conducted studies on SKYBOND® 7621 polyimide resin and no data was obtained in a search of the available scientific literature. However, toxicity information is available on representative polyimide resins.

Inhalation and skin contact are expected to be the primary routes of occupational exposure of SKYBOND® 7621 Polyimide Resin.

Occupational exposure to this material has not been reported to cause significant adverse human health effects. However, SKYBOND® 7621 polyimide resin is considered to cause severe eye irritation based on animal studies. The organic solvents described below, have been reported to cause eye, skin and respiratory tract irritation and may contribute to the health effects of this material. These solvents also posses narcotic-like properties; excessive exposure may result in headache, dizziness, in coordination, nausea, loss of appetite and loss of consciousness.

**Toxicological Data**
Single exposure (acute) animal studies conducted on representative polyimide resins indicate that these materials are slightly toxic or practically nontoxic orally (rats) and practically nontoxic after skin application (rabbits). They range from practically nonirritating to moderately irritating to rabbit skin and moderately irritating to corrosive to rabbit eyes.
Data from Industrial Summit Technology Corporation, studies, and from the available scientific literature on the components of SKYBOND® 7621 polyimide resin which have been identified under the criteria of the OSHA Hazard Communication standard (29 CFR 1910.1200) are discussed below.

Meta-phenylendianiline (m-PDA)
Meta-phenylenediamine (m-PDA) is used in the production of this polyimide resin. Single-dose (acute) animal studies indicate that m-PDA is moderately toxic orally (rats) and inhalation (rats) and slightly toxic after skin application (rabbits). It is moderately irritating to rabbit eyes and skin. Allergic skin reactions have been reported in various laboratory animals repeated skin application tests. Rats given this material orally for 90 days showed increased liver and kidney weights and liver damage.

No significant increase in tumors were reported in a drinking water study (mice, 78 weeks), skin painting study (mice 24 months), or long term feeding study (rats, mice). No birth defects were reported in rats given this material orally during pregnancy, even at levels which produced toxic effects to the mother.

Adverse genetic effects have been reported in standard tests using bacterial and animal cells. Both positive and negative genetic changes were reported in standard tests using animals. No adverse genetic changes were reported in standard tests with human cell cultures and insects.

n-Methyl Pyrrolidone (NMP)
Human experience indicates that continued or gross skin contact with NMP produces irritation, redness, and defatting of the skin. Inhalation of very high concentrations of NMP may result in headache, giddiness, nausea, and mental confusion. Repeated dosing of laboratory animals with NMP has been reported to cause changes in organ weights and blood composition, reduced response to sound, and breathing difficulty at a dosage which produced death. No skin allergy was observed in guinea pigs following repeat skin exposure. Long-term inhalation (2 years) of NMP produced no increase in tumors in rats and NMP did not show Tumor initiating activity in a mouse skin painting study. Birth defects were reported following dermal application of MP to rats at amounts which produced adverse effects on the mother and following intraperitoneal injection in two strains of mice. No birth effects were reported in rats exposed to NMP by inhalation. No effects were seen on the ability of rats to reproduce when exposed to NMP for two successive generations, although toxic effects were reported in offspring at levels which produced adverse effects on the mother. NMP has produced no genetic changes in standard tests using animal and bacterial cells.

Xylene
Swallowing of xylene may cause digestive tract irritation. Although xylene exists in different structural forms, single-dose studies using a mixture of these forms indicate that xylene is slightly toxic orally (rats) and after skin application (rabbit). It is slightly irritating to the eyes of rabbits and severely irritating to the skin of rabbits. No mortality occurred in rats exposed to mixed xylene at a concentration of 21.2 mg/L for 6 hours. Repeated application of xylene to the skin of rabbits produced irritation and skin damage.

Various laboratory animals exposed to xylene by repeat inhalation at high atmospheric concentrations showed slight blood changes. Guinea pigs exposed to xylene at lower concentration showed liver damage and lung inflammation. Rats and dogs exposed to xylene by inhalation at similar levels showed no adverse effects. Rats and mice repeatedly administered xylene orally showed no evidence of toxicity or tumor development.

No birth defects were reported in two studies with rats exposed by inhalation to mixed xylene (containing ethylbenzene): toxic effects were noted in the offspring from only one study. Birth defects occurred in mice
exposed orally mixed xylene (containing ethylbenzene) at levels that produced adverse effects and mortality in the mother. No adverse genetic changes were reported in standard tests using bacterial and yeast cells, insects, animals, and animal cells.

Ethanol
Swallowing of ethanol also causes central nervous system effects and digestive tract effects; large amounts may cause respiratory failure leading to death. Other effects of ethanol related to repeated intake of alcoholic beverages including nutritional deficiencies, liver, and pancreas damage and secondary blood cell changes. Repeated consumption of ethanol (alcoholic beverages) by pregnant women is reported to produce adverse effects on the development of their offspring ("fetal alcohol syndrome").

Single-dose (acute) animal studies indicate that ethanol is practically non-toxic orally (rats), after skin application (rabbits) and after inhalation (rats). It is mildly to severely irritating to rabbit eyes and practically nonirritating to moderately irritating to rabbit skin. It is practically non-toxic by inhalation (Rat LD50-20,000 ppm, 10-hr. exposure). Various morphological functions and biochemical changes including changes in the heart muscle, liver, CNS, and blood cells have been reported for experimental animals given ethanol orally. Repeated inhalation exposures produced liver damage in rabbits, while other treatment-related effects were reported in pigs, dogs, and monkeys. Rats exposed by skin application to a 50/o/o solution of ethanol showed only temporary skin irritation. Several species of laboratory animals have been exposed to ethanol by various routes to determine effects on an offspring. While susceptibility varies with each species, birth defects have been consistently reported in many of the species tested (mouse, rat, pig, guinea pig, monkey). Ethanol produced genetic changes in standard tests using human volunteers and animals and yeast cells. No genetic changes were reported in standard tests using bacterial or animal cells, negative responses were reported in assays using human cells.

Ethanol in alcoholic beverages is listed as a substance which is "carcinogenic to humans" by the International Agency for Research on Cancer (IARC Monographs Vol. 44). This IARC listing is based on evidence of carcinogenicity of alcoholic beverages following long-term consumption of alcoholic beverages. Epidemiological studies report increased incidence of mouth and throat cancer in humans after long-term consumption of alcoholic beverages. Higher risk is associated with the drinking of dark liquors and for smokers who consume alcoholic beverages.

Ethylbenzene
Ethylbenzene has been reported to cause severe eye, skin, and respiratory tract irritation. Prolonged skin contact with ethylbenzene may cause blistering, and repeated contact may remove oils from the skin surface causing dryness and cracking of the skin. This component possesses narcotic like properties; excessive exposure may result in headache, dizziness, incoordination, fatigue, nausea, loss of appetite, and loss of consciousness. Coughing, choking and shortness of breath may occur in this material is accidentally drawn into the lungs during swallowing or vomiting.

No allergic skin reaction was observed in controlled skin contact studies with human volunteers. Single-dose (acute) animal studies indicate that ethylbenzene is slightly toxic orally (rats) and practically nontoxic after skin application (rabbit). It is slightly irritating to rabbit eyes and severely irritating to rabbit skin. One out of six rats died during a single 6-hour exposure to ethylbenzene vapor (30.2 mg/L) with another dying during the 14 day observation period. Rats given ethylbenzene orally for 6 months showed liver and kidney changes. Numerous short-term repeat inhalation studies have been conducted and report various effects in laboratory animals including increased liver or kidney weights, body weight changes, liver, kidney, and testes changes. The results from animal studies (rats, rabbits, and monkeys) suggest that these studies are not conclusive as to the reproductive effects of ethylbenzene. No adverse genetic changes were
reported in standard tests using bacterial or yeast cells; however, genetic changes were reported in standard tests with human cell cultures.

**Carcinogenicity**

Methyl isobutyl ketone; IARC Group 2B: Possibly carcinogenic to humans

Ethyl benzene: IARC Group 2B Possibly carcinogenic to humans

Xylene: IARC Group 3: Not classifiable as to its carcinogenicity in humans

Other components of this product are not classified by NTP, IARC, or OSHA as carcinogens.

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**Section 12**

**Ecological Information**

Industrial Summit Technology Corp has not developed toxicity information on SKYBOND®7621 polyimide resin. However, data is available on SKYBOND® 700 polyimide resin, a similar material.

96-hr LC50 Bluegill Sunfish
380 mg/l, Practically Non-Toxic

96-brLC 50 Rainbow Trout
340 mg/l Practically Non-Toxic

48-h LC50 Daphnia Magna
16 mg/l, Slightly Toxic

**Persistence and Degradability**

Not known

**Bioaccumulative Potential**

Not known

**Mobility in Soil**

Not known

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**Section 13**

**Disposal Information**

Do not discharge into waterways or sewer systems. Dispose of in accordance with government regulations. US EPA waste code D001 (ignitability characteristic).

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**Section 14**

**Transport Information**

UN Number: 1866
Proper shipping name: Resin solution
Hazard class: 3  
Packing group: III

**Section 15**  
Regulatory Information

**TSCA Inventory Status**  
All ingredients are on the TSCA inventory.

**SARA Title III Section 311/312 Hazard Categories**  
Immediate (acute), Delayed (chronic), Fire

**SARA Title III Section**  
The component listed below is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (EPCRA or SARA Title III) and 40 CFR 372.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>313 Listed</th>
<th>%</th>
<th>RQ (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-methyl-2-pyrrolidone</td>
<td>872-50-4</td>
<td>Yes</td>
<td>29</td>
<td>-</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>Yes</td>
<td>3</td>
<td>1000</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>Yes</td>
<td>13</td>
<td>100</td>
</tr>
<tr>
<td>1,2-Benzenedicarboxylic acid, 4,4'-carbonylbis-ar, ar'-diethyl ester, compd with with 1,3-benzenediamine</td>
<td>65701-07-7</td>
<td>No</td>
<td>56.7</td>
<td>-</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>No</td>
<td>1.3</td>
<td>-</td>
</tr>
<tr>
<td>1,3 -Diaminobenzene (m-phenylenediamine)</td>
<td>108-45-2</td>
<td>Yes</td>
<td>13</td>
<td>-</td>
</tr>
</tbody>
</table>

**CERCLA RQ**  
See table above.

**California Proposition 65**  
This product contains N-methyl-2-Pyrrolidone, a chemical known to the State of California to cause birth defects or other reproductive harm (developmental). This product contains ethylbenzene is known to the State of California to cause cancer.

**Section 16**  
Other Information

**Date of Preparation or Revision**  
June 01, 2015
**GHS Label Hazard Statement Codes**

**Signal Word: DANGER**

- **H226** Flammable liquid and vapor
- **H302** Harmful if swallowed
- **H304** May be fatal if swallowed and enters airways
- **H311** Toxic in contact with skin
- **H315** Causes skin irritation
- **H317** May cause an allergic reaction.
- **H319** Causes serious eye irritation
- **H331** Toxic if inhaled
- **H335** May cause respiratory irritation
- **H351** Suspected of causing cancer
- **H360** May damage fertility or the unborn child
- **H373** May cause damage to organs through prolonged or repeated exposure
- **H401** Toxic to aquatic life
- **H411** Toxic to aquatic life with long lasting effects

**GHS Label Precautionary Statement Codes**

- **P201** Obtain special instructions before use.
- **P202** Do not handle until all safety precautions have been read and understood.
- **P210** Keep away from flames and hot surfaces. – No smoking.
- **P233** Keep container tightly closed.
- **P241** Use explosion-proof equipment.
- **P242** Use non-sparking tools.
- **P343** Take action to prevent static discharges.
- **P260** Do not breathe dust/ fume/ gas/ mist/ vapors/ spray
- **P264** Wash hands thoroughly after handling.
- **P271** Use only outdoors or in a well-ventilated area.
- **P272** Contaminated work clothing should not be allowed out of the workplace
- **P273** Avoid release to the environment.
- **P280** Wear protective gloves, eye and face protection.
- **P281** Use personal protective equipment as required.
- **P301+310** IF SWALLOWED: Immediately call a poison center/doctor.
- **P302+P352** IF ON SKIN: Wash with plenty of soap and water.
- **P303+P361:P353** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- **P303+313** If exposed or concerned: Get medical advice/attention.
- **P304+P340** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- **P305+P251+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- **P307+P313** If exposed: Call a POISON CENTER or doctor/physician.
- **P312** Call a POISON CENTER or doctor/physician if you feel unwell.
- **P321** Specific treatment: In case of skin contact, immediately wash skin with soap and water. Remove and wash contaminated clothing before reuse.
- **P331** Do NOT induce vomiting.
- **P332+P313** If skin irritation occurs: Get medical advice.
- **P337+P313** If eye irritation persists: Get medical advice.
- **P361+P364** Take off immediately all contaminated clothing and wash it before reuse.
P370+P378  In case of fire: Use water fog, dry chemical, foam, or CO2 for extinction.
P405  Store locked up.
P501  Dispose of contents/container in accordance with local/regional/national/international regulations.

Abbreviations
ALC  Approximate Lethal Concentration
ANSI  American National Standards Institute
CAS  Chemical Abstracts Service
CERCLA  Comprehensive Environmental Response Compensation and Liability Act
CFR  US Code of Federal Regulations
CO2  Carbon dioxide
DOT  US Department of Transportation
EPCRA  Emergency Planning and Community Right to Know Act
GHS  UN Globally Harmonized System of Classification and Labeling of Chemicals
HCS  Hazard Communication Standard
IARC  International Agency for Research on Cancer
ICAO/IATA  International Civil Aviation Organization/International Air Transport Association
IMO/IMDG  International Maritime Organization/International Maritime Dangerous Goods Code
LC50  Lethal concentration to 50% of exposed laboratory animals
LD50  Lethal dose to 50% of exposed laboratory animals
MSHA  US Mine Safety and Health Administration
NIOSH  US National Institute of Occupational Safety and Health
NA  Not available
NMP  N-methyl-2-pyrrolidone
NTP  National Toxicology Program
OARS  Occupational Alliance for Risk Science
OSHA  US Occupational Safety Health Administration
RQ  Reportable quantity
SARA  Superfund Amendments and Reauthorization Act
SDS  Safety data sheet
TSCA  Toxic Substances Control Act
UN  United Nations
US/USA  United States
WEEL  Workplace Environmental Exposure Levels

Although the information set forth herein (herein after “Information”) are presented in good faith and believed to be correct as of the date hereof, I.S.T. Corporation makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will I.S.T. Corporation be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information.

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