

G.J. CHEMICAL COMPANY, INC. SAFETY DATA SHEET

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME-----> **Isobutyl Acetate all grades**

PRODUCT NUMBER(S)-----> 180500

TRADE NAMES/SYNONYMS---> Acetic Acid, 2-Methylpropyl ester;
2-Methyl-1-propyl acetate

CAS-No: 110-19-0

CHEMICAL FAMILY: Ester

1.2 RELAVENT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES

ADVISED AGAINST:

RECOMMENDED USE: Industrial use in coatings. Cleaning agent. Laboratory chemicals.

USES ADVISED AGAINST: No information available

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: **G.J. CHEMICAL CO., INC.**

Address: **40 VERONICA AVENUE
SOMERSET, NJ 08873**

Telephone: **1-973-589-1450**

Fax: **1-973-589-3072**

1.4 Emergency Telephone Number

Emergency Phone: **1-800-424-9300 (CHEMTREC)**

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225

Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

Acute aquatic toxicity (Category 3), H402

2.2 GHS Label elements, including precautionary statements



Pictogram

GHS02 GHS07

Signal word: DANGER

Hazard statement(s)

H225 Highly flammable liquid and vapor.

H336 May cause drowsiness or dizziness.

H402 Harmful to aquatic life.

Precautionary statement(s)

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. - 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 precautionary measures against static discharge.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:

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

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Repeated exposure may cause skin dryness or cracking.

3. INGREDIENTS

3.1 SUBSTANCE:

Ingredient	CAS No.	% by WT. Range	CLASSIFICATION
Isobutyl Acetate	110-19-0 EC No.203-745-1 Index No.607-026-00-7 Reg.-No. 01-2119488971-22-XXXX	99-100	Flammable liquids (Category 2), H225 STOT-SE (Category 3), Central Nervous System, H335 Acute aquatic toxicity (Category 3), H402

3.2 MIXTURE: Not applicable.

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

INHALATION: Isobutyl Acetate

****FIRST AID- Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.**

SKIN CONTACT: Isobutyl Acetate

****FIRST AID- Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15-20 minutes). Get medical attention immediately.**

EYE CONTACT: Isobutyl Acetate

****FIRST AID- Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15-20 minutes). Remove contact lenses, if worn, after initial flush. Get medical attention immediately.**

INGESTION: Isobutyl Acetate

****FIRST AID- Do not induce vomiting. Never give anything by mouth to an unconscious person. If the victim is conscious and alert give large amount of water. Consult a physician or poison control center, treat symptomatically.**

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

Eye: May cause eye irritation, possible reddening;

Skin: Mildly irritating, prolonged contact may cause dermatitis;

Inhalation: Irritation of the respiratory tract, Coughing, shortness of breath, dizziness and intoxication.

Ingestion: Large oral doses may cause irritation to the gastrointestinal tract. May cause mouth and throat irritation. Symptoms may include cause nausea, vomiting and diarrhea. Other symptoms are dizziness and intoxication.

Chronic: No information

Medical Conditions Aggravated by Exposure:

Skin contact may aggravate an existing dermatitis. May aggravate mucous membrane dysfunction. May adversely affect people with chronic eye conditions.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED: No data available.

5. FIRE FIGHTING MEASURES

Flash Point: 22°C (72°F) TCC

LEL %:1.3 (V)

Auto-ignition temperature: 430°C (806°F)

UEL %:10.5 (V)

UNIFORM FIRE CODE: Flammable Liquid IB

5.1 SUITABLE EXTINGUISHING MEDIA: Foam--> x CO2--> x Dry Chemical--> x Water-fog--> x Other-->

Unsuitable extinguishing media: Do not use waterjet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR

MIXTURE: FIRE AND EXPLOSION HAZARD: DANGEROUS FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK. VAPOR-AIR MIXTURES ARE EXPLOSIVE. Vapors may be heavier than air. Keep containers tightly closed. Flammable liquid; isolate from all sources of ignition. Closed containers may explode when exposed to extreme heat.

CONDITIONS OF FLAMMABILITY: Flammable in the presence of a source of ignition when the temperature is above the flash point.

HAZARDOUS COMBUSTION PRODUCTS: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides and other unidentified organic compounds evolve when this material undergoes combustion.

5.3 ADVICE FOR FIREFIGHTERS: Keep personnel removed from and upwind of fire. Shut off source. Keep unnecessary people away; isolate hazard area and deny entry. Avoid breathing vapors, stay upwind Do not spray pool fires directly. A solid stream of water or foam directed into hot burning liquid can cause frothing. Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. For massive fire in cargo area, use unmanned hose holder or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire. Cool containers with water fog from as far a distance as possible. Wear NIOSH approved self-contained breathing apparatus for confined spaces. Use full fire-fighting protective clothing. If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Flammable liquid; Eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory equipment and fire resistant protective clothing during cleanup operations. For large spills evacuate downwind areas as conditions warrant to prevent exposure and to allow vapors or fumes to dissipate.

6.2 ENVIRONMENTAL PRECAUTIONS:

Keep out of water sources and sewers. Do not flush into surface water or sanitary sewer system.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

Methods for cleanup and containment:

Use explosion proof equipment. Shut off valves, contain spill, keep out of water sources and sewers, for smaller spills add non-flammable absorbent in spill area.

For large spills use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent.

Methods for disposal:

Place all saturated absorbent, using non-sparking tools, in an approved container for disposal. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations.

REPORTABLE QUANTITY (RQ): 5000 POUNDS

The Superfund Amendments and Reauthorization Act (SARA) Section 304 requires that a release equal to or greater than the reportable quantity for this substance be immediately reported to the local emergency planning committee and the state emergency response commission (40 CFR 355.40). If the release of this substance is reportable under CERCLA Section 103, the national response center must be notified immediately at (800) 424-8882 or (202) 426-2675 in the metropolitan Washington, D.

C. area (40 CFR 302.6).

6.4 **REFERENCE TO OTHER SECTIONS:** See Sections 8 and 13.

7. **HANDLING AND STORAGE**

7.1 **PRECAUTIONS FOR SAFE HANDLING:** This material presents a fire hazard. Liquid quickly evaporates and forms vapor (fumes), which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources, such as pilot lights, welding equipment, and electrical motors and switches. Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back. Avoid breathing vapors in top of shipping container. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid work practices that may release volatile components in the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems. Use non-sparking tools to open or close containers.

Advice on general occupational hygiene:

Wash hands before breaks and after work. Keep away from food, drink and animal feeding stuffs. When using do not smoke.

STATIC HAZARD: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not be sufficient. For more information refer to OSHA Standard 29CFR 1910.106 "Flammable and Combustible Liquids" and National Fire Protection Association (NFPA 77) "Recommended Practice on Static Electricity".

7.2 **CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:**

Follow maximum allowed pile heights specified in the BOCA codes or the NFPA manual. Local fire authorities should be notified for storage of this material in any quantity. Local permits are required for storage in warehouse quantities. Recommended storage temperature: 15 - 25 °C. Store large quantities only in cool, dry areas in buildings designed to comply with OSHA 1910.106. Keep containers tight and upright to prevent leakage. Do not contact with oxidizing materials. Keep containers closed when not in use. Do not take internally. Storage class (TRGS 510): 3: Flammable liquids

CONTAINER WARNINGS: Containers should be Bonded and Grounded when pouring. Avoid free fall of liquid in excess of a few inches. Empty containers release residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, or expose such containers to heat, sparks, static electricity or other sources of ignition. Do not attempt to clean. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner.

7.3 **SPECIFIC END USES:** Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. EXPOSURE CONTROL (PERSONAL PROTECTION)

8.1 CONTROL PARAMETERS:

Ingredient	CAS No.	% by WT. Range	Exposure Limits
Isobutyl Acetate	110-19-0 EC No.203-745-1 Index No.607-026-00-7 Reg.-No. 01-2119488971-22-XXXX	99-100	150ppm TWA (NIOSH) 700mg/m ³ TWA (NIOSH) 50ppm TWA (ACGIH) 150ppm STEL (ACGIH) 150ppm TWA (OSHA) 700mg/m ³ TWA (OSHA) 1300ppm (IDLH)

Key: (PEL) = Permissible Exposure Limit OSHA
(TLV) = Threshold Limit Value OSHA & ACGIH
(STEL) = Short Term Exposure Limit ACGIH
(WEEL) = USA. Workplace Environmental Exposure Levels
(TWA) = Time Weighted Average
CAS = Chemical Abstracts Registry Number
IDLH = Immediate Danger to Life and Health
N.E. =None Established

8.2 EXPOSURE CONTROLS

EXPOSURE GUIDELINES: Consider the potential hazards of this material (Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.

ENGINEERING CONTROLS: Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits. All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910. Explosion proof motors should be used in mechanical ventilation.

RESPIRATORY PROTECTION: The specific respirator selected must be based on contamination levels found in the work place, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA):

For vapor concentrations 1 to 10 times OSHA TWA or PEL an air purifying NIOSH/MSHA Approved respirator with full face-piece and organic vapor cartridges. For concentrations over 10 times OSHA TWA or PEL, in confined areas, and/or where vapor concentrations are unknown use an approved positive pressure full face-piece supplied air respirator.

BODY CLOTHING: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged contact with this substance. Flame retardant antistatic protective clothing. Remove and wash contaminated clothing before reuse.

SKIN PROTECTION: Employee must wear appropriate protective gloves to prevent contact with this substance.

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 30 min

HYGIENE: Use good personal hygiene practices, wash hands before eating, drinking, smoking or using toilet facilities.

EYE/FACE PROTECTION: Use safety eyewear with splash-guards or face shield must be worn where possibility exists for eye contact. Contact lenses should not be worn. Emergency shower and eyewash fountains should be easily available in the immediate vicinity of any potential exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Isobutyl Acetate 110-19-0

Appearance-----> Clear mobile liquid

Color-----> Colorless

Odor-----> Mild ester odor

Odor Threshold----- > 0.64ppm

pH-----> No data available

Molecular Weight-----> 116.16amu

Melting/Freezing Point)-----> -99 °C (-146 °F)

Boiling Point (°F)-----> 116 - 118°C (241 - 244°F)

Specific Gravity-----> 0.870@25°C

Vapor Pressure-----> 15mmHg@20°C

Vapor Density (air=1)-----> 4.01

Water Solubility-----> 5.6 g/l at 20 °C (68 °F) - soluble

Partition Coefficient n-Octanol/Water-> log Pow 2.3 @ 25°C (77°F)

Evaporation Rate (Butyl Acetate=1)----> 1.5

Flash Point-----> 22 °C (72 °F) - closed cup

Upper Flammability Limit-----> 10.5%(V)

Lower Flammability Limit-----> 1.3%(V)

Auto-Ignition Temperature-----> 430°C (806°F)

Decomposition Temperature-----> No data available

Viscosity-----> No data available

Explosive Properties-----> No data available

Oxidizing Properties-----> No data available

9.2 Other Information:

Surface Tension: 5.6 g/l at 20 °C (68 °F)

10. STABILITY AND REACTIVITY INFORMATION

10.1 REACTIVITY: No data available.

10.2 CHEMICAL STABILITY: Unstable () Stable (X)

10.3 POSSIBILITY OF HAZARDOUS REACTIONS: Vapors may form explosive mixtures with air.

HAZARDOUS POLYMERIZATION: May occur () Will not occur (X)

10.4 CONDITIONS TO AVOID: Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame.

10.5 INCOMPATIBLE MATERIALS: Strong oxidants such as liquid chlorine, oxygen, sodium hypochlorite, inorganic acids e.g. nitric acid, perchloric acid and hydrogen peroxide. Avoid aluminum and lead.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS: Fumes, Smoke, Carbon Monoxide, Aldehydes and other decomposition products where combustion is not complete.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x

ACUTE HEALTH EFFECTS:

Effects of overexposure:

Eye> May cause eye irritation, possible reddening;

Skin> Mildly irritating, prolonged contact may cause dermatitis;

Inhalation> Irritation of the respiratory tract, Coughing, shortness of breath, dizziness and intoxication.

Ingestion> Large oral doses may cause irritation to the gastrointestinal tract. May cause mouth and throat irritation. Symptoms may include cause nausea, vomiting and diarrhea. Other symptoms are dizziness and intoxication.

Chronic: No information

Medical Conditions Aggravated by Exposure>

Skin contact may aggravate an existing dermatitis. May aggravate mucous membrane dysfunction. May adversely affect people with chronic eye conditions.

ACUTE TOXICITY:

The effects of overexposure shown in Section II are based on acute toxicity profiles. Typical values are:

Ingredient	Oral LD50 (Rat)	Skin LD50(Rabbit)	Inhalation LC50	
Isobutanol	13.4g/kg	>17.4g/kg		

SKIN CORROSION/IRRITATION: Std. Draize (rabbit) - skin 500mg/24hr moderate. Open draize (rabbit) skin - 500mg mild;

SERIOUS EYE DAMAGE/EYE IRRITATION: Eye moderate.

RESPIRATORY OR SKIN SENSITIZATION: Maximization Test - Guinea pig Result: Does not cause skin sensitization. (OECD Test Guideline 406)

MUTAGENIC EFFECTS: Classified None, for human.

CARCINOGEN STATUS:

IARC - No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP – No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA – No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

REPRODUCTIVE TOXICITY: Hamster Lungs Result: negative

Specific target organ toxicity (STOT-SE) - single exposure (Globally Harmonized System): no data available

Specific target organ toxicity (STOT-RE) - repeated exposure (Globally Harmonized System): no data available

Irritation Data : Open draize (rabbit) skin - 500mg mild; Std.Draize (rabbit) - skin 500mg/24hr moderate, eye moderate.

ASPIRATION HAZARD: No data available

11.2 ADDITIONAL DATA: No data available

RTECS: AI4025000

12. ECOLOGICAL INFORMATION

12.1 AQUATIC TOXICITY:

Toxicity to fish:

LC50 - *Oryzias latipes* (Japanese rice fish) - 17 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

LC50 - *Daphnia magna* (Water flea) - 25 mg/l - 48 h
(OECD Test Guideline 202)

Toxicity to algae:

EC50 - *Pseudokirchneriella subcapitata* (green algae) - 370 mg/l - 72 h
Growth inhibition. (OECD Test Guideline 201)

12.2 PERSISTENCE AND DEGRADABILITY: aerobic - Exposure time 20 d Result:
81 % - Readily biodegradable. (OECD Test Guideline 301D)

12.3 BIOACCUMULATIVE POTENTIAL: This material is not expected to
significantly bio-accumulate.

Bio-concentration Factor: Est. <100

Biological Oxygen Demand (BOD): No data available

12.4 MOBILITY IN SOIL: No data available.

12.5 RESULTS OF PBT AND vPvB :

PBT assessment results: This substance is not classified as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: Toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS: Hazard characteristic and regulatory waste
stream classification can change with product use. Accordingly it is the
responsibility of the user to determine the proper storage, transportation,
treatment and or disposal methodologies for spent materials and residues at time
of disposition. Dispose in accordance with all applicable disposal regulations.
Incinerate under controlled conditions in a permitted facility.

CONTAMINATED PACKAGING: Dispose of as unused product

The information offered here is for the product as shipped. Use and/or
alterations to the product such as mixing with other materials may significantly
change the characteristics of the material and alter the RCRA classification and
the proper disposal method.

RCRA: The unused product is a RCRA hazardous waste if discarded. The RCRA
ID number is: D001.

**DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO
GENERATORS OF HAZARDOUS WASTE, 48 CFR 262**

14. TRANSPORT INFORMATION

Land Transport (DOT)

- 14.1 USDOT ID Number-----> UN1213
- 14.2 USDOT Shipping Name-----> Isobutyl Acetate
- 14.3 USDOT Hazard Classification-----> 3 (Flammable Liquid)
USDOT Label Codes-----> 3
- 14.4 USDOT Package Code-----> II
- 14.5 Marine Pollutant-----> No
- 14.6 Special precautions for user-----> None
Emergency Response Guide-----> 129
Reportable quantity-----> 5000lbs.

Sea Transport (IMDG)

- 14.1 ID Number-----> UN1213
- 14.2 Proper shipping name-----> ISOBUTYL ACETATE
- 14.3 Hazard Classification-----> 3 (Flammable Liquid)
Label Codes-----> 3
- 14.4 Package Code-----> II
- 14.5 Marine Pollutant-----> No
- 14.6 Special precautions for user-----> Yes
EMS-Number-----> F-E, S-D

Air Transport (IATA)

- 14.1 ID Number-----> UN1213
- 14.2 Proper shipping name-----> Isobutyl Acetate
- 14.3 Hazard Classification-----> 3 (Flammable Liquid)
Label Codes-----> 3
- 14.4 Package Code-----> II
- 14.5 Environmental hazard-----> None
- 14.6 Special precautions for user-----> None

15. REGULATORY INFORMATION

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

SARA TITLE III (Superfund Amendment and Reauthorization Act)

SECTION 302 AND 304: Extremely Hazardous Substance List (40 CFR 355) - Not Listed

SECTION 313: Toxic Chemicals Listing (40 CFR 372.65) - Not Listed

SECTION 311/312: Hazard Categorization (40 CFR 370) – Fire Hazard

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Listed
Isobutyl acetate CAS-No.110-19-0 Reportable Quantity: 5000lbs

SECTION 101(14) Reportable Quantity: 5000lbs

Massachusetts Right to Know Components

Isobutyl acetate CAS-No.110-19-0

Pennsylvania Right to Know Components

Isobutyl acetate CAS-No.110-19-0

New Jersey Right to Know Components

Isobutyl acetate CAS-No.110-19-0

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA (Toxic Substance Control Act)

Isobutyl acetate CAS-No.110-19-0 is listed on the TSCA Inventory.

International Inventories:

<u>Country or Region</u>	<u>Inventory Name</u>	<u>On inventory yes/no</u>
<u>Australia</u>	Australian Inventory of Chemical Substances (AICS)	Yes
<u>Canada</u>	Domestic Substances List (DSL)	Yes
<u>Canada</u>	Non-Domestic Substances List (NDSL)	No
<u>China</u>	Inventory of Existing Chemical Substances in China (IECSC)	Yes
<u>Europe</u>	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
<u>Europe</u>	European List of Notified Chemical Substances (ELINCS)	No
<u>Japan</u>	Inventory of Existing and New Chemical Substances (ENCS)	Yes
<u>Japan</u>	Industrial Safety & Health Law Inventory (ISHL)	Yes
<u>Korea</u>	Existing Chemicals List (ECL)	Yes
<u>Mexico</u>	National Inventory of Chemical Substances (INSQ)	Yes
<u>New Zealand</u>	New Zealand Inventory	Yes
<u>Philippines</u>	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
<u>Switzerland</u>	Inventory of Notified New Substances (CHINV)	Yes
<u>Taiwan</u>	National Existing Chemical Inventory (NECI)	Yes
<u>United States & Puerto Rico</u>	Toxic Substances Control Act Inventory	Yes

15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has been carried out for this substance.

16. OTHER INFORMATION:

HMIS (Hazardous Materials Identification System)

Hazard Rating:

4-Extreme

3-High

2-Moderate

**1-Slight
0-Insignificant**

**NFPA RATINGS (SCALE 0-4): Health=0 Fire=3 Reactivity=0
HMIS(SCALE 0-4): Health=0 Fire=3 Reactivity=0 PPE=G**

**Hazard statement(s) from Section 2 and 3:
H225 Highly flammable liquid and vapor.
H336 May cause drowsiness or dizziness.
H402 Harmful to aquatic life.**

**Date of preparation-----> July 20, 2007
Revision Number-----> 1.4
Revision Content-----> General update all sections
Revision Date-----> September 20, 2018
Prepared by-----> T.G. Fenstermaker, Jr.**

Acronyms:

ACGIH - American Conference of Governmental Industrial Hygienists
AIHA - American Industrial Hygiene Association
ANSI - American Nation Standards Institute
API - American Petroleum Institute
CERCLA - Comprehensive Emergency Response, Compensation, and Liability Act
DOT - U.S. Department of Transportation
EPA - U.S. Environmental Protection Agency
HMIS - Hazardous Materials Information System
IARC - International Agency For Research On Cancer
MSHA - Mine Safety and Health Administration
NFPA - National Fire Protection Association
NIOSH - National Institute of Occupational Safety and Health
NOIC - Notice of Intended Change (Proposed change to ACGIH TLV)
NTP - National Toxicology Program
OPA - Oil Pollution Act of 1990
OSHA - U.S. Occupational Safety & Health Administration
PEL - Permissible Exposure Limit (OSHA)
RCRA - Resource Conservation and Recovery Act
REL - Recommended Exposure Limit (NIOSH)
SARA - Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA - Self-Contained Breathing Apparatus
STEL - Short-Term Exposure Limit (generally 15 minutes)
TLV - Threshold Limit Value
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average (8hr.)
WHMIS - Canadian Workplace Hazardous Materials Information System

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