

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

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME: ETHANOL DENATURED, 190
or Proprietary Solvent Formula #3, 190proof

PRODUCT NUMBER(S): 152100, 238500

TRADE NAMES/SYNONYMS: Denatured alcohol; Regent Grade Ethanol, Denatured Ethanol, Ethanol Reagent, SDA-1 Alcohol, Denatured spirits

CHEMICAL FAMILY: Hydroxyl, aliphatic

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

RECOMMENDED USE: Chemical for synthesis, Solvent

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

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 1), respiratory, H335

Specific target organ toxicity - single exposure (Category 3), organs, H370

2.2 GHS Label elements, including precautionary statements



Signal word: **DANGER**

Hazard statement(s)

H225 Highly flammable liquid and vapor.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H370 Causes damage to organs.

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.

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

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

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.

P321 Specific treatment (see supplemental first aid instructions on this label).

P330 Rinse mouth.

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

Storage:

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

P405 Store locked up.

Disposal:

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

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS: None

3. INGREDIENTS

3.1 SUBSTANCE: Not applicable

3.2 MIXTURE:

COMPONENT	CAS NO.	% BY WT.	CLASSIFICATION
Ethyl alcohol EC-No.200-578-6 Index-No.603-002-00-5 REg.-No.1-2119457610-43-XXXX	64-17-5	86-88%	Flammable liquids (Category 2), H225
Methyl alcohol EC-No.200-659-6 Index-No.603-001-00-X Reg.-No.0-2119433307-44-XXXX	67-56-1	3.6-4.0%	Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 STOT-SE (Category 1), organs, H370
Ethyl Acetate EC-No.205-500-4 Index-No.607-022-00-5 Reg.-No.01-2119475103-46-XXXX	141-78-6	0.9-1.0%	Flammable liquids (Category 2), H225 Eye irritation (Category 2A), H319 STOT-SE (Category 3), Central nervous system, H336
Methyl isobutyl Ketone EC-No. 203-550-1 Index-No. 606-004-00-4 Reg.-No.01-2119473980-30-XXXX	108-10-1	1.8% - 1.9%	Flammable liquids (Category 2), H225 Acute toxicity, Inhalation (Category 4), H332 Eye irritation (Category 2A), H319 Carcinogenicity (Category 2), H351 STOT-SE (Category 3), Respiratory system, H335
Heptane or EC-No.205-563-8 Index-No.601-008-00-2 Reg.-No. 01-2119457603-38-XXXX	142-82-5	0.90% - 1.00%	Flammable liquids (Category 2), H225 Skin irritation (Category 2), H315 STOT-SE (Category 3), Central nervous system, H336 Aspiration hazard (Category 1), H304 Acute aquatic toxicity (Category 1), H400 Chronic aquatic toxicity (Category 1), H410
Toluene EC-No.203-625-9 Index-NO.601-021-00-3	108-88-3	0.90% - 1.00%	Flammable liquids (Category 2), H225 Skin irritation (Category 2), H315 Reproductive toxicity (Category 2), H361

Reg.-No.01-2119471310-51-XXXX

STOT-RE (Category 2), organs, H373
STOT-SE (Category 3) - Central nervous
system, H336
Aspiration hazard (Category 1), H304
Acute aquatic toxicity (Category 2), H401

Water 7732-18-5 4.8-6.1% max Not a hazardous substance or mixture.
EC-No. 231-791-2

Non-Volatile Matter 0.001% max
Less than 0.5% miscellaneous organic contaminants not tested for.

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

INHALATION: CARCINOGEN/NARCOTIC/IRRITANT.

****FIRST AID:** Remove from exposure area to fresh air immediately. If breathing has stopped, give artificial respiration. Maintain airway and blood pressure and administer oxygen if available. Keep affected person warm and at rest. Administration of oxygen should be performed by qualified personnel. Get medical attention immediately.

SKIN CONTACT: IRRITANT/NARCOTIC.

****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: CORROSIVE.

****FIRST AID-** Wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of chemical remains (at least 15-20 minutes). Remove contact lenses, if present, after initial flush. In case of burns, apply sterile bandages loosely without medication. Get medical attention immediately.

INGESTION: NARCOTIC.

****FIRST AID-** Remove ethyl alcohol by gastric lavage with tap water or emesis (Dreisbach, Handbook of Poisoning, 11th ed.) or by gastric lavage with warm water or 3-5% sodium bicarbonate solution unless two hours or more have passed since ingestion (Gosselin, Clinical Toxicology of Commercial Products). Syrup of ipecac may be given promptly following ingestion.

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

Inhalation: Irritation of mucus membranes, eyes, nose, throat and membranes of the upper respiratory tract. May cause nasal irritation, cough, and at high levels, a feeling of suffocation. May cause symptoms of inebriation. Within 12-18 hours, headache, anorexia, weakness, fatigue, leg cramps, vertigo and restlessness occur, followed by nausea, vomiting, diarrhea, dizziness, narcosis.

Skin: Irritation to skin results in cracking and flaking due to de-fatting action of the alcohol. May cause eczema, redness, and scaling. High exposure can cause gastritis, blindness and death. It is readily absorbed through the skin and may cause symptoms as with acute inhalation, principally acidosis, central nervous system depression and optic neuritis.

Eyes: Splashes may cause temporary pain and blurred vision. Liquid may cause irritation and corneal burns if not promptly removed.

Ingestion: Central nervous system depression resembling intoxication by ethyl alcohol. Excitation is followed by impaired motor coordination, slurred speech, sensory disturbances such as blurred and double vision, drowsiness, loss of appetite, and an inability to concentrate. Convulsions may occur from hypoglycemia. The pupils may be normal or dilated. Shock may follow, with hypotension, tachycardia, cold pale skin, and hypothermia. Respiration may be slow. Death may occur from respiratory or circulatory failure or from aspiration pneumonitis.

Chronic Effects: Irritation of the eyes, nose, throat and mucus membranes of the upper respiratory tract. Repeated and prolonged exposure may cause conjunctivitis. Central nervous system effects such as dizziness and sleepiness can occur, as can dryness, irritation and inflammation of the skin. The denaturants in this formulation may cause chronic kidney and liver damage. Continued ingestion of small amounts may result in blindness.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED.

****ANTIDOTE**:** Naloxone, 0.01 MG/KG intravenously, has an arousal effect in acute alcoholic coma. (Dreisbach, Handbook of Poisoning, 11th ed.)

5. FIRE FIGHTING MEASURES

FLASH POINT: 16.7°C (62°F) (CC) UPPER EXPLOSIVE LIMIT: 19% (V)
AUTOIGNITION TEMP: 354°C (669°F) LOWER EXPLOSIVE LIMIT: 3.3%(V)
UNIFORM FIRE CODE: Flammable Liquid Class 1B

5.1 SUITABLE EXTINGUISHING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR ALCOHOL-RESISTANT FOAM (1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5).
FOR LARGER FIRES, USE WATER SPRAY, FOG OR ALCOHOL-RESISTANT FOAM (1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5).

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 ABOVE FLASH POINT.
Dangerous fire hazard when exposed to heat. Vapor may explode if ignited in an enclosed area.

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, nitrogen oxides and other unidentified organic compounds evolve when this material undergoes combustion.

5.3 ADVICE FOR FIREFIGHTERS:

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. Stay away from ends of tanks. 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. Isolate for 1/2 mile in all directions if tank, rail car or tank truck is involved in fire (1990 Emergency Response Guidebook, DOT P 5800.5), Guide page 26).

Extinguish only if flow can be stopped. Use flooding amounts of water as fog: solid streams may be ineffective. Cool containers with flooding amounts of water from as far a distance as possible. Avoid breathing vapors; keep upwind. Fire fighters should wear full protective clothing and NIOSH/MSHA approved self

contained breathing apparatus (SCBA) with full face piece operated in the pressure demand or other positive pressure mode. Water spray can be used to extinguish fires and cool fire-exposed containers. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

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.

6.2 ENVIRONMENTAL PRECAUTIONS:

Keep out of water sources and sewers. Soluble in water. When release this product is expected to evaporate. Contact authorities in the event of pollution of soil and aquatic environment or discharge into drains.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

Methods for Containment:

Use explosion proof equipment and equipment that can withstand the corrosive nature of this product. 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 water on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent.

Methods for Cleanup:

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): Methanol - 5,000 pounds; Methyl Isobutyl Ketone – 5000lbs; Toluene – 1000lbs.

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. 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. Do not take internally. 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. Keep away from heat, sparks and flame. Keep container tightly closed and upright to prevent leakage. Use only with adequate ventilation. Prevent buildup of vapors. Extinguish all pilot lights and turn off heater, non explosion-proof electrical equipment and other sources of ignition during use and until all vapors are gone. Avoid contact with eyes. Avoid prolonged or repeated breathing of vapor. Avoid prolonged or repeated contact with skin. Wash hands thoroughly after handling.

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:

CONTAINER WARNINGS: Denatured alcohol is a class IB flammable liquid (NFPA). Following 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. Store in a well ventilated place, away from sources of ignition and direct sunlight. Store at 15 to 30°C (59 to 86°F). In laboratory quantities, store away from oxidizing material, mineral acids, and chloroform. Store denatured alcohol in areas equipped with automatic sprinklers or fire extinguishing system. All denatured alcohol storage and transfer equipment should be electrically grounded and bonded to prevent possible ignition from static sparks. Use spark resistant equipment to store denatured alcohol

CONTAINER WARNINGS: Do not use air pressure to unload denatured alcohol from containers. Containers of this material may be hazardous when empty. Since emptied containers retain product residues, assume emptied containers to

have the same hazard qualities as full containers. 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:

COMPONENT	CAS NO.	% BY WT.	EXPOSURE LIMITS
Ethyl alcohol EC-No.200-578-6 Index-No.603-002-00-5 Reg.-No.1-2119457610-43-XXXX	64-17-5	86-88%	1000PPM TLV (ACGIH) 1000PPM TWA (OSHA) 1000PPM TWA (NIOSH)
Methyl alcohol EC-No.200-659-6 Index-No.603-001-00-X Reg.-No.0-2119433307-44-XXXX	67-56-1	3.6-4.0%	200PPMTWA (ACGIH) 250PPM STEL (ACGIH) 200PPM TWA (OSHA) 250PPM STEL (OSHA) 200PPM TWA (NIOSH) 250PPM STEL (NIOSH)
Ethyl Acetate EC-No.205-500-4 Index-No.607-022-00-5 Reg.-No.01-2119475103-46-XXXX	141-78-6	0.9-1.0%	400PPM TWA (ACGIH) 400PPM TWA (OSHA) 400PPM TWA (NIOSH)
Methyl isobutyl Ketone EC-No. 203-550-1 Index-No. 606-004-00-4 Reg.-No.01-2119473980-30-XXXX	108-10-1	1.8-1.9%	50PPM TWA (ACGIH) 75PPM STEL (ACGIH) 50PPM TWA (NIOSH) 75PPM STEL (NIOSH) 100PPM TWA (OSHA)
Heptane or EC-No.205-563-8 Index-No.601-008-00-2 Reg.-No. 01-2119457603-38-XXXX	142-82-5	0.90% - 1.00%	400PPM TWA (ACGIH) 500PPM STEL (ACGIH) 85PPM TWA (NIOSH) 440PPM CEILING (NIOSH) 500PPM TWA (OSHA)
Toluene EC-No.203-625-9 Index-No.601-021-00-3 Reg.-No.01-2119471310-51-XXXX	108-88-3	0.90% - 1.00%	50PPM TWA (ACGIH) 100PPM TWA (NIOSH) 150PPM STEL (NIOSH) 200PPM TWA (OSHA) 300PPM STEL (OSHA)

Water 7732-18-5 4.8-6.1% max
 EC-No. 231-791-2

Non-Volatile Matter 0.001% max
Less than 0.5% miscellaneous organic contaminants not tested for.

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 2), 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 following respirators are recommended based on information found in the physical data, toxicity and health effects sections. They are ranked in order from minimum to maximum respiratory protection.

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

Any chemical cartridge respirator with organic vapor cartridge(s) and a full face-piece.

Any gas mask with organic vapor canister (chin style or front- or back-mounted canister), with a full face-piece.

Any type 'C' supplied-air respirator with a full face-piece operated in pressure-demand or other positive-pressure mode or with a full face-piece, helmet or hood operated in a continuous-flow mode.

Any self-contained breathing apparatus with a full face-piece operated in pressure-demand or other positive-pressure mode.

BODY CLOTHING: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged contact with this substance.

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

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 38 min

EYE /FACE PROTECTION: Employee must wear splash-proof or dust-resistant goggles to prevent eye contact with this substance.

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

EMERGENCY EYE WASH:

Where this is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Ethanol denatured 190

APPEARANCE:

Watery liquid

COLOR:

Colorless

ODOR:

Characteristic sweetish odor

ODOR THRESHOLD:

10ppm

pH:

No data available

MOLECULAR WEIGHT:

46.07amu

MELTING POINT:

-114°C (-172°F)

BOILING POINT:

78° C (172°F)

SPECIFIC GRAVITY:

0.810@20°C

DENSITY (25°C):

0.80 g/ml (25°C): 0.81 g/ml (20°C)

VAPOR PRESSURE:

40 mm Hg @ 20°C (68.0°F)

VAPOR DENSITY:

1.6

WATER SOLUBILITY:

Complete

PARTITION COEFFICIENT N-OCTANOL/WATER	No data available
FLASH POINT:	16.7°C (62°F)
EVAPORATION RATE (BUTYL ACETATE=1):	No data available
UPPER FLAMMABILITY LIMIT:	19% (V)
LOWER FLAMMABILITY LIMIT:	3.3% (V)
AUTO IGNITION TEMPERATURE:	354°C (669°F)
DECOMPOSITION TEMPERATURE:	No data available
VISCOSITY:	No data available
EXPLOSIVE PROPERTIES:	No data available
OXIDIZING PROPERTIES:	No data available

9.2 OTHER INFORMATION:

SOLVENT SOLUBILITY: BENZENE, ETHER, ACETONE, CHLOROFORM, WATER

10. STABILITY AND REACTIVITY INFORMATION

10.1 REACTIVITY:

Containers may rupture or explode if exposed to heat.

10.2 CHEMICAL STABILITY: Stable under normal temperatures and pressures (Ethyl alcohol, methyl alcohol, and isopropyl alcohol). In use, may form flammable/explosive vapor-air mixture. Product is Hygroscopic

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, flames and sparks. Extremes of temperature and direct sunlight.

10.5 INCOMPATIBLE MATERIALS: Violent reaction with NITRIC ACID, ACETYL CHLORIDE, and ACETYL BROMIDE. Ignition may occur in reactions with BROMINE PENTAFLUORIDE, CHROMIC ANHYDRIDE, CHROMYL CHLORIDE, PERMANGANIC ACID, PLATINUM, POTASSIUM DIOXIDE, POTASSIUM-TERT-BUTOXIDE, and HYDROGEN PEROXIDE/SULFURIC ACID MIXTURES. Explosions may occur from reactions with ALUMINUM SESQUIBROMIDE ETHYLATE, BROMINE PENTAFLUORIDE, CALCIUM HYPOCHLORITE, HYDROGEN PEROXIDE-SULFURIC ACID MIXTURES, IODINE-MERCURIC OXIDE MIXTURES, MANGANESE PERCHLORATE-2,2-DIMETHOXY PROPANE MIXTURES.

Some PERCHLORATES RECRYSTALLIZED FROM ETHANOL (such as SILVER PERCHLORATE and URANYL PERCHLORATE), PERCHLORIC ACID, PERMANGANATES treated with SULFURIC ACID, PERMANGANIC ACID, POTASSIUM SUPEROXIDE, SODIUM HYDRAZIDE, and SULFURIC ACID-SODIUM DICHROMATE MIXTURES. Explosive compounds may be formed in reactions with AMMONIUM HYDROXIDE-SILVER(I) OXIDE MIXTURES, HYDROGEN PEROXIDE, IODINE-PHOSPHORUS, SILVER/NITRIC ACID, and SILVER NITRATE. CHROMYL CHLORIDE CAUSES

ETHANOL AND AMMONIA TO IGNITE. CONTACT WITH STRONG OXIDIZERS MAY CAUSE FIRES OR EXPLOSIONS. REACTIONS WITH ALKALI METALS LIBERATE FLAMMABLE HYDROGEN GAS. (ETHYL ALCOHOL)

INCOMPATIBLE MATERIALS: ETHYL ALCOHOL

ACETIC ANHYDRIDE AND SODIUM HYDROGEN SULFATE: Possible explosion.
ACETYL CHLORIDE: Violent reaction.
ACETYL BROMIDE: Violent reaction.
ALKALI METALS: Liberates flammable hydrogen gas.
ALUMINUM HYDROXIDE AND SILVER (I) OXIDE: Formation of explosive silver nitride.
BARIUM PERCHLORATE: Formation of explosive compound.
BROMINE PENTAFLUORIDE: Ignition and explosions are possible.
CALCIUM HYPOCHLORITE: Possible explosion.
CHLORINE TRIOXIDE: Violent reaction.
CHLORYL PERCHLORATE: Possible ignition.
CHRONIC ANHYDRIDE: Ignition.
CHROMIUM TRIOXIDE: Possible ignition.
CHROMYL CHLORIDE: Ignition.
DIOXYGEN DIFLUORIDE: Possible explosion.
DISULFURIC ACID AND NITRIC ACID: Possible ignition.
DISULFURYL DIFLUORIDE: Violent reaction.
FLUORINE NITRATE: Explosion.
HYDROGEN PEROXIDE: Formation of highly explosive shock-sensitive compound.
HYDROGEN PEROXIDE-SULFURIC ACID MIXTURE: Explosion.
IODINE HEPTAFLUORIDE: Ignition
IODINE-MERCURIC OXIDE-METHYL ALCOHOL MIXTURE: Possible explosion.
IODINE AND PHOSPHORUS: Formation of explosive ethane iodide.
MANGANESE PERCHLORATE AND 2,2-DIMETHOXY PROPANE: Possible explosion.
MERCURIC NITRATE: Formation of explosive compound.
NITRIC ACID: Violent reaction.
NITROSYL PERCHLORATE: Possible explosion.
OXIDIZERS (STRONG): Fire and explosion hazard.
PERCHLORATES: May form explosive compound when mixed.
PERCHLORIC ACID: Explosion.
PERMANGANIC ACID: Ignition or explosion.
PERMANGANATES AND SULFURIC ACID: Explosion.
PEROXYDISULFURIC ACID: Possible explosion.
PHOSPHORUS(III) OXIDE: Ignition.
PLATINUM: Ignition.
POTASSIUM: Violent reaction.
POTASSIUM DIOXIDE: Violent reaction, possible explosion.
POTASSIUM PERCHLORATE: Possible explosion.
POTASSIUM PERMANGANATE: Possible explosion.
POTASSIUM TERT-BUTOXIDE: Ignition.
RUTHENIUM(VIII) OXIDE: Formation of explosive compound.
SILVER AND NITRIC ACID: Formation of explosive compound.
SILVER NITRATE: Formation of explosive compound.
SILVER PERCHLORATE: May form explosive compound when mixed.
SODIUM-AIR: Possible explosion.
SODIUM HYDRAZIDE: May cause violent explosion on contact.
SODIUM PEROXIDE: Violent reaction.
SULFURIC ACID AND SODIUM DICHROMATE: Possible explosion.
TETRACHLOROSILANE: Violent reaction.
URANIUM HEXAFLUORIDE: Violent reaction.
URANYL PERCHLORATE: May form explosive compound when mixed.

See also alcohols.

METHYL ALCOHOL (METHANOL):

ACETYL BROMIDE: Violent reaction with formation of hydrogen bromide.

ALKYLALUMINUM SOLUTIONS: Violent reaction.

ALUMINUM: Corrodes.

BARIUM PERCHLORATE: Distillation yields highly explosive alkyl perchlorate.

BERYLLIUM HYDROXIDE: Violent reaction, even at -196 C.

BROMINE: Vigorously exothermic reaction.

CALCIUM CARBIDE: Violent reaction.

CHLORINE: Possible ignition and explosion hazard.

CHLOROFORM AND SODIUM HYDROXIDE: Explosive reaction.

CHROMIUM TRIOXIDE (CHRONIC ANHYDRIDE): Possible ignition.

CYANURIC CHLORIDE: Violent reaction.

DICHLOROMETHANE: Possible ignition and explosion.

DIETHYL ZINC: Possible ignition and explosion.

HYDROGEN PEROXIDE + WATER: Explosion hazard.

IODINE + ETHANOL + MERCURIC OXIDE: Explosion hazard.

LEAD: Corrodes.

LEAD PERCHLORATE: Explosion hazard.

MAGNESIUM: Violent reaction.

MAGNESIUM (POWDERED): Mixtures are capable of detonation.

METALS: Incompatible.

NICKEL: Possible ignition in the presence of nickel catalyst.

NITRIC ACID (CONCENTRATED): Mixtures of greater than 25% acid may decompose violently.

OXIDIZERS (STRONG): Fire and explosion hazard.

PERCHLORIC ACID: Explosion hazard.

PHOSPHOROUS TRIOXIDE: Possible violent reaction and ignition.

PLASTICS, RUBBER, COATINGS: May be attacked.

POTASSIUM: Possible dangerous reaction.

POTASSIUM HYDROXIDE + CHLOROFORM: Exothermic reaction.

POTASSIUM TERT-BUTOXIDE: Fire and explosion hazard.

SODIUM + CHLOROFORM: Possible explosion.

SODIUM HYPOCHLORITE: Explosion hazard.

SODIUM METHOXIDE + CHLOROFORM: Violent reaction.

SULFURIC ACID: Fire and explosion hazard.

ZINC: Explosion hazard.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may release toxic oxides of carbon and formaldehyde.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

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

ACUTE HEALTH EFFECTS:

Effects of overexposure:

Inhalation: Irritation of mucus membranes, eyes, nose, throat and membranes of the upper respiratory tract. May cause nasal irritation, cough, and at high levels, a feeling of suffocation. May cause symptoms of inebriation. Within 12-18 hours, headache, anorexia, weakness, fatigue, leg cramps, vertigo and restlessness occur, followed by nausea, vomiting, diarrhea, dizziness, narcosis.

Skin: Irritation to skin results in cracking and flaking due to de-fatting action of the alcohol. May cause eczema, redness, and scaling. High exposure can cause gastritis, blindness and death. It is readily absorbed through the skin and may cause symptoms as with acute inhalation, principally acidosis, central nervous system depression and optic neuritis.

Eyes: Splashes may cause temporary pain and blurred vision. Liquid may cause irritation and corneal burns if not promptly removed.

Ingestion: Central nervous system depression resembling intoxication by ethyl alcohol. Excitation is followed by impaired motor coordination, slurred speech, sensory disturbances such as blurred and double vision, drowsiness, loss of appetite, and an inability to concentrate. Convulsions may occur from hypoglycemia. The pupils may be normal or dilated. Shock may follow, with hypotension, tachycardia, cold pale skin, and hypothermia. Respiration may be slow. Death may occur from respiratory or circulatory failure or from aspiration pneumonitis.

Chronic Effects: Irritation of the eyes, nose, throat and mucus membranes of the upper respiratory tract. Repeated and prolonged exposure may cause conjunctivitis. Central nervous system effects such as dizziness and sleepiness can occur, as can dryness, irritation and inflammation of the skin. The denaturants in this formulation may cause chronic kidney and liver damage. Continued ingestion of small amounts may result in blindness.

ACUTE TOXICITY:

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

Ingredient	 Oral LD50 (Rat)	 Skin LD50(Rabbit)	 Inhalation LC50
ETHYL ALCOHOL	4060MG/KG	963MG/KG	20000PPM/10HR
ETHYL ACETATE	5.6-10.17G/KG	>180000MG/KG	>29.3MG/l/4H
METHYL ALCOHOL	5628MG/KG	15800MG/KG	64000PPM/4HR
METHYL ISOBUTYL KETONE	2080MG/KG	20000MG/KG	>3000PPM/6HR
HEPTANE OR	>15000MG/KG	222MG/KG	103000MG/M3/4HR
TOLUENE	636MG/KG	12124MG/KG	28800MG/M3/4HR

ETHYL ALCOHOL

SKIN CORROSION/IRRITATION : Skin - Rabbit Result: No skin irritation - 24 h (OECD Test Guideline 404)

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: Moderate eye irritation (OECD Test Guideline 405)

RESPIRATORY IRRITATION: No data available.

RESPIRATORY OR SKIN SENSITIZATION: No data available

MUTAGENIC EFFECTS: No information available.

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.

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

ETHYL ACETATE

SKIN CORROSION/IRRITATION: Skin - Rabbit Result: Mild skin irritation (OECD Test Guideline 404)

SERIOUS EYE DAMAGE/EYE IRRITATION: Causes serious eye irritation

RESPIRATORY OR SKIN SENSITIZATION:

Respiratory: No data available.

Skin: No data available.

MUTAGENIC EFFECTS: No Data Available

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.

Specific target organ toxicity (STOT-SE) - single exposure (Globally Harmonized System): May cause drowsiness or dizziness.

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

METHYL ALCOHOL (METHANOL):

SKIN CORROSION/IRRITATION : Irritating to skin.

SERIOUS EYE DAMAGE/EYE IRRITATION: Irritating to eyes. Risk of serious damage to eyes.

RESPIRATORY IRRITATION: Irritating to respiratory tract.

RESPIRATORY OR SKIN SENSITIZATION: No data available

MUTAGENIC EFFECTS: No data available.

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.

Specific target organ toxicity (STOT-SE) - single exposure (Globally Harmonized System): Causes damage to organs.

Specific target organ toxicity (STOT-RE) - repeated exposure (Globally Harmonized System): The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

METHYL ISOBUTYL KETONE:

SKIN CORROSION/IRRITATION: Skin - Rabbit Result: Mild skin irritation - 24 h

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: Moderate eye irritation - 24 h

RESPIRATORY OR SKIN SENSITIZATION: No data available.

MUTAGENIC EFFECTS: No data available.

CARCINOGEN STATUS: IARC: 2B - Group 2B: Possibly carcinogenic to humans (4-Methylpentan-2-one)

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.

Specific target organ toxicity (STOT-SE) - single exposure (Globally Harmonized System): May cause respiratory irritation.

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

HEPTANE:

SKIN CORROSION/IRRITATION: No data available

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: No eye irritation (OECD Test Guideline 405)

RESPIRATORY OR SKIN SENSITIZATION: No data available.

MUTAGENIC EFFECTS: No information available.

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.

Specific target organ toxicity (STOT-SE - single exposure (Globally Harmonized System): May cause respiratory irritation. May cause drowsiness or dizziness.

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

TOLUENE:

SKIN CORROSION/IRRITATION: Skin - Rabbit Result: Skin irritation - 24 h

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: No eye irritation (OECD Test Guideline 405)

RESPIRATORY OR SKIN SENSITIZATION: No data available.

MUTAGENIC EFFECTS: Germ cell mutagenicity Rat Liver DNA damage

CARCINOGEN STATUS: IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Toluene)

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 and OSHA.

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

REPRODUCTIVE TOXICITY: No data available.

ASPIRATION HAZARD: No data available

11.2 ADDITIONAL DATA: Alcohol may enhance the toxic effects.

12. ECOLOGICAL INFORMATION

DANGEROUS TO AQUATIC LIFE IN HIGH CONCENTRATIONS

May be dangerous if it enters water intakes.

Notify local health and pollution control officials.

Notify operators of nearby water intakes.

ETHYL ALCOHOL:

Toxicity to fish:

LC-50 Goldfish 250 PPM/6 hours-lethal in fresh water.

12.2 PERSISTANCE AND DEGRADABILITY:

12.3 BIOACCUMULATIVE POTENTIAL: No data available

Biological Oxygen Demand (BOD): 125% 5 days, 44.2% (theoretical) 5 days, 71.2% (theoretical) 20 days

Bio-concentration Factor (BCF): no data available.

12.4 MOBILITY IN SOIL: Mobile

12.5 RESULTS OF PBT AND vPvB ASSESSMENT: This substance does not meet the criteria for classification as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: Do not allow this material to enter streams, sewers and other waterways.

ETHYL ACETATE -

12.1 AQUATIC TOXICITY::

Toxicity to Fish

LC50 96-hour Fish (pimephales promelas) - 230ppm – 96 h

LC50 48-hour Fish (pimephales promelas) - 270ppm – 48 h

LC50 96-hour Fish (Salmo gairdneri) - 230ppm – 96 h

LC50 48-hour Fish (Salmo gairdneri) - 260ppm – 48 h

Toxicity to daphnia and other invertebrates:

EC50 48-hour crustacean (*Daphnia magna*) - 717ppm – 48 h

EC50 24-hour crustacean (*Daphnia magna*) - 1000 to 3090ppm – 24 h

12.2 PERSISTENCE AND DEGRADABILITY; Ethyl Acetate was readily biodegradable when tested according to OECD Guideline 301D.

BIODEGRADABILITY RESULT: The BOD5/COD ratio was 0.81 when tested under aerobic conditions a single test under anaerobic conditions indicated 100% degradation after 4 days. Result: 79 % - Readily biodegradable.

12.3 BIOACCUMULATIVE POTENTIAL: The log-n octanol/water partition coefficient was determined experimentally to be 0.6 to 0.73. These data indicate a low potential to bio-accumulate.

12.4 MOBILITY IN SOIL: No data available

12.5 RESULTS OF PBT AND vPvB ASSESSMENT: This substance does not meet the criteria for classification as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: Do not allow this material to enter streams, sewers and other waterways.

METHYL ALCOHOL:

Toxicity to fish:

LC50 - *Lepomis macrochirus* (Bluegill) - 15,400.0 mg/l - 96 hr

NOEC - *Oryzias latipes* - 7,900 mg/l - 200 hr

Toxicity to daphnia and other aquatic invertebrates:

EC50 - *Daphnia magna* (Water flea) - > 10,000.00 mg/l - 48 hr

Toxicity to algae Growth inhibition:

EC50 - *Scenedesmus capricornutum* (fresh water algae) - 22,000 mg/l -96 hr

12.2 PERSISTENCE AND DEGRADABILITY: Biodegradability aerobic; Result: 72 % - rapidly biodegradable

Biological Oxygen Demand (BOD): 0.6 to 1.2 lb/lb in 5 days

12.3 BIOACCUMULATIVE POTENTIAL: *Cyprinus carpio* (Carp) - 72 d at 20 °C

Bio-concentration Factor (BCF): 1.0

12.4 MOBILITY IN SOIL: No data available

12.5 RESULTS OF PBT AND vPvB ASSESSMENT: This substance does not meet the criteria for classification as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: Do not allow this material to enter streams, sewers and other waterways.

METHYL ISOBUTYL KETONE –

12.1 AQUATIC TOXICITY:

LC50 96-hour fish (*Fathead minnow*) 505-540ppm – 96 h

LC50 24-hour fish (*Goldfish*) 360-460ppm – 24 h

LC50 24-hour (brine shrimp) 1230ppm – 24 h

12.2 PERSISTENCE AND DEGRADABILITY: MIBK is readily biodegraded. 5 day BOD in freshwater ranged from 56 to 76% of THOD. The estimated half-life for volatilization from water is 15-33 hours.

Bioaccumulation: The log octanol/water partition coefficient is 1.31. This suggests that it has low potential to bio-concentrate in aquatic organisms.

12.4 MOBILITY IN SOIL: No data available

12.5 RESULTS OF PBT AND vPvB ASSESSMENT: This substance does not meet the criteria for classification as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: No data available

HEPTANE -

12.1 AQUATIC TOXICITY:

Toxicity to Fish:

LC50 - Carassius auratus (goldfish) - 4 mg/l - 24.0 h

LC50 - Tilapia mossambica - 375 mg/l - 96.0 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 - Daphnia magna (Water flea) - 1.50 mg/l - 48 h

12.2 PERSISTENCE AND DEGRADABILITY: Ratio BOD/ThBOD 3.5 %

12.3 BIOACCUMULATIVE POTENTIAL: Indication of bioaccumulation.

12.4 MOBILITY IN SOIL: no data available

12.5 RESULTS OF PBT AND vPvB ASSESSMENT: This substance does not meet the criteria for classification as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: No data available

TOLUENE -

12.1 AQUATIC TOXICITY:

Toxicity to Fish:

EC-50-Daphnia magna (Water flea) - 6 mg/l - 48 h LC50 - Oncorhynchus mykiss (rainbow trout) - 7.63 mg/l - 96 h

NOEC - Pimephales promelas (fathead minnow) - 5.44 mg/l - 7 d

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 8.00 mg/l - 24 h

12.2 PERSISTENCE AND DEGRADABILITY: Readily Biodegradable

Biological Oxygen Demand (BOD): 0% 5 days, 38% (theoretical.) 8 days

12.3 BIOACCUMULATIVE POTENTIAL

12.4 MOBILITY IN SOIL: no data available

12.5 RESULTS OF PBT AND vPvB ASSESSMENT: This substance does not meet the criteria for classification as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: No data available

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS: The waste material should be treated and/or disposed of at site authorized to handle hazardous chemical waste. Appropriate Federal, State and Local Regulatory Authorities should be contacted before discharge, treatment or disposal of waste material

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

If the waste is a spent solvent, the appropriate spent solvent code should be used.

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

14. TRANSPORT INFORMATION

Ground Transportation

- 14.1 USDOT ID Number-----> UN1987
- 14.2 USDOT Shipping Name-----> Alcohols, n.o.s.
- 14.3 USDOT Hazard Classification-----> 3 (Flammable Liquid)
USDOT Label Codes-----> 3 Required (if not excepted)
- 14.4 USDOT Package Code-----> II
- 14.5 Environmental hazard-----> None
- 14.6 Special precautions for user-----> None
Emergency Response Guide-----> 127
Reportable quantity-----> 5000lbs. (Methanol)

IMDG

- 14.1 ID Number-----> UN1987
- 14.2 Proper shipping name-----> ALCOHOLS N.O.S.
- 14.3 Hazard Classification-----> 3 (Flammable Liquid))
Label Codes-----> 3
- 14.4 Package Code-----> II
- 14.5 Environmental hazard-----> No
- 14.6 Special precautions for user-----> Yes
EMS-Number-----> F-E, S-D

IATA

- 14.1 ID Number-----> UN1987
- 14.2 Proper shipping name-----> Alcohols, n.o.s.
- 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

IMD

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) - Methanol CAS 67-56-1, Methyl Isobutyl Ketone CAS 108-10-1 and Toluene CAS 108-88-3 are listed

SECTION 311: Hazard Categorization (40 CFR 370) – Acute Health Hazard, Chronic Health Hazard, and Fire Hazard.

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

SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Listed

Reportable Quantity – Methanol - 5,000 pounds; Methyl Isobutyl Ketone – 5000lbs; Toluene – 1000lbs.

SECTION 101(14) Reportable Quantity: 5,000 lbs

Massachusetts Right to Know Components

Methanol CAS-No.67-56-1

Ethanol 64-17-5

Ethyl Acetate CAS-No. 141-78-6

Methyl Isobutyl Ketone CAS-No. 108-10-1

Heptane CAS-No. 142-82-5

Toluene CAS-No.108-88-3

Pennsylvania Right to Know Components

Methanol CAS-No.67-56-1

Ethanol 64-17-5

Ethyl Acetate CAS-No. 141-78-6

Methyl Isobutyl Ketone CAS-No. 108-10-1

Heptane CAS-No. 142-82-5

Toluene CAS-No.108-88-3

New Jersey Right to Know Components

Methanol CAS-No.67-56-1

Ethanol 64-17-5

Ethyl Acetate CAS-No. 141-78-6

Methyl Isobutyl Ketone CAS-No. 108-10-1

Heptane CAS-No. 142-82-5

Toluene CAS-No.108-88-3

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Toluene CAS-No.108-88-3

TSCA (Toxic Substance Control Act)

Methanol CAS-No.67-56-1

Ethanol 64-17-5

Ethyl Acetate CAS-No. 141-78-6

Methyl Isobutyl Ketone CAS-No. 108-10-1

Heptane CAS-No. 142-82-5

Toluene CAS-No.108-88-3

are listed on the TSCA Inventory.

15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has not been carried out for this substance.

16. OTHER INFORMATION:

Hazard Rating:

4-Extreme

3-High

2-Moderate

1-Slight

0-Insignificant

NFPA RATINGS (SCALE 0-4): Health=2 Fire=3 Reactivity=0
HMIS RATINGS (SCALE 0-4): Health=2 Fire=3 Reactivity=0 PPE=G

Hazard statement(s) from Section 2 and 3:

H225 Highly flammable liquid and vapor.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H370 Causes damage to organs.

Date of Preparation-----> January 13, 2004

Revision Number-----> 1.7

Revision Content-----> General update all sections

Revision Date-----> August 7, 2018

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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