

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

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME: **SPEC. DENATURED ALCOHOL 3A 200**

PRODUCT NUMBER(S): 260500

TRADE NAMES/SYNONYMS: Denatured Alcohol, SDA-3A Alcohol,

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

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Specific target organ toxicity - single exposure (Category 1), organs, H370

2.2 GHS Label elements, including precautionary statements



Pictogram

GHS02

GHS08

GHS07

Signal word: **DANGER**

Hazard statement(s)

H225 Highly flammable liquid and vapor.

H302 Harmful if swallowed.

H311 Toxic in contact with skin.

H331 Toxic if inhaled.

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

COMPONENT	CAS NO.	% BY WT.	CLASSIFICATION
Ethyl Alcohol	64-7-5 EC-No.200-578-6 Index-No.603-002-00-5 Reg.-No.1-2119457610-43-XXXX	95-96%	Flammable liquids (Category 2), H225
Methyl alcohol	67-56-1 EC-No.200-659-6 Index-No.603-001-00-X Reg.-No.0-2119433307-44-XXXX	4.0- 5.0%	Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 STOT-SE (Category 1), organs, H370
WATER	7732-18-5 EC-No. 231-791-2	0.1 max.	Not a hazardous substance or mixture.
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:

****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. Treat symptomatically and supportively. Administration of oxygen should be performed by qualified personnel. Get medical attention immediately.**

SKIN CONTACT:

****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:

****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 worn, after initial flush. Continue irrigating with normal saline until the ph has returned to normal (30-60 minutes). Cover with sterile bandages. Get medical attention immediately.**

INGESTION:

****FIRST AID- Removal of ethyl alcohol by gastric lavage with tap water or emesis should be performed by qualified medical personnel(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:

Inhalation: Irritation of mucus membranes, eyes, nose, throat and membranes of the upper respiratory tract. Central nervous system depression resembling intoxication by ethyl alcohol. Excitation is followed by impaired motor coordination, slurred (Dreisbach, Handbook of Poisoning, 11th ed.). Antidote should be administered by qualified medical personnel.

5. FIRE FIGHTING MEASURES

**FLASH POINT: 13°C (56°F) (CC) UPPER EXPLOSIVE LIMIT: 19% (V)
AUTOIGNITION TEMP: 363°C (685°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 FOR LARGER FIRES, USE WATER SPRAY, FOG OR ALCOHOL-RESISTANT FOAM

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: 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. Water fog may be used to cool closed containers to prevent pressure build up and possible auto ignition or explosion when exposed to extreme heat. Cool containers with water-fog from as far a distance as possible. Wear NIOSH/MSHA approved self-contained breathing apparatus (SCBA) 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. 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, drains 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 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. Stop leak if you can do it without risk. Use water spray to reduce vapors. For large

spills use water 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. Do not touch spilled material.

REPORTABLE QUANTITY (RQ): Methanol – 5000lbs; Blend (calculated) – 100000lbs. 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. 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:

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. 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. So 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.

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:

COMPONENT	CAS NO.	% BY WT.	EXPOSURE LIMITS
Ethyl Alcohol	64-7-5 EC-No.200-578-6 Index-No.603-002-00-5 Reg.-No.1-2119457610-43-XXXX	95-96%	1000PPM TWA (ACGIH) 1000PPM TWA (NIOSH) 1000PPM TWA (OSHA)
Methyl Alcohol	67-56-1 EC-No.200-659-6 Index-No.603-001-00-X Reg.-No.0-2119433307-44-XXXX	4.0%-5.0%	200PPM TWA (ACGIH) 250PPM STEL (ACGIH) 200PPM TWA (NIOSH) 250PPM STEL (NIOSH) 200PPM TWA (OSHA) 25000PPM IDLH
WATER	7732-18-5 EC-No. 231-791-2	0.1% max.	

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 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 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 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. Use chemical resistant apron or other impervious clothing. Remove and wash contaminated clothing before reuse.

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

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.

Contact lenses should not be worn.

Emergency shower and eyewash should be easily accessible to the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Special Denatured Alcohol (SDA) 3A 200

APPEARANCE:

Watery liquid

COLOR:

Colorless

ODOR:

Characteristic sweetish alcohol odor

ODOR THRESHOLD:

5-10ppm

pH:

No data available

MOLECULAR WEIGHT:

46.07 amu

MELTING POINT:

-144°C (-227°F)

BOILING POINT:

78°C (172°F)

SPECIFIC GRAVITY:

0.791@20°C (68.0°F)

DENSITY (25°C):

0.789 g/ml (20°C): 0.789 g/ml (20°C)

VAPOR PRESSURE:

48 mm Hg @ 20°C (68.0°F)

VAPOR DENSITY:

1.6

WATER SOLUBILITY:

Complete

PARTITION COEFFICIENT N-OCTANOL/WATER

No data available

FLASH POINT:

13°C (56°F)

EVAPORATION RATE (BUTYL ACETATE=1): 3.6

UPPER FLAMMABILITY LIMIT:

19% (V)

LOWER FLAMMABILITY LIMIT:

3.3% (V)

AUTO IGNITION TEMPERATURE:

363°C (685°F)

DECOMPOSITION TEMPERATURE:

No data available

VISCOSITY:

No data available

EXPLOSIVE PROPERTIES: No data available
OXIDIZING PROPERTIES: No data available

9.2 OTHER INFORMATION: No data available

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 INCOMPATIBILITIES: ETHYL ALCOHOL (ETHANOL):

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.

10.5 INCOMPATIBILITIES: 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 products may include toxic and hazardous fumes of formaldehyde and oxides of carbon.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

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

ACUTE HEALTH EFFECTS:

Effects of overexposure:

Inhalation: Irritation of mucus membranes, eyes, nose, throat and membranes of the upper respiratory tract. 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.

Skin: Irritation to skin results in cracking and flaking due to de-fatting action of the alcohol. Direct contact may cause mild redness and burning. High exposure can cause gastritis, blindness and death. Splashes may cause temporary pain and blurred vision. . Sensitization has occasionally been reported to occur in some individuals resulting in allergic contact dermatitis

Eye: Direct contact with the liquid may cause immediate burning and stinging, with reflex closure of the lids, tearing, temporary injury of the corneal epithelium, and hyperemia of the conjunctiva. Healing is usually spontaneous and complete. Vapors may cause irritation.

Ingestion: Ingestion may cause emotional lability and decreased inhibitions, with exhilaration, boastfulness, talkativeness, remorse, and belligerency; followed by gradual visual impairment, muscular in-coordination, slowing of reaction time, sensory disturbances, and slurring of speech. Other symptoms may include flushing of the face, dilated pupils, rapid pulse, nausea, vomiting, sweating, and diuresis. Ingestion of large amounts may cause confusion, disorientation, loss of motor nerve control, shallow respiration, involuntary defecation and urination, drowsiness, stupor, and possibly coma. Convulsions due to hypoglycemia and shock with hypotension, tachycardia, cold pale skin, hypothermia, respiratory depression, and decreased reflexes may occur. Death may occur from respiratory or circulatory failure or later from aspiration pneumonitis or pulmonary edema.

Chronic Effects:

Inhalation: Irritation of the eyes, nose, throat and mucus membranes of the upper respiratory tract. Central nervous system effects such as dizziness and sleepiness can occur.

Skin: Dryness, irritation and inflammation of the skin. Repeated or prolonged

contact with the liquid can cause de-fatting of the skin, producing a dry, fissured dermatitis, or other symptoms as in acute exposure

Ingestion: Ingestion of small amounts may result in blindness. Chronic exposure may cause cancer.

The denaturants in this formulation may cause chronic kidney and liver damage. Chronic intoxication may result in weight loss, degenerative changes in the liver, kidneys, and brain, gastroenteritis with anorexia and diarrhea, and cirrhosis of the liver. Repeated ingestion may cause visual impairment and blindness and other systemic effects as detailed in acute ingestion.

Eye: Prolonged or repeated exposure to vapors may cause conjunctivitis.

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	
Ethanol	4060mg/kg	963mg/kg	20000ppm/10h	
Methanol	1187mg/kg -2769mg/kg	17100mg/kg	87.6mg/L/6h	

ETHYL ALCOHOL: (ETHANOL)

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

ASPIRATION HAZARD: No data available.

11.2 ADDITIONAL INFORMATION: 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.

REPRODUCTIVE TOXICITY: Damage to fetus not classifiable Fertility classification not possible from current data.

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.

ASPIRATION HAZARD: No data available.

11.2 OTHER INFORMATION: Effects due to ingestion may include: Headache, Dizziness, Drowsiness, metabolic acidosis, Coma, Seizures., Methyl alcohol may be fatal or cause blindness if swallowed

AT INCREASED RISK FROM EXPOSURE: Persons with kidney, eye or skin disorders.

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:

12.1 AQUATIC TOXICITY

Toxicity to fish:

LC-50 *Carassius auratus* (Goldfish) 250 PPM - 6 h-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.

METHYL ALCOHOL:

12.1 ACUTE AQUATIC TOXICITY:

Toxicity to fish:

LC50 - Lepomis macrochirus (Bluegill) - 15,400.0 mg/L - 96 h

LC50 - Pimphales promelas (Fathead Minnow) - 28200 mg/L - 96 h

LC50 - Oncorhynchus mykiss (Rainbow Trout) - 19500-20700 mg/L - 96 h

NOEC - Oryzias latipes - 7,900 mg/L - 200 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 - Daphnia magna (Water flea) - > 10,000.00 mg/L - 48 h

Toxicity to algae Growth inhibition:

EC50 - Scenedesmus capricornutum (fresh water algae) - 22,000.0 mg/L -96hr

12.2 PERSISTENCE AND DEGRADABILITY: Result: 72 % - rapidly biodegradable

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

Bioconcentration factor (BCF): 1.0

Biochemical Oxygen Demand (BOD): 600 - 1,120 mg/g

Chemical Oxygen Demand (COD): 1,420 mg/g

No indication of bioaccumulation potential.

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.

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 or the appropriate spent solvent code.

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 Marine Pollutant-----> No
- 14.6 Special precautions for user-----> None
Emergency Response Guide-----> 127
Reportable quantity-----> 5000lbs.-Methanol, Blend – 100000lbs

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 Marine Pollutant-----> 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

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 Denaturant CAS-No.67-56-1

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

Methanol CAS-No.67-56-1<=4.65%

Acetaldehyde CAS 75-07-0<=0.001%; Acetone CAS-No.67-64-1<=0.0002%

Reportable Quantity - 5,000lbs; Blend (calculated) – 100000lbs.

SECTION 101(14) Reportable Quantity: 5,000 lbs; Blend (calculated) – 100000lb.

Massachusetts Right to Know Components

Methanol CAS-No.67-56-1

Ethanol CAS-No.64-17-5

Pennsylvania Right to Know Components

Methanol CAS-No.67-56-1

Ethanol CAS-No.64-17-5

New Jersey Right to Know Components

Methanol CAS-No.67-56-1

Ethanol CAS-No.64-17-5

California Prop. 65 Components

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

ATF (Alcohol Tobacco and Firearms)

Denatured Alcohol, formula 3A is regulated by the ATF and subject to certain record keeping and reporting requirements.

TSCA (Toxic Substance Control Act)

Ethanol CAS-No.64-17-5 and Methanol CAS-No.67-56-1 are listed on the TSCA Inventory.

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

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=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.**
- H311 Toxic in contact with skin.**
- H331 Toxic if inhaled.**
- H370 Causes damage to organs.**

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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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