

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

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME: REAGENT ALCOHOL DENATURED, ANHYDROUS
Also SPECIAL INDUSTRIAL SOLVENT (SOF 210 200)

PRODUCT NUMBER(S): 269900, 269910, 269920

TRADE NAMES/SYNONYMS: Denatured Alcohol; Reagent Grade Alcohol,
Alcohol Reagent

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

USES: Manufacture of substances. 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

Flammable liquids (Category 2), H225

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Eye irritation, (Category 2A), H319

Specific target organ toxicity - single exposure, central nervous system
(Category 1), H370, H336

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.
H319 Causes serious eye irritation.
H331 Toxic if inhaled
H336 May cause drowsiness or dizziness.
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.01-2119457610-43-XXXX	64-7-5	89.8%-90.7%	Flammable liquids (Category 2), H225
Methyl Alcohol EC-No.200-659-6 Index-No.603-001-00-X Reg.-No.01-2119433307-44-XXXX	67-56-1	4.7% - 4.8%	Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category3). H302 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 STOT-SE (Category 1), central nervous system H370
Isopropyl Alcohol EC-No.200-661-7 Index-No.603-117-00-0 Reg. No.01-2119457558-25-XXXX	67-63-0	4.9% - 5.1%	Flammable liquids (Category 2), H225 Eye Irritation (Category 2A), H319 STOT-SE (Category 3), central nervous system, H336
WATER EC-No. 231-791-2	7732-18-5	0.10% max	Not a hazardous substance or mixture.

Non-volatile Matter

0.001% max

OTHER CONTAMINANTS: 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. Exposure of humans to 1000-10,000 PPM has caused temporary irritation of the upper respiratory tract and coughing; and if continued, central nervous system depression with headache, stupor, fatigue, dizziness, drowsiness, dullness, lassitude and loss of appetite may occur.

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 inability to concentrate. 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.

Skin: Irritation to skin results in cracking and flaking due to de-fatting action of the alcohol.

Sensitization has occasionally been reported to occur in some individuals resulting in allergic contact dermatitis. High exposure can cause gastritis, blindness and death.

Eyes: Splashes may cause temporary pain and blurred vision. 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.

Chronic Effects: 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, 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. Chronic exposure may cause cancer.

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

****ANTIDOTE:****

The following antidote has been recommended. However, the decision as to whether the severity of poisoning requires administration of any antidote and actual dose required should be made by qualified medical personnel.

ETHANOL POISONING:

Naloxone, 0.01 MG/KG, intravenously, has an arousal effect in acute alcoholic coma (Dreisbach, Handbook of Poisoning, 11th ed.). Antidote should be administered by qualified medical personnel.

5. FIRE FIGHTING PROCEDURES

FLASH POINT: 14°C (57°F) (CC)

LOWER EXPLOSIVE LIMIT: 3.3% (V)

AUTOIGNITION TEMP.: 363°C (685°F)

UPPER EXPLOSIVE LIMIT: 19% (V)

UNIFORM FIRE CODE: Flammable Liquid Class 1B

5.1 EXTINGUISHING MEDIA:

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.

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 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. 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. 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. 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 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 – 5000lbs; Blend – 104167lbs.

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 prolonged or repeated contact with eyes, skin and clothing. Wash hands thoroughly after handling. 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.

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: 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). 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. In laboratory quantities, store away from oxidizing material, mineral acids, and chloroform. Do not use air pressure to unload denatured alcohol from 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.

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.

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	89.8%-90.7%	1000ppm TWA (ACGIH)
	EC-No.200-578-6		1000ppm TWA (OSHA)
	Index-No.603-002-00-5		1000ppm TWA (NIOSH)
	Reg.-No.01-2119457610-43-XXXX		
Methyl Alcohol	67-56-1	4.7% - 4.8%	200ppm TWA (ACGIH)
	EC-No.200-659-6		250ppm STEL (ACGIH)
	Index-No.603-001-00-X		200ppm TWA (OSHA)
	Reg.-No.01-2119433307-44-XXXX		200ppm TWA (NIOSH)
			250ppm STEL (NIOSH)
Isopropyl Alcohol	67-63-0	4.9% - 5.1%	200ppm TWA (ACGIH)
	EC-No.200-661-7		400ppm STEL (ACGIH)
	Index-No.603-117-00-0		400ppm TWA (OSHA)
	Reg. No.01-2119457558-25-XXXX		500ppm STEL (OSHA)

400ppm TWA (NIOSH)
500ppm STEL (NIOSH)

WATER 7732-18-5 0.10% max N.E.
 EC-No. 231-791-2

Non-volatile Matter 0.001% max

OTHER CONTAMINANTS: 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).

For 1 to 10 times occupation exposure limits:

Any MSHA/NIOSH approved 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.

For over 10 times occupational exposure limits:

Any approved '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 approved 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:

Reagent Alcohol denatured, anhydrous

APPEARANCE	Clear watery liquid
COLOR	Colorless
ODOR	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 - 80 °C (172 - 176 °F)
SPECIFIC GRAVITY:	0.80@20°C
DENSITY (25°C):	0.782 g/ml (25°C): 0.7893 g/ml (20°C)
VAPOR PRESSURE:	44.6 mm Hg @ 20°C (68.0°F)
VAPOR DENSITY:	1.6
WATER SOLUBILITY:	Complete
PARTITION COEFFICIENT N-OCTANOL/WATER	No data available
FLASH POINT:	14 °C (57 °F) - closed cup
EVAPORATION RATE (BUTYL ACETATE=1):	No data available

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:

Containers may rupture or explode if exposed to heat.

10.2 CHEMICAL STABILITY: Unstable () Stable (X)
Stable under normal conditions of use. 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, Sparks, Pilot Lights, Static Electricity, and Open Flame. Direct sunlight.

10.5 INCOMPATIBLE MATERIALS: 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.
See also alcohols.

10.5 INCOMPATIBLE MATERIALS: 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.

10.5 INCOMPATIBLE MATERIALS: ISOPROPYL ALCOHOL (ISOPROPNOL; 2-PROPANOL):

ACIDS: Incompatible.
ACIDS ANHYDRIDES: Incompatible.
ALUMINUM: Dissolution is exothermic.
BARIUM PERCHLORATE: Formation of explosive compound.
2-BUTANONE (METHYL ETHYL KETONE): Accelerates the peroxidation of the alcohol.
CHROMIUM TRIOXIDE (GRANULAR): Ignition.
COATINGS: May be attacked.
DIOXYGENYL TETRAFLUOROBORATE: Ignition at ambient temperatures.
HALOGENS: Incompatible.
HYDROGEN + PALLADIUM (PARTICLES): Ignition on exposure to air.
HYDROGEN PEROXIDE: Formation of explosive compound.
KETONES: Markedly increases the possibility of peroxidation.
NITROFORM (TRINITROMETHANE): Dissolves liberating heat and possibly exploding.
OLEUM: Temperature and pressure increase in closed container.
OXIDIZERS (STRONG): Fire and explosion hazard.
OXYGEN (GAS): Auto-oxidation, on exposure to light, results in formation of ketones and potentially explosive hydrogen peroxide.
PHOSGENE: In the presence of iron salts, may explode.
PLASTICS: May be attacked.
POTASSIUM TERT-BUTOXIDE: Ignition.
RUBBER: May be attacked.
SODIUM DICHROMATE + SULFURIC ACID: Exothermic reaction with possible incandescence.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS --> Flammable gases, Smoke, Carbon Monoxide, Carbon dioxide, formaldehyde, 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:

Inhalation: Irritation of mucus membranes, eyes, nose, throat and membranes of the upper respiratory tract. Exposure of humans to 1000-10,000 PPM has caused temporary irritation of the upper respiratory tract and coughing; and if continued, central nervous system depression with headache, stupor, fatigue, dizziness, drowsiness, dullness, lassitude and loss of appetite may occur.

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 inability to concentrate. 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.

Skin: Irritation to skin results in cracking and flaking due to de-fatting action of the alcohol.

Sensitization has occasionally been reported to occur in some individuals resulting in allergic contact dermatitis. High exposure can cause gastritis, blindness and death.

Eyes: Splashes may cause temporary pain and blurred vision. 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.

Chronic Effects: 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, 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. Chronic exposure may cause cancer.

ACUTE TOXICITY:

The effects of overexposure shown under Acute Health Effects are based on acute animal toxicity profiles. Typical values are:

Ingredient	 Oral LD50(Rat)	 Skin LD50(Rabbit) 	Inhalation LC50	
Ethanol	7060mg/kg	963mg/kg	20000ppm/10h	
Methanol	5628mg/kg	15800mg/kg	64000ppm/4h	
2-Propanol	5045mg/kg	12800mg/kg	16000ppm/8hr	

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 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.

REPRODUCTIVE TOXICITY: no data available

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: Allergic reactions to alcohols have been reported.

IRRITATION DATA: 400 MG open skin-rabbit mild; 20 MG/24 hours skin-rabbit moderate; 500 MG/24 hours eye-rabbit mild; 500 MG eye-rabbit severe; 100 MG/4 seconds rinsed eye-rabbit moderate.

39 GM/M3/4 hours inhalation-mouse LC50; 21,900 PPM inhalation-guinea pig LCLO; 20 GM/KG skin rabbit LDLO; 700 MG/KG oral-man TOLO; 2000 MG/KG oral-child LDLO; 14,400 MG/KG/30 minutes intermittent oral-child TDLO; 50 MG/KG oral-man TDLO; 1430 UG/KG oral-man TDLO; 256 GM/KG/12 weeks oral-woman TDLO; 1400 MG/KG oral-human LDLO;; 3450 MG/KG oral-mouse LD50; 6000 MG/KG oral-cat LDLO; 5500 MG/KG oral-dog LDLO; 6300 MG/KG oral-rabbit LD50; 5560 MG/KG oral-guinea pig LD50; 19,440 MG/KG subcutaneous-infant LDLO; 8285 MG/KG subcutaneous-mouse LD50; 2374 MG/KG intravenous-dog LDLO; 1973 MG/KG intravenous-mouse LD50; 2374 MG/KG intravenous-rabbit LD50; 4300 MG/KG dermal-mammal LD50; 3600 MG/KG dermal-rat LD50;

3000 MG/KG dermal-dog LDLO;; 933 MG/KG intra-mouse LD50,; 3414 MG/KG dermal-guinea pig LD50; 11 Mg/Kg intraarterial-rat LD50; 36 GM/KG parenteral-frog LDLO;

ACUTE TOXICITY LEVEL: Slightly toxic by inhalation and ingestion.

TARGET EFFECTS: Central nervous system depressant; hepatotoxin.

AT INCREASED RISK FROM EXPOSURE: Persons with liver disease.

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: 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, OSHA, or ACGIH.

REPRODUCTIVE TOXICITY: no data available

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 ADDITIONAL INFORMATION: Potentiates the effect of carbon tetrachloride and other hepatotoxic chlorinated aliphatic hydrocarbons

IRRITATION DATA: 20 MG/24 hours skin-rabbit moderate; 40 MG eye-rabbit moderate; 100 MG/24 hours eye-rabbit moderate.

86,000 MG/M3 inhalation-human TCLO; 300 PPM inhalation-human TCLO; 1000 PPM inhalation-monkey LCLO; 50 GM/M3/2 hours inhalation-mouse LCLO; 44,000 MG/M3/6 hours inhalation-cat LCLO;; 393 MG/KG skin-monkey LDLO; 428 MG/KG oral-human LDLO; 143 MG/KG oral-human LDLO; 6422 MG/KG oral-man LDLO; 3429 MG/KG ORAL-MAN TDLO; 4 GM/KG oral-woman TDLO; 7 GM/KG oral-monkey LD50;; 7300 MG/KG oral-mouse LD50; 14,200 MG/KG oral-rabbit LD50; 7500 MG/KG oral-dog LDLO; 9800 MG/KG subcutaneous-mouse LD50; 2131 MG/KG intravenous-rat LD50; 4710 MG/KG intravenous-mouse LD50; 8907 MG/KG intravenous-rabbit LD50; 4641 MG/KG intravenous-cat LDLO; 7529 MG/KG dermal-rat LD50; 10,765 MG/KG dermal-mouse LD50; 15800 MG/KG dermal-rabbit LD50; 3556 MG/KG dermal-guinea pig LD50; 8555 MG/KG dermal-hamster LD50; 868 MG/KG unreported-man LDLO;

ACUTE TOXICITY LEVEL: Slightly toxic by dermal absorption and ingestion; relatively non-toxic by inhalation.

TARGET EFFECTS: Central nervous system depressant; neurotoxin.

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

ISOPROPYL ALCOHOL (ISOPROPANOL; 2-PROPANOL):

Skin corrosion/irritation:

Based on available data, the classification criteria are not met

Serious eye damage/eye irritation: Category 2

Respiratory or Skin sensitization:

Respiratory: Based on available data, the classification criteria are not met

Skin: Based on available data, the classification criteria are not met

MUTAGENIC EFFECTS: No data available.

CARCINOGEN STATUS: Potential Human Carcinogen (IARC Group-3) For workers involved in the manufacture of isopropyl alcohol by the strong-acid process, involving the formation of isopropyl oils, showed an increase in paranasal and laryngeal cancer.

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 NTP, OSHA.

REPRODUCTIVE TOXICITY: no data available

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: Potentiates the effect of carbon tetrachloride and other hepatotoxic chlorinated aliphatic hydrocarbons.

IRRITATION DATA: 500 MG skin-rabbit mild; 100 MG/eye-rabbit severe; 10 MG eye-rabbit moderate; 100 MG/24 hours eye-rabbit moderate.

12,800 PPM/3 hours inhalation-mouse LCLO; 5272 MG/KG oral-man LDLO; 14,432 MG/KG oral-man TDLO; 3570 MG/KG oral-human LDLO; 223 MG/KG oral-human TDLO;; 3600 MG/KG oral-mouse LD50; 6410 MG/KG oral-rabbit LD50; 1537 MG/KG oral-dog LDLO; 6 MG/KG subcutaneous-mammal LDLO; 6 GM/KG subcutaneous-mouse LDLO; 1088 MG/KG intravenous-rat LD50; 1509 MG/KG intravenous-mouse LD50; 1184 MG/KG intravenous-rabbit LD50; 1963 MG/KG intravenous-cat LDLO; 1024 MG/KG intravenous-dog LDLO; 2735 MG/KG dermal-rat LD50; 4477 MG/KG dermal-mouse LD50;; 2560 MG/KG dermal-guinea pig LD50; 3444 MG/KG dermal-hamster LD50; 2770 MG/KG unreported-man LDLO;

ACUTE TOXICITY LEVEL: Slightly toxic by ingestion, dermal absorption.

TARGET EFFECTS: Central nervous system depressant.

AT INCREASED RISK FROM EXPOSURE: Persons with pre-existing skin disorders; impaired liver, renal and/or pulmonary function.

12. ECOLOGICAL INFORMATION

DANGEROUS TO AQUATIC LIFE IN HIGH CONCENTRATIONS

May be dangerous if it enters water intakes.

Notify local health and wildlife officials.

Notify operators of nearby water intakes.

12.1 AQUATIC TOXICITY:

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

BIOCONCENTRATION 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.

12.1 AQUATIC TOXICITY;

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 PERSISTANCE 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:

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.

12.1 AQUATIC TOXICITY:

ISOPROPYL ALCOHOL:

Toxicity to Fish:

LC50 Chub 900-1100 PPM/24 hours-in critical range in fresh water

Toxicity to fish:

LC50 - Pimephales promelas (fathead minnow) - 9,640.00 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 - Daphnia magna (Water flea) - 5,102.00 mg/l - 24 h

Immobilization EC50 - Daphnia magna (Water flea) - 6,851 mg/l - 24 h

Toxicity to algae:

EC50 - Desmodesmus subspicatus (green algae) - > 2,000.00 mg/l - 72 h

EC50 - Algae - > 1,000.00 mg/l - 24 h

12.2 PERSISTANCE AND DEGRADABILITY: Biodegradation: 95%/21days. Readily Biodegradable

12.3 BIOACCUMULATIVE POTENTIAL: No bioaccumulation is to be expected.

Biological Oxygen Demand (BOD): 133% 5 days

Bio-concentration Factor (BCF): no data available

12.4 MOBILITY IN SOIL:

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. Methanol – U154
DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 48 CFR 262

14. TRANSPORT INFORMATION

- 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 (Flammable Liquid)
- 14.4 USDOT Package Code-----> II
- 14.5 Environmental hazard-----> None
- 14.6 Special precautions for user-----> None
Emergency Response Guide-----> 127
Reportable quantity-----> 104167lbs. (Blend)

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-----> None
- 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) - Listed Component

Methanol CAS-No.67-56-1

SECTION 311/312 Categories: Acute Health Hazard; Chronic Health Hazard; 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 Reportable Quantity - Methanol - 5,000 pounds; Blend – 1045167lbs.

SECTION 101(14) Reportable Quantity: Methanol - 5,000lbs; Blend – 104167lbs.

State Right to Know

Environmental Hazardous Substance List: All components Listed, Massachusetts, New Jersey, Pennsylvania and Rhode Island

Massachusetts Right to Know Components

Methanol CAS-No.67-56-1

Ethanol 64-17-5

2-Propanol 67-63-0

Pennsylvania Right to Know Components

Methanol CAS-No.67-56-1

Ethanol 64-17-5

2-Propanol 67-63-0

New Jersey Right to Know Components

Methanol CAS-No.67-56-1

Ethanol 64-17-5

2-Propanol 67-63-0

California Prop. 65 Components

This product contains a chemical known to State of California to cause birth defects or other reproductive harm. Methanol CAS-No.67-56-1

ATF (Alcohol Tobacco and Firearms)

Reagent Alcohol, is regulated by the ATF and subject to certain record keeping and reporting requirements

TSCA (Toxic Substance Control Act)

Methanol CAS-No.67-56-1, Ethanol 64-17-5, and 2-Propanol 67-63-0 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:

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.**
- H319 Causes serious eye irritation.**
- H331 Toxic if inhaled**
- H336 May cause drowsiness or dizziness.**
- H370 Causes damage to organs.**

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Revision Content-----> Updated sections: 3, 6, 8, 10, 11, 14&15

Revision Date-----> December 31, 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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