

**SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION**

**1.1 Product identifier**

**Product name:** Crown Alcohol Stove Fuel  
**SDS number:** CR.AS  
**Synonym(s):** Denatured alcohol; Denatured methanol

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

**General use:** Fuel for alcohol fuel stoves; use only in well ventilated areas  
**Uses advised against:** No data available

**1.3 Details of the supplier and of the safety data sheet**

**Manufacturer/Distributor**  
 SolvChem Consumer Products  
 1904 Mykawa Road  
 Pearland, TX 77581-3210 USA  
 1-281-485-1458

**1.4 Emergency telephone number**

CHEMTREC: 1-800-424-9300 (USA)  
 CANUTEC: 1-613-996-6666 (Canada)

**SECTION 2 - HAZARDS IDENTIFICATION**

**2.1 Classification of substance or mixture**

**Product definition:** Mixture  
**Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation EC No. 1272/2008**  
 Flammable Liquid - Category 2 [H225]  
 Acute Toxicity, Oral - Category 3 [H301]  
 Acute Toxicity, Dermal - Category 3 [H311]  
 Eye Irritation - Category 2B [H320]  
 Acute Toxicity, Inhalation - Category 3 [H331]  
 Single Target Organ Toxicity, Single Exposure - Category 1; STOT RE 1 [H370]

**2.2 Label elements**

**Hazard symbol(s):**



**Signal word:** Danger  
**Hazard statement(s):** H225 - Highly flammable liquid and vapor  
 H301 - Toxic if swallowed  
 H311 - Toxic in contact with skin  
 H320 - Causes eye irritation  
 H331 - Toxic if inhaled  
 H370 - Causes damage to the central nervous system, optic nerve, liver and kidneys

**Precautionary statements:**

**[Prevention]** P210 - Keep away from heat, open flames and hot surfaces. No smoking.  
 P233 - Keep container tightly closed.  
 P240 - Ground and bond container and receiving equipment.  
 P241 + P242 - Use explosion proof electrical, ventilating and lighting equipment. Use only non-sparking tools.  
 P243 - Take precautionary measures against static discharge.  
 P260 - Do not breathe mist and vapor.  
 P264 - Wash hands and other exposed skin areas thoroughly after handling.  
 P270 - Do not eat, drink or smoke when using this product.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P280 - Wear protective gloves, protective clothing and eye protection.

**[Response]** P301 + P330 + P310 - IF SWALLOWED: Rinse mouth. Immediately call a POISON CENTER or doctor.  
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water or shower.  
 P304 + P340 + P311 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor.  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
 P321 + P312 - Specific treatment: Call a POISON CENTER or doctor if you feel unwell. Refer to Section 4 of this SDS.

P337 + P313 - If eye irritation persists: Get medical attention.  
P361 + P363 - Take off immediately all contaminated clothing and wash before reuse.  
P370 + P378 - In case of fire: Use water fog, foam, dry chemical or carbon dioxide for extinction.  
P405 + P403 + P235 + P233 - Store locked up in a well-ventilated place. Keep cool. Keep container tightly closed.  
P501 - Dispose of contents and containers in accordance with national and local regulations.

[Storage]  
[Disposal]

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

Suspected of causing cancer. Repeated exposure may cause skin dryness or cracking.

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Not applicable

### 3.2 Mixtures

% by Weight	Ingredient	CAS Number	EC Number	Index Number	GHS Classification
65 - 85	Methanol	67-56-1	200-659-6	603-001-00-X	H225, H301, H311, H331, H370
20 - 30	Ethanol	64-17-5	200-578-6	603-002-00-5	H225
0.5 - 3	Isopropanol	67-63-0	200-661-7	603-117-00-0	H225, H319, H336
0.1 - 1	Methyl Isobutyl Ketone	108-10-1	203-550-1	606-004-00-4	H225, H319, H332, H335

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with the applicable provisions of paragraph (i).

There are no additional ingredients present in this product which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

## SECTION 4 – FIRST AID MEASURES

### 4.1 Description of first aid measures

**Inhalation:** If product mist or vapor causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. If unconscious, maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If symptoms persist or if the victim feels unwell, seek medical attention.

**Eyes:** Immediately flush eyes with large amounts of water or saline solution for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do after first 2 minutes and continue rinsing. If irritation persists seek medical attention, preferably from an ophthalmologist.

**Skin:** Flush skin with large amounts of water while removing contaminated clothing. Wash the affected area with soap and water followed by thorough rinsing. Wash contaminated clothing and shoes before reuse. If irritation persists or if the victim feels unwell, seek medical attention.

**Ingestion:** Rinse mouth with water if the victim is conscious. Remove dentures if present. DO NOT induce vomiting unless directed to do so by medical personnel. Vomiting may occur spontaneously. To prevent aspiration of vomit into the lungs, lay the victim on one side with the head lower than the waist. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended. Seek immediate medical attention.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Potential health symptoms and effects

**Eyes:** Causes eye irritation with inflammation, swelling, stinging, tearing and discomfort. Risk of corneal clouding or corneal injury. May cause painful sensitization to light. Continued exposure may cause lesions. Vapor or mist can cause eye irritation.

**Skin:** Toxic if absorbed through the skin. May cause skin irritation with localized redness, itching and discomfort. Prolonged contact with unprotected skin may cause defatting of the skin and dermatitis.

**Inhalation:** Toxic if inhaled. Irritating to mucous membranes and to the respiratory system. Causes central nervous system depression and particularly affects the optic nerve. Symptoms of over-exposure may include headache, drowsiness, dizziness, nausea, vomiting, impaired vision, blindness, narcosis, coma and death. Inhalation of mist may cause edemas in the lungs and respiratory system. Prolonged and repeated inhalation of vapor or mist may cause damage to the central nervous system, liver and kidneys. May damage fertility and the unborn child.

**Ingestion:** Toxic if swallowed. May cause irritation of the digestive tract with nausea, vomiting, abdominal pain and diarrhea. Symptoms are similar to those for acute inhalation, but severity and speed of appearance may be greater. May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May cause liver and kidney damage. Symptoms may be delayed.

**Chronic:** Pre-existing skin, eye and respiratory disorders may be aggravated by exposure to this product. Prolonged or repeated skin contact may cause drying and cracking of the skin, dermatitis or aggravate existing skin conditions. Prolonged and repeated inhalation of vapor or mist may cause permanent brain and nervous system damage. Chronic exposure may cause damage to the liver and kidneys. Impaired kidney, liver and central nervous system functions from pre-existing disorders may be aggravated by exposure to this product. Exposure may cause degeneration of the optic nerve, resulting in impaired vision. Chronic exposures may cause reproductive disorders and teratogenic effects. Chronic inhalation can damage the central nervous system. Methyl isobutyl ketone is a possible human carcinogen. Isopropanol may be carcinogenic to humans. Refer to Section 11.2.

### 4.3 Indication of any immediate medical attention and special treatment needed

#### Advice to doctor and hospital personnel

Treat symptomatically and supportively. Effects may be delayed. Ethanol may inhibit methanol metabolism.

## SECTION 5 – FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

**Suitable methods of extinction:** Use extinguishing media such as water spray or fog, carbon dioxide, foam and dry chemical.

**Unsuitable methods of extinction:** Water jets or streams may spread the fire.

### 5.2 Special hazards arising from the substance or mixture

Highly flammable liquid and vapor! Vapors are heavier than air and can travel along the ground to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Exposure to ignition sources (e.g. cell phones) can ignite vapors, causing a flash fire. Closed containers may explode due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.

**Explosion hazards:** Keep away from heat, hot surfaces and sources of ignition. Vapors may form an explosive mixture with air, especially in confined spaces. Ground and bond containers in storage and when container is in use.

### 5.3 Advice to firefighters

Firefighters should wear full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If possible, firefighters should control runoff to prevent environmental contamination. Notify appropriate authorities of potential fire and explosion hazard if liquid enters sewers or waterways.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Evacuate non-essential personnel. Wear appropriate protective clothing and equipment designated in Section 8.2. Ventilate the area. Remove all sources of ignition. NO SMOKING. Clean up spills immediately. Spill creates a slip hazard.

### 6.2 Environmental precautions

Avoid dispersal of spilled material or runoff and prevent contact with soil and entry into drains, sewers or waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements.

### 6.3 Methods and materials for containment and cleaning up

Approach spill from upwind direction. DO NOT flush spill down the drain. Cover drains and contain spill. Cover spill with a large quantity of inert absorbent. Do not use combustible material such as sawdust. Collect material using non-sparking tools and place into an approved container for proper disposal. Observe possible material restrictions (Sections 7.2 and 10.5). Do not allow material or runoff from rinsing contaminated areas to enter floor drains or storm drains and ditches that lead to waterways. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

For indications about waste treatment, see Section 13.

## SECTION 7 – STORAGE AND HANDLING

### 7.1 Precautions for safe handling

Wear all appropriate personal protective equipment specified in Section 8.2. Do not get in eyes or on skin or clothing. Do not inhale mist or vapor. NO SMOKING. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Open containers slowly to control possible pressure release. Wash contaminated clothing and shoes thoroughly before reuse.

#### Advice on protection against fire and explosion

Keep away from heat, hot surfaces and sources of ignition. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in dry, cool, well-ventilated areas away from incompatible materials (see Section 10.5), food and drink. Keep away from heat and ignition sources. Transfer only to approved containers having correct labeling. Keep containers tightly closed when not in use. Protect containers against physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Containers are hazardous when empty as they contain product residue. Do not cut, drill, weld, braze, solder grind or perform similar operations on or near empty containers. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. Keep out of reach of children.

### 7.3 Specific end uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

## SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Occupational exposure limit values

CAS Number	Ingredient	OSHA PEL	ACGIH TLV	NIOSH
64-17-5	Ethanol	1,000 ppm; 1,900 mg/m <sup>3</sup> TWA	1,000 ppm; 1,880 mg/m <sup>3</sup> TWA	1,000 ppm; 1,900 mg/m <sup>3</sup> TWA; 3,300 ppm IDLH

67-63-0	Isopropanol	400 ppm; 980 mg/m <sup>3</sup> TWA	200 ppm; 941 mg/m <sup>3</sup> TWA 400 ppm; 984 mg/m <sup>3</sup> STEL	400 ppm; 980 mg/m <sup>3</sup> TWA 500 ppm; 1,225 mg/m <sup>3</sup> STEL 2,000 ppm IDLH
67-56-1	Methanol	200 ppm; 260 mg/m <sup>3</sup> TWA	200 ppm; 160 mg/m <sup>3</sup> TWA 250 ppm; 327 mg/m <sup>3</sup> STEL Skin	200 ppm; 260 mg/m <sup>3</sup> TWA 250 ppm; 325 mg/m <sup>3</sup> STEL 6,000 ppm IDLH; Skin
108-10-1	Methyl Isobutyl Ketone	250 ppm; 590 mg/m <sup>3</sup> TWA	20 ppm	50 ppm; 205 mg/m <sup>3</sup> TWA 75 ppm; 300 mg/m <sup>3</sup> STEL 500 ppm IDLH

A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material, including eyes and mucous membranes, either by direct contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposure should be considered.

## 8.2 Exposure controls

**Engineering measures:** Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable. Refer to Section 7.1.

**Individual protection measures:** Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

**Hygiene measures:** Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking, smoking or using the lavatory.

**Eye/face protection:** Wear safety glasses with unperforated side shields or protective splash goggles during use.

**Hand protection:** Wear gloves made of nylon, butyl or Nitrile rubber or those recommended by glove supplier for protection against materials in Section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be greater than the intended use period.

**Skin protection:** Wear protective clothing. Wear protective boots if the situation requires.

**Respiratory protection:** Always use an approved respirator when vapor/aerosols exceed permissible exposure limits. Where risk assessment shows air-purifying respirators are appropriate use a half-mask respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

**Environmental exposure controls:** Do not empty into drains.

*PPE must not be considered a long-term solution to exposure control. PPE usage must be accompanied by employer programs to properly select, maintain, clean fit and use. Consult a competent industrial hygiene resource to determine hazard potential and/or the PPE manufacturers to ensure adequate protection*



## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

<b>Appearance</b>	Clear, colorless liquid
<b>Odor</b>	Alcoholic
<b>Odor Threshold</b>	No data available
<b>Molecular Weight</b>	Not applicable
<b>Chemical Formula</b>	Not applicable
<b>pH</b>	No data available
<b>Freezing/Melting Point</b>	No data available
<b>Boiling Point Range</b>	64.5 - 116 °C (148 - 241 °F)
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas)</b>	Not applicable
<b>Flash Point</b>	11 °C (58.1 °F) [estimated]
<b>Autoignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Lower Explosive Limit (LEL)</b>	No data available
<b>Upper Explosive Limit (UEL)</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	No data available
<b>Specific Gravity</b>	0.7875 - 0.7975 [calculated]
<b>Density</b>	0.788 - 0.796 g/ml (6.57 - 6.66 lb/gal) [calculated]

Viscosity	No data available
Solubility in Water	No data available
Partition Coefficient (n-octanol/water)	log P <sub>ow</sub> = -0.82 - 1.9
Oxidizing Properties	Not applicable
Explosive Properties	Not applicable
Volatiles by Weight @ 21 °C	100%
VOC Content @ 21 °C	100%

## 9.2 Other Data

Flammability Classification	IB
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## SECTION 10 – STABILITY AND REACTIVITY

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### 10.1 Reactivity

This material is stable under normal handling conditions and use.

### 10.2 Chemical Stability

This material is stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Vapors may form explosive mixture with air. May react exothermically with some incompatible materials. Hazardous polymerization will not occur.

### 10.4 Conditions to avoid

Avoid exposure to high temperatures, sources of ignition, hot surfaces and contact with incompatible materials. Avoid use in confined areas. May be corrosive to lead, aluminum, magnesium and platinum.

### 10.5 Incompatible materials

Strong oxidizing agents, strong acids, strong bases, acid anhydrides, aluminum, halogenated compounds, peroxides

### 10.6 Hazardous decomposition products

Thermal decomposition products include oxides of carbon, formic acid, formaldehyde, toxic fumes and gases.

## SECTION 11 – TOXICOLOGICAL INFORMATION

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### 11.1 Information on toxicological effects

#### Acute oral toxicity

LD<sub>50</sub>, rat: 1,517 - 3,382 mg/kg [calculated]

LD<sub>Lo</sub>, Human: 193.5 mg/kg [methanol, calculated]

#### Acute inhalation toxicity

LC<sub>50</sub>, rat: 93.6 mg/l, 4 h [calculated]

#### Acute dermal toxicity

LD<sub>50</sub>, rabbit: > 5,000 mg/kg [calculated]

#### Skin irritation

May cause skin irritation.

#### Eye irritation

Causes eye irritation.

#### Sensitization

No data available

#### Genotoxicity in vitro

No data available

#### Mutagenicity

No data available

#### Specific organ toxicity - single exposure

May cause respiratory irritation, drowsiness or dizziness. Causes damage to the central nervous system, optic nerve, liver and kidneys.

#### Specific organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available

### 11.2 Further information

**Ethanol** (CAS #64-17-5): Carcinogen classifications of IARC, ACGIH, NTP, OSHA and California Proposition 65 apply to *beverage use only*.

This product is NOT intended for this use. Ethanol has been shown to produce fetotoxicity in the embryo or fetus of laboratory animals. Prenatal exposure to ethanol is associated with congenital malformations that have collectively been termed "fetal alcohol syndrome".

**Isopropanol** (CAS #67-63-0): IARC, Group 3 carcinogen - *Not classifiable as to its carcinogenicity to humans*. Not listed as a carcinogen by ACGIH, NTP or OSHA.

**Methanol** (CAS #67-56-1) is slowly eliminated from the body; therefore, it can have cumulative toxicity effects with repeated exposures. Ingestion of 100 - 125 ml (3 - 4 oz.) can be fatal or cause serious, irreversible injury such as blindness. May cause liver disorders (e.g. edema, proteinuria) and damage. Significant exposure to methanol may adversely affect people with chronic disease of the respiratory system, central nervous system, kidneys, liver, skin and/or eyes.

Methanol is a potential hazard to the fetus. Developmental effects have been observed in the offspring of rats and mice exposed to methanol by inhalation. These included skeletal, cardiovascular, urinary system and central nervous system (CNS) malformations in rats and increased resorptions and skeletal and CNS malformations in mice.

**Methyl Isobutyl Ketone** (CAS #108-10-1): IARC Group 2B carcinogen - *Possibly carcinogenic to humans*. ACGIH A3 carcinogen - *Confirmed animal carcinogen with unknown relevance to humans*. Not listed as a carcinogen by NTP or OSHA. Kidney effects and/or tumors have been observed in male rats. This substance has been toxic to the fetus in laboratory animals at doses toxic to the mother. It did not cause birth defects in test animals.

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 12 - ECOLOGICAL INFORMATION

### 12.1 Toxicity

Large spills or discharges of this material may be harmful to aquatic life. Methanol is dangerous to aquatic life in high concentrations. A study of methanol's toxic effects on sewage sludge bacteria reported little effect on digestion at 0.1% while 0.5% methanol retarded digestion. Methanol will be broken down into carbon dioxide and water.

### 12.2 Persistence and degradability

This product is biodegradable.

### 12.3 Bioaccumulation potential

The bioaccumulation potential for this material is low.

### 12.4 Mobility in soil

Mobility in soil is high and may cause contamination of ground water.

### 12.5 Results of PBT and vPvB assessment

This material contains no substances that are persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

### 12.6 Other effects

#### Additional ecological information

Do not allow material to run into surface waters, wastewater or soil.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## SECTION 13 – DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Methods of disposal: The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14 – TRANSPORTATION INFORMATION

**Note:** Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

*Limited quantity for flammable liquids in Packing Group II when inner packagings are not over 1.0 liter (0.3 gallon) net capacity each, packed in a strong outer packaging.*

#### USA DOT (Ground Transportation) - Bulk and Non-bulk

<b>Proper Shipping Name</b>	Alcohols, n.o.s.
<b>Hazard Class</b>	3
<b>UN</b>	UN1987
<b>Packing Group</b>	II
<b>NAREG</b>	Guide #127
<b>Packaging Authorization</b>	Non-Bulk: 49 CFR 173.202; Bulk: 173.242
<b>Packaging Exceptions</b>	49 CFR 173.150

#### IMO/IMDG (Water Transportation)

<b>Proper Shipping Name</b>	Alcohols, flammable, toxic n.o.s. (Methanol, Ethanol)
<b>Hazard Class</b>	3 (6.1)
<b>UN</b>	UN1986
<b>Packing Group</b>	II
<b>Marine Pollutant</b>	No
<b>EMS Number</b>	F-E, S-D

#### Drum Label(s)



Class 6 placard for use with UN1986



**ICAO/IATA (Air Transportation)**

**Proper Shipping Name** Alcohols, flammable, toxic n.o.s. (Methanol, Ethanol)  
**Hazard Class** 3 (6.1)  
**UN** UN1986  
**Packing Group** II  
**Quantity Limitations** 49 CFR 175.27 and 175.75 - Cargo Aircraft Only: 60 l; Passenger Aircraft: 1 l

**RID/ADR (Rail Transportation)**

**Proper Shipping Name** Alcohols, n.o.s.  
**Hazard Class** 3  
**UN** UN1987  
**Packing Group** II

**SECTION 15 - REGULATORY INFORMATION**

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**15.1 Safety, health and environmental regulations/legislation specific for substance or mixture****U. S. Federal Regulations**

**OSHA Hazard Communication Standard:** This material is classified as hazardous in accordance with OSHA 29 CFR 1910-1200.

**OSHA Process Safety Management Standard:** This product is not regulated under OSHA PSM Standard 29 CFR 1910.119.

**EPA Risk Management Planning Standard:** This product is not regulated under EPA RMP Standard (RMP) 40 CFR Part 68.

**EPA Federal Insecticide, Fungicide and Rodenticide Act:** This product is not a registered Pesticide under the FIFRA, 40 CFR Part 150.

**Toxic Substance Control Act (TSCA) Inventory:** All substances in this product are listed on the TSCA Inventory. This product is not subject to TSCA 12(b) Export Notification.

**Drug Enforcement Administration (DEA) List 2, Essential Chemicals (21 CFR 1310.02(b)) and 1310.4(f)(2)) and Chemical Code Number:**  
No listings

**Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number**

*Methyl Isobutyl Ketone* (CAS #108-10-1): List 2, DEA Chemical code 6594; 35% by Weight or Volume; exports only; limit applies to methyl isobutyl ketone or any combination of acetone, ethyl ether, 2-butanone, methyl isobutyl ketone, and toluene if present in the mixture by summing the concentrations for each chemical

**Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals:** No listings

**Superfund Amendments and Reauthorization Act (SARA)****SARA Section 311/312 Hazard Categories**

Highly flammable liquid and vapor Causes eye irritation  
Toxic if swallowed, inhaled or in contact with skin Causes damage to the central nervous system, optic nerve, liver and kidneys

**SARA 313 Information:** Isopropanol, Methanol and Methyl Isobutyl Ketone are subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to Know Act of 1986.

**SARA 302/304 Extremely Hazardous Substance:** None of the components of the product exceed the threshold (de minimis) reporting levels of established by these sections of Title III of SARA.

**SARA 302/304 Emergency Planning & Notification:** None of the components of the product exceed the threshold (de minimis) reporting levels established by of these sections of Title III of SARA.

**Comprehensive Response Compensation and Liability Act (CERCLA):** This product contains the following CERCLA reportable substance:  
Methanol (CAS #67-56-1): RQ = 2,268 kg (5,000 lb) Methyl Isobutyl Ketone (CAS #108-10-1): RQ = 2,268 kg (5,000 lb)

This product has a Reportable Quantity (RQ) of 7,174.6 lb. (1,085.5 gal) based on the RQ for *methanol* of 5,000 lb. Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**Clean Air Act (CAA)**

Methanol and Methyl Isobutyl Ketone are Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).  
This product does not contain Class 1 Ozone depleters.  
This product does not contain Class 2 Ozone depleters.

**Clean Water Act (CWA)**

Methanol and Methyl Isobutyl Ketone are Hazardous Substances.  
This product does not contain Priority Pollutants.  
This product does not contain Toxic Pollutants.

**U.S. State Regulations****California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986**

**⚠️ WARNING:** This product will expose you to Methyl Isobutyl Ketone, which is known to the state of California to cause cancer. This product will expose you to Methanol, which is known to the state of California to cause birth defects or reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**Other U.S. State Inventories**

*Ethanol* (CAS #64-17-5) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, ID, MA, MN, NJ, PA, WA.

*Isopropanol (CAS #67-63-0)* is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, DE, ID, ME, MA, MN, NJ, NY, PA, RI, WA, WI.

*Methanol (CAS #67-56-1)* is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, DE, ID, IL, ME, MA, MN, NJ, NY, NC, PA, RI, WA.

*Methyl Isobutyl Ketone (CAS #108-10-1)* is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, DE, ID, IL, MA, MN, NJ, NY, PA, RI, WI, WV.

#### Canada

##### WHMIS Hazard Classification

Highly flammable liquid and vapor	Causes serious eye irritation	May damage fertility or the unborn child
Toxic if swallowed	May cause drowsiness or dizziness	Causes damage to organs

**Canadian National Pollutant Release Inventory (NPRI):** Isopropanol, Methanol and Methyl Isobutyl Ketone are listed on the NPRI.

##### European Economic Community

**WGK, Germany (Water danger/protection):** 2 (obviously hazardous to waters)

##### Global Chemical Inventory Lists

Country	Inventory Name	Listed
Canada	Domestic Substance List (DSL)	Yes
Canada	Non-Domestic Substance List (NDSL)	No
Europe	Inventory of New and Existing Chemicals (EINECS)	Yes
United States	Toxic Substance Control Act (TSCA)	Yes
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (KECI)	Yes
Philippines	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Yes

\*Yes - All components of this product comply with the inventory requirements administered by the governing country.

No - One or more components of this product are not on the inventory or are exempt from listing.

## 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

## SECTION 16 - OTHER INFORMATION

### Hazardous Material Information System (HMIS)

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL HAZARD		0
PERSONAL PROTECTION		C

C = safety glasses, gloves & apron

#### HMIS Hazard Rating Legend

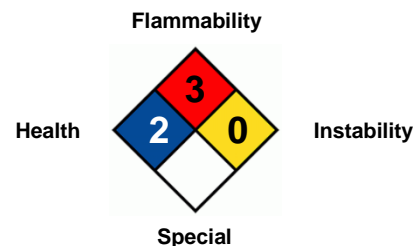
0 = Minimal 1 = Slight 2 = Moderate  
3 = Serious 4 = Severe

\* = Chronic Health Hazard

#### NFPA Hazard Rating Legend

0 = Insignificant 1 = Slight 2 = Moderate  
3 = High 4 = Extreme

### National Fire Protection Association (NFPA)



### Full Text of GHS Hazard Phrases Referenced in Section 3 (not covered in Section 2)

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness

#### Abbreviation Key

<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists	<b>LD<sub>50</sub></b>	Lowest Lethal Dose
<b>ADR</b>	Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road)	<b>mppcf</b>	Millions of Particles Per Cubic Foot
<b>CAS</b>	Chemical Abstract Services	<b>NA</b>	North America
<b>CFR</b>	Code of Federal Regulations	<b>NAERG</b>	North American Emergency Response Guide Book
<b>COC</b>	Cleveland Open Cup	<b>NIOSH</b>	National Institute for Occupational Safety & Health
<b>DOT</b>	Department of Transportation	<b>NTP</b>	National Toxicology Program
<b>EC<sub>50</sub></b>	Half maximal effective concentration	<b>OSHA</b>	Occupational Safety and Health Administration
<b>EMS</b>	Emergency Response Procedures for Ships Carrying	<b>PBT</b>	Persistent, Bioaccumulating and Toxic
<b>EPA</b>	Environmental Protection Agency	<b>PEL</b>	Permissible exposure limit
<b>ErC<sub>50</sub></b>	Reduction of Growth Rate	<b>PMCC</b>	Pensky-Martens Closed Cup
<b>ERG</b>	Emergency Response Guide Book	<b>ppm</b>	Parts Per Million
<b>FDA</b>	Food and Drug Administration	<b>RCRA</b>	Resource Conservation and Recovery Act
<b>GHS</b>	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)	<b>RID</b>	Dangerous Goods by Rail
<b>HCS</b>	Hazard Communication Standard	<b>RQ</b>	Reportable Quantity



<b>IARC</b>	International Agency for Research on Cancer
<b>IATA</b>	International Air Transport Association
<b>IC<sub>50</sub></b>	Half Maximal Inhibitory Concentration
<b>ICAO</b>	International Civil Aviation Organization
<b>IDLH</b>	Immediately Dangerous to Life and Health
<b>IMDG</b>	International Maritime Dangerous Goods
<b>IMO</b>	International Maritime Organization
<b>LC<sub>50</sub></b>	50% Lethal Concentration
<b>LD<sub>50</sub></b>	50% Lethal Dose

<b>TCC/Tag</b>	Tagliabue Closed Cup
<b>TLV</b>	Threshold Limit Value
<b>TSCA</b>	Toxic Substance Control Act
<b>TWA</b>	Time-weighted Average
<b>UN</b>	United Nations
<b>VOC</b>	Volatile Organic Compounds
<b>vPvB</b>	Very Persistent and Very Bioaccumulating
<b>WHMIS</b>	Workplace Hazardous Materials Information System

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