



# SAFETY DATA SHEET

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## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

**Product identifier** **Denatured Alcohol**

**Other means of identification**

**Product code** **DA**

**Recommended use** Solvent

### Manufacturer/Importer/Supplier/Distributor information

**Company name** Automotive Systems Warehouse, Inc.  
**Address** 2330 Wildwood Rd.  
Wildwood, PA 15091  
United States

**Telephone** (800) 472-1448

**Emergency phone number** 800-424-9300 ChemTrec  
EMERGENCY 24 Hrs.

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## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification

Flammable liquids Category 2

Eye irritation Category 2A

Carcinogenicity Category 2

Reproductive toxicity Category 2

Specific target organ toxicity - single exposure Category 1 (Eyes)

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

### GHS Label element

Hazard pictograms



Signal word Danger

Hazard statements H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H351 Suspected of causing cancer.  
H361 Suspected of damaging fertility or the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.

#### Precautionary statements

##### **Prevention:**

P201 Obtain special instructions before use.  
P210 Keep away from open flames/hot surfaces. - No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P242 Use only non-sparking tools.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P281 Use personal protective equipment as required.

##### **Response:**

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
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.  
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.

#### **Potential Health Effects**

##### **Carcinogenicity:**

##### **IARC**

Group 2B: Possibly carcinogenic to humans

<b>ACGIH</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
<b>OSHA</b>	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.
<b>NTP</b>	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.

### Emergency Overview

Appearance	liquid
Colour	colourless
Odour	alcohol-like
Hazard Summary	No information available.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Hazardous components

CAS-No.	Chemical Name	Concentration (%)
64-17-5	Ethanol	70 - 90
67-63-0	Isopropyl alcohol	5 - 10
67-56-1	Methanol	1 - 5
108-10-1	Methyl isobutyl ketone	0 - 2

## SECTION 4. FIRST AID MEASURES

General advice	Show this safety data sheet to the doctor in attendance.
If inhaled	If symptoms persist, call a physician.
In case of skin contact	If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	Flush eyes with water as a precaution. Remove contact lenses. If eye irritation persists, consult a specialist.

If swallowed

Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Take victim immediately to hospital.

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## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media

Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Water spray

Unsuitable extinguishing media

High volume water jet

Specific hazards during firefighting

Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products

Carbon oxides

Specific extinguishing methods

Use a water spray to cool fully closed containers.

Further information

Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.  
For safety reasons in case of fire, cans should be stored separately in closed containments.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for fire-fighting if necessary.

### **NFPA Flammable and Combustible Liquids Classification:**

Flammable Liquid Class IB

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.  
Ensure adequate ventilation.  
Remove all sources of ignition.  
Evacuate personnel to safe areas.  
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

## SECTION 7. HANDLING AND STORAGE

Advice on safe handling	Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis

			tion	
64-17-5	Ethanol	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	OSHA P0
		STEL	1,000 ppm	ACGIH
67-63-0	Isopropyl alcohol	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m <sup>3</sup>	NIOSH REL
		ST	500 ppm 1,225 mg/m <sup>3</sup>	NIOSH REL
		TWA	400 ppm 980 mg/m <sup>3</sup>	OSHA Z-1
		TWA	400 ppm 980 mg/m <sup>3</sup>	OSHA P0
		STEL	500 ppm 1,225 mg/m <sup>3</sup>	OSHA P0
67-56-1	Methanol	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m <sup>3</sup>	NIOSH REL
		ST	250 ppm 325 mg/m <sup>3</sup>	NIOSH REL
		TWA	200 ppm 260 mg/m <sup>3</sup>	OSHA Z-1
		STEL	250 ppm 325 mg/m <sup>3</sup>	OSHA P0
		TWA	200 ppm 260 mg/m <sup>3</sup>	OSHA P0
108-10-1	Methyl isobutyl ketone	TWA	20 ppm	ACGIH
		STEL	75 ppm	ACGIH
		TWA	50 ppm 205 mg/m <sup>3</sup>	NIOSH REL
		ST	75 ppm 300 mg/m <sup>3</sup>	NIOSH REL
		TWA	100 ppm 410 mg/m <sup>3</sup>	OSHA Z-1
		TWA	50 ppm 205 mg/m <sup>3</sup>	OSHA P0
		STEL	75 ppm 300 mg/m <sup>3</sup>	OSHA P0

### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Isopropyl alcohol	67-63-0	Acetone	In urine	End of shift at end of work-week	40 mg/l	ACGIH BEI
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI
Methyl isobutyl ketone	108-10-1	MIBK	In urine	End of shift (As soon as possible after exposure ceases)	1 mg/l	ACGIH BEI

### Personal protective equipment

Respiratory protection	No personal respiratory protective equipment normally required. In the case of vapour formation use a respirator with an approved filter.
Hand protection Remarks	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	Eye wash bottle with pure water Tightly fitting safety goggles
Skin and body protection	impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Colour	colourless
Odour	alcohol-like
Odour Threshold	No data available
pH	No data available
Freezing Point	No data available
Boiling Point (Boiling point/boiling range)	78 °C (172 °F)
Flash point	16.11 °C (61.00 °F) Calculated Flash Point
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Burning rate	No data available
Upper explosion limit	12 %(V)
Lower explosion limit	2.5 %(V)
Vapour pressure	39.75 mmHg @ 19 °C (66 °F)
Relative vapour density	1.6(Air = 1.0)
Relative density	0.79 @ 22.2 °C (72.0 °F)
Density	No data available
Bulk density	No data available
Solubility(ies)	
Water solubility	partly soluble
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	> 404 °C
Thermal decomposition	No data available



<b>Regulatory VOC (lbs/gal)</b>	<b>6.32</b>
<b>Regulatory VOC (g/l)</b>	<b>758.60</b>
<b>Actual VOC (lbs/gal)</b>	<b>6.32</b>
<b>Actual VOC (g/l)</b>	<b>758.60</b>

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Vapours may form explosive mixture with air.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Acids Aldehydes Alkali metals Ammonia Bases Chlorine Ethylene oxide halogens isocyanates Oxidizing agents oxidizers peroxides
Hazardous decomposition products	Carbon oxides

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## SECTION 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### **Product:**

Acute oral toxicity	Acute toxicity estimate : 2,340 mg/kg Method: Calculation method
Acute inhalation toxicity	Acute toxicity estimate : > 40 mg/l

Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method

Acute dermal toxicity      Acute toxicity estimate : > 5,000 mg/kg  
Method: Calculation method

**Components:**

**64-17-5:**

Acute oral toxicity      LD50 (rat): 7,060 mg/kg

Acute inhalation toxicity      LC50 (rat): 124.7 mg/l

Acute dermal toxicity      Remarks: No data available

**67-63-0:**

Acute oral toxicity      LD50 (rat): 5,500 mg/kg

Acute inhalation toxicity      LC50 (rat, male and female): > 10000 ppm  
Exposure time: 6 h  
Test atmosphere: vapour  
GLP: yes  
Assessment: The component/mixture is low toxic after short term inhalation.

Acute dermal toxicity      LD50 (rabbit): > 12,800 mg/kg

**67-56-1:**

Acute oral toxicity      LD50 (rat): 100 mg/kg  
Assessment: The component/mixture is toxic after single ingestion.

Acute inhalation toxicity      LC50 (rat): 5 mg/l  
Assessment: The component/mixture is toxic after short term inhalation.

Acute dermal toxicity      LD50 (rabbit): 300 mg/kg  
Assessment: The component/mixture is toxic after single contact with skin.

**108-10-1:**

Acute oral toxicity      LD50 (rat): 2,080 mg/kg  
Method: OECD Test Guideline 401  
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity      LC50 (rat): 10 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Assessment: The component/mixture is moderately

toxic after short term inhalation.

Acute dermal toxicity

LD50 (rat, male and female): > 2,000 mg/kg

Method: OECD Test Guideline 402

GLP: yes

Assessment: The substance or mixture has no acute dermal toxicity

## **Skin corrosion/irritation**

### **Components:**

#### **64-17-5:**

Species: rabbit

Result: Mild skin irritation

#### **67-63-0:**

Species: rabbit

Exposure time: 4 h

Method: In vivo

Result: No skin irritation

#### **67-56-1:**

Species: rabbit

Result: No skin irritation

#### **108-10-1:**

Species: rabbit

Exposure time: 4 h

Method: OECD Test Guideline 404

Result: No skin irritation

GLP: yes

## **Serious eye damage/eye irritation**

### **Components:**

#### **64-17-5:**

Species: rabbit

Result: Irritating to eyes.

#### **67-63-0:**

Species: rabbit

Result: Irritating to eyes.

Exposure time: 24 h

Method: In vivo

#### **67-56-1:**

Species: rabbit

Result: No eye irritation

#### **108-10-1:**

Species: rabbit  
Result: Irritating to eyes.  
Method: OECD Test Guideline 405  
GLP: yes

## **Respiratory or skin sensitisation**

### **Components:**

#### **64-17-5:**

Test Type: lymph node assay  
Species: mouse  
Method: OECD Test Guideline 429  
GLP: No data available  
Remarks: Did not cause sensitisation on laboratory animals.

#### **67-63-0:**

Test Type: Buehler Test  
Species: guinea pig  
Method: OECD Test Guideline 406  
Result: Did not cause sensitisation on laboratory animals.  
GLP: yes

#### **67-56-1:**

Test Type: Maximisation Test (GPMT)  
Species: guinea pig  
Method: OECD Test Guideline 406  
Result: Did not cause sensitisation on laboratory animals.

#### **108-10-1:**

Test Type: Maximisation Test (GPMT)  
Species: guinea pig  
Method: OECD Test Guideline 406  
Result: Did not cause sensitisation on laboratory animals.

## **Germ cell mutagenicity**

### **Components:**

#### **64-17-5:**

Genotoxicity in vitro	Test Type: Mammalian cell gene mutation assay Test species: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative GLP: No data available
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Genotoxicity in vivo

Test Type: Dominant lethal assay Test species: mouse (male) Application Route: Oral Dose: 10 or 40% ethanol in water
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	<p>Method: OECD Test Guideline 478  Result: negative  GLP: No data available</p>
Germ cell mutagenicity-Assessment	Mutagenicity classification not possible from current data
<b>67-63-0:</b> Genotoxicity in vitro	<p>Test Type: Ames test  Metabolic activation: with and without metabolic activation  Result: negative</p> <p>Test Type: Mammalian cell gene mutation assay  Test species: Chinese hamster ovary (CHO)  Metabolic activation: with and without metabolic activation  Result: negative  GLP: yes</p>
Genotoxicity in vivo	<p>Test Type: In vivo micronucleus test  Test species: mouse (male and female)  Application Route: Intraperitoneal  Exposure time: Single  Dose: 0, 350, 1173, 2500, 3500 mg/kg  Result: negative  GLP: yes</p>
Germ cell mutagenicity-Assessment	Did not show mutagenic effects in animal experiments.
<b>67-56-1:</b> Genotoxicity in vitro	<p>Test Type: DNA damage and/or repair  Metabolic activation: with and without metabolic activation  Result: Ambiguous</p>
Genotoxicity in vivo	<p>Test Type: In vivo micronucleus test  Test species: mouse (male and female)  Cell type: Bone marrow  Application Route: Intraperitoneal  Exposure time: Single  Dose: 0, 1920, 3200, 4480 mg/kg  Result: negative</p>
Germ cell mutagenicity-Assessment	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
<b>108-10-1:</b> Genotoxicity in vitro	Test Type: Ames test

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

GLP: yes

Genotoxicity in vivo

Test Type: In vivo micronucleus test

Test species: mouse

Cell type: Bone marrow

Application Route: Intraperitoneal

Exposure time: 12 - 48 h

Method: OECD Test Guideline 474

Result: negative

GLP: yes

Germ cell mutagenicity-  
Assessment

Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

## **Carcinogenicity**

### **Components:**

#### **64-17-5:**

Carcinogenicity - Assessment

Carcinogenicity classification not possible from current data.

#### **67-63-0:**

Species: rat, (male and female)

Application Route: inhalation (vapour)

Exposure time: 104 wks

Activity duration: 6 h

Dose: 0, 500, 2500, 5000 ppm

Frequency of Treatment: 5 days/week

NOAEL: 5,000 ppm

Method: OECD Test Guideline 451

Result: did not display carcinogenic properties

GLP: yes

Species: mouse, (male and female)

Application Route: inhalation (vapour)

Exposure time: 78 wks

Activity duration: 6 h

Dose: 0, 500, 2500, 5000 ppm

Frequency of Treatment: 5 days/week

NOAEL: 5,000 ppm

Result: did not display carcinogenic properties

GLP: yes

Carcinogenicity - As-

Not classifiable as a human carcinogen.

essment

**67-56-1:**

Carcinogenicity - Assessment

Suspected human carcinogens

**108-10-1:**

Species: rat, (male and female)  
Application Route: inhalation (vapour)  
Exposure time: 2 yrs  
Dose: 0, 450, 900, 1800 ppm  
Frequency of Treatment: 6 h/d, 5 d/wk  
NOAEL: 450 ppm

Method: OECD Test Guideline 451

Result: Evidence of renal carcinogenesis that is not relevant to humans

GLP: yes

Carcinogenicity - Assessment

Suspected human carcinogens

**Reproductive toxicity**

**Components:**

**64-17-5:**

Effects on fertility

Test Type: Two-generation study  
Species: mouse, male and female  
Application Route: oral  
Dose: 5, 10 and 15% v/v in water  
General Toxicity - Parent: NOAEL: 15 % diet  
General Toxicity F1: NOAEL: 10 % diet  
Symptoms: reduced litter size Reduced sperm motility in F1 generation  
Method: OECD Test Guideline 416  
GLP: No data available

Effects on foetal development

Species: rat  
Application Route: Inhalation  
Dose: 10,000, 16,000 or 20,000 ppm  
General Toxicity Maternal: NOAEL: 16,000 ppm  
Teratogenicity: NOAEL: > 20,000 ppm  
Symptoms: No malformations were observed.  
Method: OECD Test Guideline 414  
GLP: No data available

Reproductive toxicity Assessment

Fertility classification not possible from current data.  
Embryotoxicity classification not possible from current data.

**67-63-0:**

## Effects on fertility

Test Type: Two-generation study  
Species: rat, male and female  
Dose: 0, 100, 500, 1000 mg/kg bw/d  
General Toxicity - Parent: NOAEL: 500 mg/kg body weight  
General Toxicity F1: NOAEL: 500 mg/kg body weight  
Fertility: NOAEL: 1,000 mg/kg body weight  
Symptoms: Maternal effects. Fetotoxicity. Reduced offspring weight gain.  
Method: OECD Test Guideline 416  
Result: Animal testing did not show any effects on fertility.  
GLP: yes

## Effects on foetal development

Species: rabbit  
Application Route: Oral  
Dose: 0, 120, 240, 480 mg/kg bw/day  
Duration of Single Treatment: 13 d  
General Toxicity Maternal: NOAEL: 240 mg/kg body weight  
Developmental Toxicity: NOAEL: 480 mg/kg  
Symptoms: Maternal toxicity  
Result: No teratogenic effects.  
GLP: yes

## Reproductive toxicity - Assessment

Animal testing did not show any effects on fertility.  
Did not show teratogenic effects in animal experiments.

**67-56-1:**

## Effects on fertility

Test Type: Two-generation study  
Species: rat, male and female  
Application Route: Inhalation  
Dose: 0, 0.013, 0.13, 1.3 mg/L  
Duration of Single Treatment: 20 h  
General Toxicity - Parent: NOAEC: 1.3 mg/l  
General Toxicity F1: NOAEC: 0.13 mg/l  
Fertility: NOAEC: 1.3 mg/l  
Symptoms: Effects on postnatal development.  
Result: Animal testing did not show any effects on fertility.

## Effects on foetal development

Species: rat  
Application Route: inhalation (vapour)  
Dose: 0, 6.65, 13.3, 26.6 mg/L  
Duration of Single Treatment: 20 d  
Frequency of Treatment: 7 hr/day  
General Toxicity Maternal: NOAEC: 13.3 mg/L  
Teratogenicity: NOAEC: 6.65 mg/L  
Result: Teratogenic effects.



Reproductive toxicity -  
Assessment

Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

**108-10-1:**

Effects on fertility

Test Type: Two-generation study  
Species: rat, male and female  
Application Route: inhalation (vapour)  
Dose: 0, 500, 1000, 2000 ppm  
Duration of Single Treatment: 6 h  
Frequency of Treatment: 7 days/week  
General Toxicity - Parent: NOAEC: 1,000 ppm  
General Toxicity F1: NOAEC: 1,000 ppm  
Fertility: NOAEC: 2,000 ppm  
Symptoms: Maternal effects. sedation  
Method: OECD Test Guideline 416  
Result: Animal testing did not show any effects on fertility.

Effects on foetal development

Species: rat  
Application Route: inhalation (vapour)  
Dose: 0, 300, 1000, 3000 ppm  
Duration of Single Treatment: 10 d  
Frequency of Treatment: 6 hr/day  
General Toxicity Maternal: NOAEC: 1,000 ppm  
Teratogenicity: NOAEC: 3,000 ppm  
Symptoms: Maternal toxicity, Specific developmental abnormalities., Reduced body weight, Reduced number of viable fetuses.  
Method: OECD Test Guideline 414  
Result: No teratogenic effects.  
GLP: yes

Reproductive toxicity  
Assessment

No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments.

**STOT - single exposure**

**Product:**No data available

**Components:**

64-17-5:

<b>Exposure routes:</b>	<b>Target Organs:</b>	<b>Assessment:</b>	<b>Remarks:</b>
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, cate-	

		gory 3 with narcotic effects.	
Inhalation	Respiratory system	May cause respiratory irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.	

67-63-0:

<b>Exposure routes:</b>	<b>Target Organs:</b>	<b>Assessment:</b>	<b>Remarks:</b>
Inhalation, Ingestion	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	

67-56-1:

<b>Exposure routes:</b>	<b>Target Organs:</b>	<b>Assessment:</b>	<b>Remarks:</b>
	Eyes, Central nervous system	Causes damage to organs., The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.	

108-10-1:

<b>Exposure routes:</b>	<b>Target Organs:</b>	<b>Assessment:</b>	<b>Remarks:</b>
Inhalation	Respiratory Tract	May cause respiratory irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.	

## **STOT - repeated exposure**

**Product:**No data available

### **Components:**

**64-17-5:**No data available

**67-63-0:**No data available

**67-56-1:**No data available

**108-10-1:**No data available

## **Repeated dose toxicity**

### **Components:**

#### **64-17-5:**

Species: rat, male and female

NOAEL: 10 ml/kg

Application Route: Oral

Exposure time: 7 or 14 wk

Number of exposures: 2 times/d, 7 d/wk

Dose: 5, 10, 20ml/kg of 16.25% etoh

Method: OECD Test Guideline 408

GLP: yes

#### **67-63-0:**

Species: rat, male and female

NOAEL: > 5000

Application Route: inhalation (vapour)

Exposure time: 13 wks

Number of exposures: 6 h/d, 5 d/wk

Dose: 0, 100, 500, 1500, 5000 ppm

Method: OECD Test Guideline 413

GLP: yes

Symptoms: Central nervous system depression

Species: mouse, male and female

NOAEL: > 5000

Application Route: inhalation (vapour)

Exposure time: 13 wks

Number of exposures: 6 h/d, 5 d/wk

Dose: 0, 100, 500, 1500, 5000 ppm

Method: OECD Test Guideline 413

GLP: yes

Symptoms: Central nervous system depression

**67-56-1:**

Species: mouse, male and female

NOAEL: 1.3 mg/l

Application Route: Inhalation

Exposure time: 12 mths

Number of exposures: Continuous

Dose: 0, 0.013, 0.13, 1.3 mg/L

**108-10-1:**

Species: rat, male and female

NOAEL: 250 mg/kg

Application Route: Oral

Exposure time: 13 wks

Number of exposures: 7 d/wk

Dose: 0, 50, 250, 1000 mg/kg bw/day

Method: OECD Test Guideline 408

GLP: yes

Symptoms: Kidney disorders

Remarks: male rat hydrocarbon nephropathy not relevant to humans

**Aspiration toxicity****Components:****64-17-5:**

No aspiration toxicity classification

**67-63-0:**

May be harmful if swallowed and enters airways.

**108-10-1:**

No aspiration toxicity classification

**Further information****Product:**

Remarks: Solvents may degrease the skin.

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****64-17-5:**

Toxicity to fish

LC50 (Pimephales promelas (fathead minnow)):  
15,300 mg/l

	Exposure time: 96 h Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates	EC50 ( <i>Ceriodaphnia dubia</i> ): 5,012 mg/l Exposure time: 48 h Test Type: static test
Toxicity to algae	EC50 ( <i>Chlorella vulgaris</i> (Fresh water algae)): 275 mg/l End point: Growth rate Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: No data available
<b>67-63-0:</b>	
Toxicity to fish	LC50 ( <i>Pimephales promelas</i> (fathead minnow)): 9,640 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates	EC50 ( <i>Daphnia magna</i> (Water flea)): > 100 mg/l Exposure time: 24 h Test Type: static test
Toxicity to algae	Remarks: No data available
Toxicity to bacteria	Toxicity threshold ( <i>Pseudomonas putida</i> ): 1,050 mg/l Exposure time: 16 h
<b>67-56-1:</b>	
Toxicity to fish	LC50 ( <i>Lepomis macrochirus</i> (Bluegill sunfish)): 15,400 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates	EC50 ( <i>Daphnia magna</i> (Water flea)): > 10,000 mg/l Exposure time: 48 h Test Type: static test
Toxicity to algae	EC50 ( <i>Scenedesmus capricornutum</i> (fresh water algae)): 22,000 mg/l End point: Growth rate Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 201
Toxicity to bacteria	IC50 (activated sludge): > 1,000 mg/l End point: Growth rate Exposure time: 3 h

Test Type: Static  
Method: OECD Test Guideline 209

**108-10-1:**

Toxicity to fish

LC50 (Danio rerio (zebra fish)): > 179 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 200 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202  
GLP: yes

Toxicity to algae

EC50 (Pseudokirchneriella subcapitata (green algae)): 400 mg/l  
End point: Growth rate  
Exposure time: 96 h  
Test Type: static test

Ecotoxicology Assessment  
Acute aquatic toxicity

This product has no known ecotoxicological effects.

Chronic aquatic toxicity

This product has no known ecotoxicological effects.

**Persistence and degradability**

**Components:**

**64-17-5:**

Biodegradability

Result: Readily biodegradable.

**67-63-0:**

Biodegradability

Result: Readily biodegradable.  
Biodegradation: 95 %  
Method: OECD Test Guideline 301E

Chemical Oxygen Demand (COD)

0.00209 mg/g

Theoretical Oxygen Demand (ThOD)

0.00240 mg/g

**67-56-1:**

Biodegradability

aerobic  
Result: Readily biodegradable.  
Biodegradation: 72 %  
Remarks: Readily biodegradable

Biochemical Oxygen Demand (BOD)	600 - 1,120 mg/g
Chemical Oxygen Demand (COD)	1,420 mg/g
BOD/COD	BOD: 600 - 1120 COD: 1420
Stability in water	Hydrolysis: 91 % at 19 °C (72 h) Remarks: Hydrolyses on contact with water. Hydrolyses readily.

**108-10-1:**

Biodegradability	Inoculum: activated sludge Biodegradation: 83 % Exposure time: 28 d Method: OECD Test Guideline 301F Remarks: Readily biodegradable
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Biochemical Oxygen Demand (BOD)	1,940 mg/g
Chemical Oxygen Demand (COD)	2,160 mg/g
Theoretical Oxygen Demand (ThOD)	0.00272 mg/g

**Bioaccumulative potential**

**Components:**

**64-17-5:**

Bioaccumulation	Remarks: Bioaccumulation is unlikely.
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**67-63-0:**

Bioaccumulation	Bioconcentration factor (BCF): 3.16 Remarks: Does not significantly accumulate in organisms.
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Partition coefficient: n-octanol/water	log Pow: 0.05 (25 °C)
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**67-56-1:**

Bioaccumulation	Species: <i>Cyprinus carpio</i> (Carp) Bioconcentration factor (BCF): 1.0 Exposure time: 72 d Temperature: 20 °C Concentration: 5 mg/l Remarks: This substance is not considered to be very persistent nor very bioaccumulating (vPvB).
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Partition coefficient: n-octanol/water

log Pow: -0.77

**108-10-1:**

Bioaccumulation

Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water

Pow: 24

log Pow: Calculated 1.9

**Mobility in soil**

**Components:**

**67-63-0:**

Stability in soil

Remarks: Adsorbs on soil.

**108-10-1:**

Stability in soil

Remarks: Not expected to adsorb on soil.

**Other adverse effects**

No data available

**Product:**

Regulation

40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information

No data available

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**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

Waste from residues

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging

Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.



Do not burn, or use a cutting torch on, the empty drum.

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## SECTION 14. TRANSPORT INFORMATION

**IATA (International Air Transport Association):** UN1987, ALCOHOLS, N.O.S., (ETHANOL, ISOPROPYL ALCOHOL) , 3, II, Flash Point:16.11 °C(61.00 °F)

**IMDG (International Maritime Dangerous Goods):** UN1987, ALCOHOLS, N.O.S., (ETHANOL, ISOPROPYL ALCOHOL), 3, II

**DOT (Department of Transportation):** UN1987, ALCOHOLS, N.O.S., (ETHANOL, ISOPROPYL ALCOHOL), 3, II

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## SECTION 15. REGULATORY INFORMATION

**OSHA Hazards** Flammable liquid, Carcinogen, Toxic by ingestion, Toxic by skin absorption, Moderate eye irritant, Moderate respiratory irritant, Reproductive hazard

**WHMIS Classification** B2: Flammable liquid  
D1B: Toxic Material Causing Immediate and Serious Toxic Effects  
D2A: Very Toxic Material Causing Other Toxic Effects  
D2B: Toxic Material Causing Other Toxic Effects

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Methanol	67-56-1	5000	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** Fire Hazard  
Chronic Health Hazard  
Acute Health Hazard

**SARA 302** SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313**

: The following components are subject to reporting levels established by SARA Title III, Section 313:

67-56-1	Methanol	4.2248 %
108-10-1	Methyl isobutyl ketone	1.005 %

**Clean Air Act**

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

67-56-1	Methanol	4.2248 %
108-10-1	Methyl isobutyl ketone	1.005 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

64-17-5	Ethanol	84.5062 %
67-63-0	Isopropyl alcohol	8.8689 %
67-56-1	Methanol	4.2248 %
108-10-1	Methyl isobutyl ketone	1.005 %
71-23-8	n-Propanol	0.0013 %

**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**US State Regulations****Massachusetts Right To Know**

64-17-5	Ethanol	70 - 90 %
67-63-0	Isopropyl alcohol	5 - 10 %
67-56-1	Methanol	1 - 5 %
108-10-1	Methyl isobutyl ketone	1 - 2 %

**Pennsylvania Right To Know**

64-17-5	Ethanol	70 - 90 %
67-63-0	Isopropyl alcohol	5 - 10 %
7732-18-5	Water	5 - 10 %
67-56-1	Methanol	1 - 5 %
108-10-1	Methyl isobutyl ketone	1 - 2 %

**New Jersey Right To Know**

64-17-5	Ethanol	70 - 90 %
67-63-0	Isopropyl alcohol	5 - 10 %
7732-18-5	Water	5 - 10 %

67-56-1	Methanol	1 - 5 %
108-10-1	Methyl isobutyl ketone	1 - 2 %

**California Prop 65**

	WARNING! This product contains a chemical known to the State of California to cause cancer.
108-10-1	Methyl isobutyl ketone WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
67-56-1	Methanol

**The components of this product are reported in the following inventories:**

<b>United States TSCA Inventory</b>	y (positive listing) (On TSCA Inventory)
<b>Canadian Domestic Substances List (DSL)</b>	y (positive listing) (All components of this product are on the Canadian DSL.)
<b>Australia Inventory of Chemical Substances (AICS)</b>	y (positive listing) (On the inventory, or in compliance with the inventory)
<b>New Zealand. Inventory of Chemical Substances</b>	y (positive listing) (On the inventory, or in compliance with the inventory)
<b>Japan. ENCS - Existing and New Chemical Substances Inventory</b>	n (Negative listing) (Not in compliance with the inventory)
<b>Japan. ISHL - Inventory of Chemical Substances (METI)</b>	y (positive listing) (On the inventory, or in compliance with the inventory)
<b>Korea. Korean Existing Chemicals Inventory (KECI)</b>	y (positive listing) (On the inventory, or in compliance with the inventory)
<b>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</b>	y (positive listing) (On the inventory, or in compliance with the inventory)

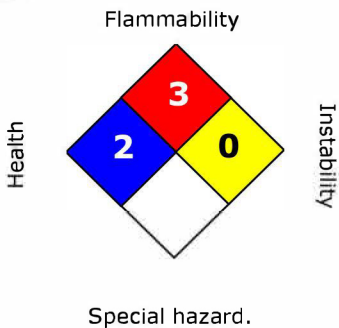
**China. Inventory of Existing Chemical Substances in China (IECSC)**

y (positive listing)  
(On the inventory,  
or in compliance  
with the inventory)

**SECTION 16. OTHER INFORMATION**

Version 2.0  
Revision Date 10/04/2020

**NFPA:**



**HMIS III:**

<b>HEALTH</b>	<b>2*</b>
<b>FLAMMABILITY</b>	<b>3</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 =Slight,  
2 = Moderate, 3 = High  
4 =Extreme, \* = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

**Legacy MSDS:** R0001434

**Material number:**

145705, 117734, 159606, 159684, 159788, 146528, 82498, 130997, 136319, 130812, 117221, 115257, 130893, 542251

**Key or legend to abbreviations and acronyms used in the safety data sheet**

ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level

DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50 EGEST	Effective Concentration 50% EOSCA Generic Exposure Scenario Tool	NOEC OSHA	No Observed Effect Concentration Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		