

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
 Trade name : DENATURED ALCOHOL190  
 CAS No : Mixture  
 Product code : NOCDA19008

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

#### 1.3. Details of the supplier of the safety data sheet

[NOCO Distribution](#)  
[2440 Sheridan Dr.](#)  
[Tonawanda, NY 14150](#)  
[1-800-500-6626](#)  
[www.noco.com](#)

#### 1.4. Emergency telephone number

Emergency number : For 24-Hour Emergency Information Call Chemtrec: +1 (800) 424-9300

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Flam. Liq. 2 H225  
 Carc. 1A H350  
 STOT RE 2 H373

Full text of H-phrases: see section 16

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapor  
 H350 - May cause cancer (oral)  
 H373 - May cause damage to organs (central nervous system, liver, kidneys) through prolonged or repeated exposure (oral)

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use  
 P202 - Do not handle until all safety precautions have been read and understood  
 P210 - Keep away from heat, hot surfaces, sparks, open flames. - No smoking  
 P233 - Keep container tightly closed  
 P240 - Ground/bond container and receiving equipment  
 P241 - Use explosion-proof electrical, lighting, ventilating equipment  
 P242 - Use only non-sparking tools  
 P243 - Take precautionary measures against static discharge  
 P260 - Do not breathe fume, mist, spray, vapors  
 P280 - Wear eye protection, face protection, face shield, protective clothing, protective gloves  
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
 P308+P313 - If exposed or concerned: Get medical advice/attention  
 P314 - Get medical advice/attention if you feel unwell  
 P370+P378 - In case of fire: Use ABC-powder, alcohol resistant foam, an extinguishing blanket, carbon dioxide (CO2), sand to extinguish  
 P403+P235 - Store in a well-ventilated place. Keep cool  
 P405 - Store locked up  
 P501 - Dispose of contents/container to a hazardous or special waste collection point, an approved waste disposal plant, an authorized waste collection point, an industrial incineration plant, hazardous or special waste collection point, in accordance with local, regional, national

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and/or international regulation

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS-US)

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
ethanol	(CAS No) 64-17-5	81 - 100	Flam. Liq. 2, H225 Carc. 1A, H350
methyl isobutyl ketone	(CAS No) 108-10-1	1.9 - 10	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation:dust,mist), H332 Carc. 2, H351 STOT SE 3, H335
methanol	(CAS No) 67-56-1	0.9 - 5	Flam. Liq. 2, H225
ethyl acetate	(CAS No) 141-78-6	1 - 5	Flam. Liq. 2, H225 STOT SE 3, H336
hexane	(CAS No) 110-54-3	1 - 5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Full text of H-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

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

No additional information available

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

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### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

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

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Heat sources, open flames, Sources of ignition. Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

INTERSOL 24, 190 PROOF (Mixture)		
ACGIH	Not applicable	
OSHA	Not applicable	
ethanol (64-17-5)		
ACGIH	ACGIH STEL (ppm)	1000 ppm
ACGIH	Remark (ACGIH)	URT irr
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
methanol (67-56-1)		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	250 ppm
ACGIH	Remark (ACGIH)	Headache; eye dam; dizziness; nausea
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	260 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
methyl isobutyl ketone (108-10-1)		
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	ACGIH STEL (ppm)	75 ppm
ACGIH	Remark (ACGIH)	URT irr; dizziness; headache
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	410 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	100 ppm

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ethanol (64-17-5)		
ACGIH	ACGIH STEL (ppm)	1000 ppm
ACGIH	Remark (ACGIH)	URT irr
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
ethyl acetate (141-78-6)		
ACGIH	ACGIH TWA (ppm)	400 ppm
ACGIH	ACGIH STEL (ppm)	400 ppm
ACGIH	Remark (ACGIH)	URT & eye irr
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1400 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	400 ppm
hexane (110-54-3)		
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	ACGIH STEL (ppm)	50 ppm
ACGIH	Remark (ACGIH)	CNS impair; peripheral
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	500 ppm

### 8.2. Exposure controls

Personal protective equipment	:	Avoid all unnecessary exposure.
Hand protection	:	Wear protective gloves.
Eye protection	:	Chemical goggles or safety glasses.
Respiratory protection	:	Wear appropriate mask.
Other information	:	Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Liquid.
Molecular mass	:	46.07 g/mol
Color	:	Colorless
Odor	:	No data available
Odor threshold	:	100 ppm 188 mg/m <sup>3</sup>
pH	:	7 (10 g/l)
pH solution	:	10 g/l
Relative evaporation rate (butyl acetate=1)	:	2.4
Relative evaporation rate (ether=1)	:	8.3
Melting point	:	-114 °C
Freezing point	:	No data available
Boiling point	:	78.2 °C
Flash point	:	12 °C
Critical temperature	:	243 °C
Auto-ignition temperature	:	363 °C
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	59 hPa
Critical pressure	:	63840 hPa
Relative vapor density at 20 °C	:	1.03
Relative density	:	0.79
Relative density of saturated gas/air mixture	:	1.04

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Specific gravity / density	: 785 kg/m <sup>3</sup>
Solubility	: Soluble in water. Soluble in ether. Soluble in acetone. Soluble in chloroform. Soluble in oils/fats. Soluble in methanol. Soluble in acids. Water:
Log Pow	: -0.35 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 24 °C)
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 1.19 mPa.s (20 °C)
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 3.3 - 15.0 vol %

### 9.2. Other information

Specific conductivity	: 130000 pS/m
Saturation concentration	: 112 g/m <sup>3</sup>

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Not established.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

ethanol (64-17-5)	
LD50 oral rat	10740 mg/kg body weight (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit; Literature study)
ATE US (oral)	10740.000 mg/kg body weight
methanol (67-56-1)	
LD50 oral rat	> 5000 mg/kg (Rat; BASF test; Literature study; 1187-2769 mg/kg bodyweight; Rat; Weight of evidence)
LD50 dermal rabbit	15800 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	85 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	64000 ppm/4h (Rat; Literature study)
ATE US (dermal)	15800.000 mg/kg body weight
ATE US (gases)	64000.000 ppmV/4h
ATE US (vapors)	85.000 mg/l/4h
ATE US (dust, mist)	85.000 mg/l/4h
methyl isobutyl ketone (108-10-1)	
LD50 oral rat	2080 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)

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<b>ethanol (64-17-5)</b>	
LD50 oral rat	10740 mg/kg body weight (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit; Literature study)
ATE US (oral)	10740.000 mg/kg body weight
<b>methanol (67-56-1)</b>	
LD50 dermal rat	>= 2000 mg/kg body weight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	8.2- 16.4,Rat; Experimental value
LC50 inhalation rat (ppm)	2000 - 4000 ppm/4h (Rat; Experimental value)
ATE US (oral)	2080.000 mg/kg body weight
ATE US (gases)	2000.000 ppmV/4h
ATE US (dust, mist)	1.500 mg/l/4h
<b>ethyl acetate (141-78-6)</b>	
LD50 oral rat	5620 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value; 10200 mg/kg bodyweight; Rat)
LD50 dermal rabbit	> 18000 mg/kg (Rabbit; Experimental value; 24 hour cuff method; >20000 mg/kg bodyweight; Rabbit)
LC50 inhalation rat (mg/l)	70.56 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	19600 ppm/4h (Rat)
ATE US (oral)	5620.000 mg/kg body weight
ATE US (gases)	19600.000 ppmV/4h
ATE US (vapors)	70.560 mg/l/4h
ATE US (dust, mist)	70.560 mg/l/4h
<b>hexane (110-54-3)</b>	
LD50 oral rat	25000 mg/kg (Rat; Literature study)
LD50 dermal rabbit	3000 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (ppm)	48000 ppm/4h (Rat; Literature study)
ATE US (oral)	25000.000 mg/kg body weight
ATE US (dermal)	3000.000 mg/kg body weight
ATE US (gases)	48000.000 ppmV/4h

Skin corrosion/irritation	: Not classified pH: 7 (10 g/l)
Serious eye damage/irritation	: Not classified pH: 7 (10 g/l)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer (oral).

<b>ethanol (64-17-5)</b>	
IARC group	1 - Carcinogenic to humans
<b>methyl isobutyl ketone (108-10-1)</b>	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: May cause damage to organs (central nervous system, liver, kidneys) through prolonged or repeated exposure (oral).
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

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### SECTION 12: Ecological information

#### 12.1. Toxicity

<b>ethanol (64-17-5)</b>	
LC50 fish 1	14200 mg/l (96 h; Pimephales promelas; Nominal concentration)
EC50 Daphnia 1	9300 mg/l (48 h; Daphnia magna)
LC50 fish 2	13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	10800 mg/l (24 h; Daphnia magna)
Threshold limit other aquatic organisms 1	65 mg/l (72 h; Protozoa)
Threshold limit algae 1	1450 mg/l (192 h; Microcystis aeruginosa; Growth rate)
Threshold limit algae 2	5000 mg/l (168 h; Scenedesmus quadricauda; Growth rate)
<b>methanol (67-56-1)</b>	
LC50 fish 1	15400 mg/l (96 h; Lepomis macrochirus; Lethal)
EC50 Daphnia 1	> 10000 mg/l (48 h; Daphnia magna; Lethal)
LC50 fish 2	10800 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	24500 mg/l (48 h; Daphnia magna; Locomotor effect)
Threshold limit other aquatic organisms 1	6600 mg/l (16 h; Pseudomonas putida)
Threshold limit algae 1	530 mg/l (192 h; Microcystis aeruginosa)
Threshold limit algae 2	8000 mg/l (168 h; Scenedesmus quadricauda)
<b>methyl isobutyl ketone (108-10-1)</b>	
LC50 fish 1	505 mg/l (96 h; Pimephales promelas; GLP)
EC50 Daphnia 1	170 mg/l (48 h; Daphnia magna; Static system)
EC50 other aquatic organisms 1	400 mg/l (96 h; Selenastrum capricornutum; Growth rate)
LC50 fish 2	600 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	> 1000 mg/l (48 h; Daphnia magna; GLP)
Threshold limit algae 1	136 mg/l (Microcystis aeruginosa)
Threshold limit algae 2	725 mg/l (8 days; Scenedesmus quadricauda; Nominal concentration)
<b>ethyl acetate (141-78-6)</b>	
LC50 fish 1	454.7 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	2500 mg/l (24 h; Daphnia magna)
LC50 fish 2	230 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 2	154 mg/l (48 h; Daphnia magna)
TLM fish 1	100 - 1000,96 h; Pisces
TLM other aquatic organisms 1	100 - 1000,96 h
Threshold limit algae 1	2000 mg/l (96 h; Selenastrum capricornutum; Biomass)
Threshold limit algae 2	15 mg/l (192 h; Scenedesmus quadricauda; Growth rate)
<b>hexane (110-54-3)</b>	
LC50 fish 1	2.5 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	2.1 mg/l (48 h; Daphnia magna)
LC50 fish 2	4 mg/l (24 h; Carassius auratus)
EC50 Daphnia 2	0.4 mg/l (96 h; Chaetogammarus marinus)
Threshold limit other aquatic organisms 1	9.049 mg/l (Protozoa)
Threshold limit algae 1	10 mg/l (Laminariales; Photosynthesis)
Threshold limit algae 2	26 mg/l (72 h; Pseudokirchneriella subcapitata; GLP)

#### 12.2. Persistence and degradability

<b>INTERSOL 24, 190 PROOF (Mixture)</b>	
Persistence and degradability	Not established.
<b>ethanol (64-17-5)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	0.8 - 0.967 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.70 g O <sub>2</sub> /g substance
ThOD	2.10 g O <sub>2</sub> /g substance
<b>methanol (67-56-1)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.

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<b>ethanol (64-17-5)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	0.8 - 0.967 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.70 g O <sub>2</sub> /g substance
ThOD	2.10 g O <sub>2</sub> /g substance
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.42 g O <sub>2</sub> /g substance
ThOD	1.5 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.8 % ThOD
<b>methyl isobutyl ketone (108-10-1)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Low potential for adsorption in soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	2.06 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.16 g O <sub>2</sub> /g substance
ThOD	2.72 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.76 % ThOD
<b>ethyl acetate (141-78-6)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.293 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.69 g O <sub>2</sub> /g substance
ThOD	1.82 g O <sub>2</sub> /g substance
<b>hexane (110-54-3)</b>	
Persistence and degradability	Readily biodegradable in water. Photooxidation in water. Biodegradable in the soil.
ThOD	3.52 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.63 % ThOD

### 12.3. Bioaccumulative potential

<b>INTERSOL 24, 190 PROOF (Mixture)</b>	
Log Pow	-0.35 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 24 °C)
Bioaccumulative potential	Not established.
<b>ethanol (64-17-5)</b>	
Log Pow	-0.35 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 24 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>methanol (67-56-1)</b>	
BCF fish 1	< 10 (72 h; Leuciscus idus)
BCF fish 2	1 (72 h; Cyprinus carpio; Blood)
Log Pow	-0.77 (Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>methyl isobutyl ketone (108-10-1)</b>	
BCF fish 1	2 - 5 (Pisces)
Log Pow	1.9 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>ethyl acetate (141-78-6)</b>	
BCF fish 1	30 (3 days; Leuciscus idus)
Log Pow	0.68 (Experimental value; EPA OPPTS 830.7560; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>hexane (110-54-3)</b>	
BCF fish 1	501.187 (Pimephales promelas)
Log Pow	3.5 - 3.94 (Calculated)

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### ethanol (64-17-5)

Log Pow	-0.35 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 24 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

### methanol (67-56-1)

BCF fish 1	< 10 (72 h; Leuciscus idus)
Bioaccumulative potential	Bioaccumable.

### 12.4. Mobility in soil

#### ethanol (64-17-5)

Surface tension	0.0245 N/m (20 °C)
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#### methanol (67-56-1)

Surface tension	0.023 N/m (20 °C)
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#### methyl isobutyl ketone (108-10-1)

Surface tension	0.024 N/m (20 °C)
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#### ethyl acetate (141-78-6)

Surface tension	0.024 N/m (20 °C)
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#### hexane (110-54-3)

Surface tension	0.018 N/m
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### 12.5. Other adverse effects

Effect on ozone layer	:
Effect on the global warming	: No known ecological damage caused by this product.
Other information	: Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. an approved hazardous waste plant and/or drum reconditioner.
Ecology - waste materials	: Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT	
Transport document description	: UN1987 Alcohols, n.o.s. (Ethanol, Methanol), 3, II
UN-No.(DOT)	: UN1987
Proper Shipping Name (DOT)	: Alcohols, n.o.s.
Department of Transportation (DOT) Hazard Classes	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT)	: 3 - Flammable liquid



Packing group (DOT)	: II - Medium Danger
DOT Special Provisions (49 CFR 172.102)	: 172 - This entry includes alcohol mixtures containing up to 5% petroleum products. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32 F). TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

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DOT Packaging Exceptions (49 CFR 173.xxx)	:	4b;150
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	202
DOT Packaging Bulk (49 CFR 173.xxx)	:	242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	60 L
DOT Vessel Stowage Location	:	B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

### Additional information

Emergency Response Guide (ERG) Number	:	127
Other information	:	No supplementary information available.

### ADR

No additional information available

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

<b>ethanol (64-17-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>methanol (67-56-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
<b>methyl isobutyl ketone (108-10-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
<b>ethyl acetate (141-78-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not listed on the United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
<b>hexane (110-54-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb

### 15.2. International regulations

#### CANADA

#### EU-Regulations

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

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### 15.2.2. National regulations

#### ethanol (64-17-5)

Listed on IARC (International Agency for Research on Cancer)

#### methyl isobutyl ketone (108-10-1)

Listed on IARC (International Agency for Research on Cancer)

### 15.3. US State regulations

#### methanol (67-56-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	Yes	No	No	

#### methyl isobutyl ketone (108-10-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	

#### ethanol (64-17-5)

U.S. - New Jersey - Right to Know Hazardous Substance List

#### methanol (67-56-1)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List

#### methyl isobutyl ketone (108-10-1)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

#### ethyl acetate (141-78-6)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

#### hexane (110-54-3)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

Abbreviations and acronyms

: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. European Agreement concerning the International Carriage of Dangerous Goods by Road. Acute Toxicity Estimate. Bioconcentration factor. Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008. Derived Minimal Effect level. Derived-No Effect Level. Dangerous Preparations Directive 1999/45/EC. Dangerous Substances Directive 67/548/EEC. Median effective concentration. International Agency for Research on Cancer. International Air Transport Association. International Maritime Dangerous Goods. Median lethal concentration. Median lethal dose. Lowest Observed Adverse Effect Level. No-Observed Adverse Effect Concentration. No-Observed Adverse Effect Level. No-Observed Effect Concentration. Organisation for Economic Co-operation and Development. Persistent Bioaccumulative Toxic. Predicted No-Effect Concentration. Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. Regulations concerning the International Carriage of Dangerous Goods by Rai. Safety Data Sheet. Sewage treatment plant. Median Tolerance Limit. Very Persistent and Very Bioaccumulative.

Other information

: None.

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### Full text of H-phrases:

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Carc. 2	Carcinogenicity Category 2
Flam. Liq. 2	Flammable liquids Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H350	May cause cancer
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

### NFPA health hazard

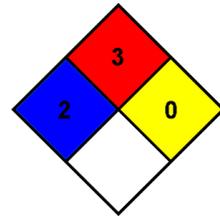
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

### NFPA fire hazard

: 3 - Liquids and solids that can be ignited under almost all ambient conditions.

### NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



### HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 3 Serious Hazard

Physical : 0 Minimal Hazard

Personal Protection : D,n

### SDS US (GHS HazCom 2012)

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