


**SECTION 1: PRODUCT IDENTIFICATION**

<b>PRODUCT NAME</b>	<b>ETHANOL (Denatured) (Ethyl Alcohol)</b>
<b>PRODUCT CODE</b>	<b>0616</b>
<b>SUPPLIER</b>	<b>MEDISCA Inc.</b> Tel.: 1.800.932.1039   Fax.: 1.855.850.5855 661 Route 3, Unit C, Plattsburgh, NY, 12901 6641 N. Belt Line Road, Suite 130, Irving, TX, 75063 <b>MEDISCA Pharmaceutique Inc.</b> Tel.: 1.800.665.6334   Fax.: 514.338.1693 4509 Rue Dobrin, St. Laurent, QC, H4R 2L8 21300 Gordon Way, Unit 153/158, Richmond, BC V6W 1M2 <b>MEDISCA Australia PTY LTD</b> Tel.: 1.300.786.392   Fax.: 61.2.9700.9047 Unit 7, Heritage Business Park 5-9 Ricketty Street, Mascot, NSW 2020
<b>EMERGENCY PHONE</b>	CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 NSW Poisons Information Centre: 131 126 National Chemical Emergency Centre 44(0)1235239670
<b>RECOMMENDED USES</b>	Industrial/Lab Use Only
<b>RESTRICTIONS ON USE</b>	Not applicable

**SECTION 2: HAZARDS IDENTIFICATION**

<b>GHS CLASSIFICATION</b>	Flammable Liquid (Category 2) Skin Irritation (Category 2) Eye Irritation (Category 2B) Carcinogenicity (Category 1A) Toxic to Reproduction (Category 1A) Specific Target Organ Toxicity - Single Exposure (Category 3) - CNS Specific Target Organ Toxicity - Repeated Exposure (Category 2) - Liver
<b>PICTOGRAM</b>	
<b>SIGNAL WORD</b>	Danger
<b>HAZARD STATEMENT(S)</b>	Highly flammable liquid and vapor. Causes skin irritation. Causes eye irritation. May cause respiratory irritation. May cause cancer. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure (liver).

**ADVERSE PHYSIOCHEMICAL, HUMAN HEALTH AND ENVIRONMENTAL EFFECTS**

In use, may form flammable/explosive vapour-air mixture.

**PRECAUTIONARY STATEMENT(S)**

<b>Prevention</b>	<p>NO open flames, NO sparks, and NO smoking. NO contact with strong oxidants.          Do NOT use compressed air for filling, discharging, or handling.          Keep away from heat, sparks, open flames and/or hot surfaces.          Keep container tightly closed.          Ground/Bond container and receiving equipment.          Use explosion-proof equipment.          Use non-sparking tools.          Take action to prevent static discharges.          Wear protective gloves, protective clothing, eye and face protection and hearing protection.          Wash thoroughly after handling.          Obtain, read and follow all special instructions before use.          Do not handle until all safety precautions have been read and understood.          Avoid breathing dust, fume, gas, mist, vapors and spray.          Use only outdoors or in a well-ventilated area.</p>
<b>Response</b>	<p>IF ON SKIN (HAIR): Take off immediately all contaminated clothing. Rinse affected areas with water/shower. If skin irritation occurs, get medical help.          IN CASE OF FIRE: Use powder, alcohol-resistant foam, water in large amounts, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.          IF SWALLOWED: Immediately call a poison center or medical professional; Rinse mouth.          IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.          IF EXPOSED OR CONCERNED: Get medical advice.          IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor. Get medical help if you feel unwell.</p>
<b>Storage</b>	<p>Store in a well ventilated place. Keep cool.          Keep container tightly closed.          Store locked up.</p>
<b>Disposal</b>	<p>Dispose of contents and/or container in accordance with local regulations.</p>

**HMIS CLASSIFICATION**

<b>Health Hazard</b>	2	<b>Flammability</b>	3
<b>Reactivity</b>	0	<b>Personal Protection</b>	E

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

<b>CHEMICAL NAME</b>	Not applicable
<b>BOTANICAL NAME</b>	Not applicable
<b>SYNONYM</b>	2A alcohol or solvent; DAG-2A
<b>CHEMICAL FORMULA</b>	Not applicable
<b>CHEMICAL FAMILY</b>	Not available
<b>CAS NUMBER</b>	Not applicable
<b>ALTERNATE CAS NUMBER</b>	Not applicable
<b>MOLECULAR WEIGHT</b>	Not applicable

**COMPOSITION**

CHEMICAL NAME	CAS NUMBER	EC NUMBER	% BY WEIGHT
ETHANOL	64-17-5	200-578-6	81 - 86
ETHYL ACETATE	141-78-6	205-500-4	~ 0.85
METHANOL	67-56-1	200-659-6	~ 13
METHYL ISOBUTYL KETONE	108-10-1	203-550-1	~ 1.0

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

**NOTES**

Balance water

**SECTION 4: FIRST-AID MEASURES**
**IN CASE OF EYE CONTACT**

Flush with copious amounts of water for 15 minutes, separating eyelids with fingers. If irritation persists seek medical aid.

**IN CASE OF SKIN CONTACT**

Wash with soap & water for 15 minutes. If irritation persists seek medical aid.

**IF SWALLOWED**

Call a physician. Wash out mouth with water. Do not induce vomiting without medical advice.

**IF INHALED**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician

**MEDICAL ATTENTION AND SPECIAL TREATMENT**

Get emergency medical help.

**SYMPTOMS CAUSED BY EXPOSURE**

Not expected to present a significant hazard under anticipated conditions of normal use.

**SECTION 5: FIREFIGHTING MEASURES**
**SPECIFIC HAZARDS ARISING FROM THE CHEMICAL**

The vapour mixes well with air, explosive mixtures are easily formed. Vapours form from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from handling point.

**FLAMMABLE PROPERTIES**

Flammable

**HAZARDOUS COMBUSTION PRODUCTS**

Under fire conditions, hazardous fumes will be present.

**SUITABLE & UNSUITABLE EXTINGUISHING MEDIA**

**Small fire:** dry chemical, CO<sub>2</sub> or water spray. **Large fire:** dry chemical, CO<sub>2</sub>, alcohol resistant foam or water spray. Do not get water inside containers.

**PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS**

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**
**PERSONAL PRECAUTIONS**

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**METHODS & MATERIAL FOR CONTAINMENT**

On land, sweep or shovel into suitable containers.

**CLEANUP PROCEDURE**

Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Shut off all sources of ignition. Evacuate the area. If necessary, employ water fog to disperse the vapors. Absorb the matter with compatible vermiculite or other absorbing material. Place in a suitable container and retain for disposal. Ventilate and clean the affected area. Do not flush into sewerage system or to drains.

**REFERENCE TO OTHER SECTIONS**

See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

**SECTION 7: HANDLING AND STORAGE**
**PRECAUTIONS FOR SAFE HANDLING**

Do not inhale. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling. Store away from incompatible materials, in a well-ventilated area. Eliminate all sources of ignition. Store in accordance with local regulations. Do not store in unlabeled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Use appropriate containment to avoid environmental contamination.

**CONDITIONS FOR SAFE STORAGE**

Store away from incompatible materials, in a well-ventilated area. Eliminate all sources of ignition. Store in accordance with local regulations. Do not store in unlabeled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Use appropriate containment to avoid environmental contamination.

**STORAGE CONDITIONS**

Store in original container, tightly sealed, protected from direct sunlight and moisture.

Preserve in tight containers away from heat and sources of ignition.

**SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION**

Chemical Name: ETHANOL CAS #: 64-17-5

	Country	Limit value-8 hours		Limit value-Short Term		IDLH	REL	Advisory	Notes
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>				
OSHA	USA	1000	1900	2000	3800	N/L	N/L	N/A	N/A
ACGIH	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	A4 (not classifiable as a human carcinogen)
NIOSH	USA	1000	1900	N/L	N/L	3300*	N/L	N/A	*10%LEL (See:64175)
WEEL	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
HSIS	Australia	1000	1800	N/L	N/L	N/L	N/L	N/A	N/A
HSE	UK	1000	1920	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Austria	1000	1900	2000	3800	N/L	N/L	N/A	N/A
GESTIS	Belgium	1000	1907	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Canada - Ontario	N/L	N/L	1000	N/L	N/L	N/L	N/A	N/A
GESTIS	Canada - Québec	1000	1880	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Denmark	1000	1900	2000	3800	N/L	N/L	N/A	N/A
GESTIS	Finland	1000	1900	1300 (1)	2500 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	France	1000	1900	5000	9500	N/L	N/L	N/A	N/A
GESTIS	Germany (AGS)	200	380	800 (1)	1520 (1)	N/L	N/L	N/A	(1) 15 minutes average value

<b>GESTIS</b>	Germany (DFG)	200	380	800 (1)	1520 (1)	N/L	N/L	N/A	(1) 15 minutes average value
<b>GESTIS</b>	Hungary	N/L	1900	N/L	7600	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Ireland	N/L	N/L	1000 (1)	N/L	N/L	N/L	N/A	(1) 15 minutes reference period
<b>GESTIS</b>	Latvia	N/L	1000	N/L	N/L	N/L	N/L	N/A	N/A
<b>GESTIS</b>	New Zealand	1000	1880	N/L	N/L	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Poland	N/L	1900	N/L	N/L	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Romania	1000	1900	5000 (1)	9500 (1)	N/L	N/L	N/A	(1) 15 minutes average value
<b>GESTIS</b>	Singapore	1000	1880	N/L	N/L	N/L	N/L	N/A	N/A
<b>GESTIS</b>	South Korea	1000	1900	N/L	N/L	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Spain	N/L	N/L	1000	1910	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Sweden	500	1000	1000 (1)	1900 (1)	N/L	N/L	N/A	(1) 15 minutes average value
<b>GESTIS</b>	Switzerland	500	960	1000	1920	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Netherlands	N/L	260	N/L	1900	N/L	N/L	N/A	N/A

**Chemical Name: ETHYL ACETATE CAS #: 141-78-6**

	Country	Limit value-8 hours		Limit value-Short Term		IDLH	REL	Advisory	Notes
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>				
OSHA	USA	400	1400	N/L	N/L	N/L	N/L	N/A	N/A
ACGIH	USA	400	N/L	N/L	N/L	N/L	N/L	N/A	N/A
NIOSH	USA	400	1400	N/L	N/L	2000 ppm 10%LEL (See: 141786)	400ppm (1400mg/m <sup>3</sup> )	N/A	N/A
WEEL	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
HSIS	Australia	200	262	400	1440	N/L	N/L	N/A	N/A
HSE	UK	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Austria	200	734	400 (1)	1468 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	Belgium	200	734	400 (1)	1468 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	Canada - Ontario	400	N/L	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Canada - Québec	400	1440	300	N/L	N/L	N/L	N/A	N/A
GESTIS	Denmark	150	540	400 (1)	1080	N/L	N/L	N/A	N/A
GESTIS	European Union	200	734	400 (1)	1468 (1)	N/L	N/L	N/A	(1) 15 minutes average value Bold-type: Indicative Occupational Exposure Limit Value (IOELV)
GESTIS	Finland	200	730	400 (1)	1470 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	France	200 (2)	734 (2)	400 (1) (2)	1468 (1) (2)	N/L	N/L	N/A	(1) 15 minutes average value; (2) Restrictive statutory limit values
GESTIS	Germany (AGS)	200	730	400 (1)	1460 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	Germany (DFG)	200	750	400 (1)	1500 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	Hungary	N/L	1400	N/L	1400	N/L	N/L	N/A	N/A
GESTIS	Ireland	200	N/L	400 (1)	N/L	N/L	N/L	N/A	(1) 15 minutes reference period
GESTIS	Japan (MHLW)	400	N/L	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Japan (JSOH)	200	720	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Latvia	54	200	400 (1)	1468 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	New Zealand	200	720	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	China	N/L	200	N/L	300 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	Poland	N/L	200	N/L	600	N/L	N/L	N/A	N/A
GESTIS	Romania	111	400	139 (1)	500 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	Singapore	400	1440	N/L	N/L	N/L	N/L	N/A	N/A

<b>GESTIS</b>	South Korea	400	1440	N/L	N/L	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Spain	400	1460	N/L	N/L	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Sweden	150	550	300 (1)	1100 (1)	N/L	N/L	N/A	(1) 15 minutes average value
<b>GESTIS</b>	Switzerland	200	730	400 (1)	1460 (1)	N/L	N/L	N/A	(1) 15 minutes average value

**Chemical Name: METHANOL CAS #: 67-56-1**

	Country	Limit value-8 hours		Limit value-Short Term		IDLH	REL	Advisory	Notes
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>				
OSHA	USA	200	260	N/L	N/L	N/L	N/L	N/A	N/A
ACGIH	USA	200	N/L	250 (1)	N/L	N/L	N/L	N/A	(1) skin; BEI issued
NIOSH	USA	200	260	N/L	N/L	N/L	N/L	N/A	(1) 15 minutes average value
WEEL	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
HSIS	Australia	200	262	250	328	N/L	N/L	N/A	N/A
HSE	UK	200	266	250	333	N/L	N/L	N/A	N/A
GESTIS	Austria	200	260	800	1040	N/L	N/L	N/A	N/A
GESTIS	Belgium	200	266 (1)	250 (1) (2)	333 (1) (2)	N/L	N/L	N/A	(1) Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air. (2) 15 minutes average value
GESTIS	Canada - Ontario	200	N/L	250	N/L	N/L	N/L	N/A	N/A
GESTIS	Canada - Québec	200	262 (1)	250 (1) (2)	328 (1) (2)	N/L	N/L	N/A	(1) Skin (2) 15 minutes average value
GESTIS	Denmark	200	260 (1)	400 (1) (2)	520 (1) (2)	N/L	N/L	N/A	(1) Skin (2) 15 minutes average value
GESTIS	European Union	200 (1)	260 (1)	N/L	N/L	N/L	N/L	N/A	Indicative Occupational Exposure Limit Value (IOELV)
GESTIS	Finland	200	270	250 (1) (2)	330 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	France	200 (1)	260 (1)	N/L	N/L	N/L	N/L	N/A	Indicative Occupational Exposure Limit Value (IOELV)
GESTIS	Germany (AGS)	100 (1)	130 (1)	200 (1) (2)	260 (1) (2)	N/L	N/L	N/A	(1) Skin (2) 15 minutes average value
GESTIS	Germany (DFG)	100 (1)	130 (1)	200 (1) (2)	260 (1) (2)	N/L	N/L	N/A	(1) Skin (2) 15 minutes average value
GESTIS	Hungary	200	260	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Ireland	200	260	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Italy	200	260	N/L	N/L	N/L	N/L	N/A	skin
GESTIS	Japan (MHLW)	200	N/L	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Japan (JSOH)	200	260	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Latvia	200	260	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	New Zealand	200	262	250	328	N/L	N/L	N/A	N/A



<b>GESTIS</b>	China	N/L	25	N/L	50 (1)	N/L	N/L	N/A	(1) 15 minutes average value
<b>GESTIS</b>	Poland	N/L	100	N/L	300	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Romania	200	260	N/L	N/L	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Singapore	200	262	250	328	N/L	N/L	N/A	N/A
<b>GESTIS</b>	South Korea	200	260	250	310	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Spain	200	266	250	333	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Sweden	200	250	250 (1)	350 (1)	N/L	N/L	N/A	(1) 15 minutes average value
<b>GESTIS</b>	Switzerland	200	260	800	1040	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Netherlands	N/L	133	N/L	N/L	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Turkey	200	260	N/L	N/L	N/L	N/L	N/A	N/A

**Chemical Name: METHYL ISOBUTYL KETONE CAS #: 108-10-1**

	Country	Limit value-8 hours		Limit value-Short Term		IDLH	REL	Advisory	Notes
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>				
OSHA	USA	100	410	N/L	N/L	N/L	N/L	N/A	N/A
ACGIH	USA	50	N/L	N/L	N/L	N/L	N/L	N/A	EI issued
NIOSH	USA	50	205	75 (1)	300 (1)	500 ppm (See: 108101)	50 ppm (205 mg/m <sup>3</sup> )	N/A	(1) 15 minutes average value
WEEL	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
HSIS	Australia	50	205	75	307	N/L	N/L	N/A	N/A
HSE	UK	50	208	100	416	N/L	N/L	N/A	N/A
GESTIS	Austria	20	83	50	208	N/L	N/L	N/A	N/A
GESTIS	Belgium	20	83	50 (1)	208 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	Canada - Ontario	20	N/L	75 (1)	N/L	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	Canada - Québec	50	205	75	307	N/L	N/L	N/A	N/A
GESTIS	Denmark	20	83	40	166	N/L	N/L	N/A	N/A
GESTIS	European Union	20 (1)	83 (1)	50 (1)	208 (1) (2)	N/L	N/L	N/A	(1) 15 minutes average value Bold-type: Indicative Occupational Exposure Limit Value (IOELV)
GESTIS	Finland	20	80	50 (1)	210 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	France	20	83	50	208	N/L	N/L	N/A	Restrictive statutory limit values
GESTIS	Germany (AGS)	20 (1)	83 (1)	40 (1) (2)	166 (1) (2)	N/L	N/L	N/A	(1) Skin (2) 15 minutes average value
GESTIS	Germany (DFG)	20 (1)	83 (1)	40 (1) (2)	166 (1) (2)	N/L	N/L	N/A	(1) Skin (2) 15 minutes average value
GESTIS	Hungary	N/L	83	N/L	208	N/L	N/L	N/A	N/A
GESTIS	Ireland	20	83	50 (1)	208 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	Israel	20	82	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Italy	20	83	50	208	N/L	N/L	N/A	N/A
GESTIS	Japan (MHLW)	20	N/L	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Japan (JSOH)	50	200	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Latvia	20	83	50 (1)	208 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	New Zealand	50	205	75	307	N/L	N/L	N/A	N/A
GESTIS	Poland	N/L	83	N/L	200	N/L	N/L	N/A	N/A
GESTIS	Romania	20	83	50 (1)	208 (1)	N/L	N/L	N/A	(1) 15 minutes average value
GESTIS	Singapore	50	205	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	South Korea	50	205	75	300	N/L	N/L	N/A	N/A

<b>GESTIS</b>	Spain	20	83	50	208	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Sweden	20	83	50 (1)	200 (1)	N/L	N/L	N/A	(1) 15 minutes average value
<b>GESTIS</b>	Switzerland	20	82	40	164	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Netherlands	N/L	104	N/L	208	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Turkey	20	83	50 (1)	208 (1)	N/L	N/L	N/A	(1) 15 minutes average value

N/L = Not listed ; N/A = Not Available

PELs are 8-hour TWAs = Limit value - Eight hours

Ceiling or Short-Term TWA = STEL = Limit value - Short term

**EXPOSURE GUIDELINES**

Consult local authorities for provincial or state exposure limits. Particulates not otherwise regulated, respirable

**PERSONAL PROTECTIVE EQUIPMENT**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by WHMIS or OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. **Skin:** Wear appropriate gloves to prevent skin exposure. **Clothing:** Wear appropriate protective clothing to minimize contact with skin. **Respirators:** Follow WHMIS or OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. **Thermal Hazards:** For products representing a thermal hazard, appropriate Personal Protective Equipment should be used.

**SPECIFIC ENGINEERING CONTROLS**

Adequate mechanical ventilation. Fumehood, eye wash station, and safety shower.

**BIOLOGICAL MONITORING**

Not available

**CONTROL BANDING**

Not available

**NOTES**

OEL: ETHANOL:

TLV: 1000 ppm as TWA

MAK: 500 ppm, 960 mg/m<sup>3</sup>;

Peak limitation category: I(2); Carcinogen category: 5; Pregnancy risk group: C;

Germ cell mutagen group: 5; (DFG 2004).

OEL: ETHYL ACETATE:

MAK: 400 ppm, 1500 mg/m<sup>3</sup>

Peak limitation category: I(2); Pregnancy risk group: C; (DFG 2004).

OEL: METHANOL:

MAK: Pregnancy risk group: C (DFG 2004).

EU OEL: 260 mg/m<sup>3</sup> 200 ppm as TWA (skin) (EU 2006).

NIOSH REL: ST 250 ppm (325 mg/m<sup>3</sup>) skin

OEL: METHYL ISOBUTYL KETONE:

MAK: 20 ppm, 83 mg/m<sup>3</sup>; H; Peak limitation category: I(2); Pregnancy risk group: C; (DFG 2004).

NIOSH ST 75 ppm (300 mg/m<sup>3</sup>)

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**
**PHYSICAL STATE**

Liquid

**DESCRIPTION**

Clear colourless liquid with alcohol-like odor.

**SOLUBILITY**

Soluble in water.

**ODOR**

Alcohol-like odor

**FLAMMABILITY**

Flammable

<b>AUTO-IGNITION TEMPERATURE</b>	363°C, 685.4°F	<b>BOILING POINT</b>	78.4°C, 173.12°F	<b>DECOMPOSITION TEMPERATURE</b>	Not available
<b>EVAPORATION RATE</b>	Not available	<b>EXPLOSIVE LIMIT</b>	Not available	<b>FLASH POINT</b>	(13-16)°C, (55.4-60.8)°F (Tag closed cup)
<b>log P (OCTANOL-WATER)</b>	Not available	<b>LOWER FLAMMABLE/EXPLOSIVE LIMIT(S)</b>	3.3%	<b>MELTING/FREEZING POINT</b>	Not available
<b>PARTICLE CHARACTERISTICS</b>	0.1 - 5100 ppm (Ethanol)	<b>OXIDIZING PROPERTY</b>	Not available	<b>pH</b>	Not available
<b>RELATIVE DENSITY (WATER = 1)</b>	0.8106 kg/L (20°C)	<b>SPECIFIC GRAVITY</b>	0.7924 - 0.7960 (15.5°C)	<b>UPPER FLAMMABLE/EXPLOSIVE LIMIT(S)</b>	19%
<b>VAPOR DENSITY (AIR = 1)</b>	1.59	<b>VAPOR PRESSURE</b>	44.6 mmHg (20°C)	<b>VISCOSITY</b>	Not available

The physical data presented above are typical values and should not be construed as a specification.

## SECTION 10: STABILITY AND REACTIVITY

<b>REACTIVITY</b>	Not established
<b>CHEMICAL STABILITY</b>	Stable under recommended storage conditions
<b>INCOMPATIBLE MATERIALS</b>	Strong oxidants, acetylchloride, excessive heat, sparks or open flame.
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	Toxic fumes of carbon monoxide, carbon dioxide and other gases may occur
<b>HAZARDOUS POLYMERIZATION</b>	Will not occur
<b>POSSIBILITY OF HAZARDOUS REACTION</b>	Not established
<b>CONDITIONS TO AVOID</b>	Moisture, sunlight and extreme temperatures

## SECTION 11: TOXICOLOGICAL INFORMATION

<b>ACUTE TOXICITY</b>	Calculated ATE: Oral: Rat: LD50: (mg/kg): 6600 - 7072 Dermal: Rabbit LD50: (mg/kg): 20 000 - 20 810 Inhalation: Rat: LD50: (mg/L/4hr): 34033 - 35969
<b>SKIN CORROSION/IRRITATION</b>	ETHANOL: Rabbit - Irritating to skin - 24h
<b>SERIOUS EYE DAMAGE/EYE IRRITATION</b>	ETHANOL: Rabbit - Mild eye irritation - 24h - Draize Test
<b>RESPIRATORY SENSITIZATION</b>	Due to lack of data the classification is not possible.
<b>SKIN SENSITIZATION</b>	Due to lack of data the classification is not possible.

**GERM CELL MUTAGENICITY  
CARCINOGENICITY**

Based on available data, the classification criteria are not met.

**OSHA** ETHANOL is listed.  
METHANOL is not listed.  
METHYL ISOBUTYL KETONE is not listed.  
ETHYL ACETATE is not listed.

**NTP** ETHANOL is listed.  
METHANOL is not listed.  
METHYL ISOBUTYL KETONE is not listed.  
ETHYL ACETATE is not listed.

**IARC** ETHANOL is listed in group 1 (carcinogenic to humans).  
METHANOL is not evaluated.  
METHYL ISOBUTYL KETONE is listed in group 2b (possibly carcinogenic to humans).  
ETHYL ACETATE is not evaluated.

**California Proposition 65** This product contains the following chemical known to the State of California to cause cancer and birth defects or other reproductive harm: ETHANOL and METHYL ISOBUTYL KETONE.

**ADDITIONAL CARCINOGENICITY  
INFORMATION**

ETHANOL: Carcinogenicity - mouse - Oral  
Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Liver: Tumors. Blood: Lymphomas including Hodgkin's disease.

**REPRODUCTIVE TOXICITY**

ETHANOL: Reproductive toxicity - Human - female - Oral  
Effects on Newborn: Apgar score (human only); other neonatal measures or effects; drug dependence

**SPECIFIC TARGET ORGAN TOXICITY -  
SINGLE EXPOSURE**

The substance may cause effects on the central nervous system.

**SPECIFIC TARGET ORGAN TOXICITY -  
REPEATED EXPOSURE**

May cause liver cirrhosis.

**ASPIRATION HAZARDS**

Based on available data, the classification criteria are not met.

**SIGNS AND SYMPTOMS OF  
EXPOSURE**

**ROUTES OF EXPOSURE:**  
Oral, Dermal, Inhalation, Eye contact  
**EARLY ONSET SYMPTOMS RELATED TO EXPOSURE:**  
Not available  
**DELAYED HEALTH EFFECT FROM EXPOSURE:**  
Not available

**EFFECTS OF SHORT-TERM EXPOSURE:**  
The substance irritates the eyes. Inhalation of high concentration of vapour may cause irritation of the eyes and respiratory tract.

**EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:**  
The liquid defats the skin. The substance may have effects on the upper respiratory tract and central nervous system, resulting in irritation, headache, fatigue and lack of concentration.

**POTENTIAL HEALTH EFFECTS**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation. Cough. Headache. Fatigue.  
**Ingestion** Harmful if swallowed. Not consumable due to the denaturation process. Burning sensation. Headache. Confusion. Dizziness. Unconsciousness. Rapidly absorbed from the gastrointestinal tract and distributed throughout the body.  
**Skin** May be harmful if absorbed through skin. Causes mild skin irritation. Dry skin.  
**Eyes** Severe eye irritation. Redness. Pain. Burning.

**SECTION 12: ECOLOGICAL INFORMATION**
**ECOTOXICITY**

EC50: 48 Hr: Crustacea: (mg/L): Not available  
LC50: 96 Hr: Fish: (mg/L): > 10 000  
EC50: 72 or 96 Hr: Algae (or other aqua plants): (mg/L): Not available

<b>PERSISTENCE AND DEGRADABILITY</b>	Not available
<b>BIOACCUMULATIVE POTENTIAL</b>	This material is not expected to bioaccumulate.
<b>MOBILITY IN SOIL</b>	ETHANOL: Water Solubility: 1.00E+06 mg/L (25°C) Henry's Law Constant: 5.00E-06 atm-m <sup>3</sup> /mole (25°C)
<b>OTHER ADVERSE EFFECTS</b>	Not available
<b>NOTES</b>	This product is not intended to be released into the environment  Ethanol & Methanol: When spilled on the land, they are apt to volatilize, biodegrade and/or leach into the ground water. It is anticipated on their physical properties that water will serve as the final media. Based on these factors it is anticipated that this substance will neither adsorb to soil nor bioconcentrate in aquatic organisms. Once in water, photolysis, oxidation, hydrolysis, and biodegradation is anticipated to occur.  Methyl Isobutyl Ketone: Expected to exist solely as a vapor in the ambient atmosphere. Expected to have high mobility in soils. Volatilization from dry soil surfaces is expected. Volatilization from moist soil surfaces is expected. Volatilization from water surfaces is expected to be an important environmental fate process. Not expected to bioaccumulate.

### SECTION 13: DISPOSAL CONSIDERATIONS

<b>DISPOSAL METHODS</b>	Dispose of in accordance with federal / local laws and regulations. Avoid release into the environment.
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### SECTION 14: TRANSPORT INFORMATION

<b>UN PROPER SHIPPING NAME</b>	ALCOHOLS, N.O.S
<b>UN NUMBER</b>	1987
<b>CLASS</b>	3
<b>PACKING GROUP</b>	II
<b><u>AUSTRALIA</u></b>	
<b>HAZCHEM</b>	3Y, 3YE
<b><u>EU</u></b>	
<b>TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE</b>	Not Listed
<b>ENVIRONMENTAL HAZARDS</b>	Not available
<b>SPECIAL SHIPPING INFORMATION</b>	Not applicable

### SECTION 15: REGULATORY INFORMATION

#### UNITED STATES REGULATIONS

Chemical Name & CAS	CERCLA 40 CFR Part 302.4	SARA (Title III) 40 CFR Part 372.65	EPA 40 CFR Part 355		Pennsylvania	Right-to-know		California Prop 65
			Appendix A	Appendix B		New Jersey	Massachusetts	
METHANOL 67-56-1	X	X	N/L	N/L	X	X	X	N/L
METHYL ISOBUTYL KETONE 108-10-1	X	X	N/L	N/L	X	X	X	X
ETHANOL 64-17-5	N/L	N/L	N/L	N/L	X	X	X	X
ETHYL ACETATE 141-78-6	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L

N/L = Not Listed; X = Listed

**AUSTRALIAN REGULATIONS**

Chemical Name & CAS	Poisons and Therapeutic Goods	Therapeutic Goods Act	Code of Practices - Illicit Drug Precursors	Poisons Standard	Work Health and Safety Regulations	Inventory of Industrial Chemicals
METHANOL 67-56-1	N/L	Listed as Schedule 6	N/L	Listed	N/L	N/L
METHYL ISOBUTYL KETONE 108-10-1	N/L	Listed as Schedule 5	N/L	Listed	N/L	N/L
ETHANOL 64-17-5	N/L	N/L	Listed as Category III	N/L	N/L	N/L
ETHYL ACETATE 141-78-6	N/L	N/L	N/L	N/L	N/L	N/L

N/L = Not Listed

**EU REGULATIONS**

Chemical Name & CAS	REACH ANNEX XVII	REACH ANNEX XIV	EC 1005/2009	EC 850/2004	EC 1107/2009	PIC - Prior Informed Consent Regulation	EC 2012/18
METHANOL 67-56-1	N/L	N/L	N/L	N/L	N/L	N/L	N/L
METHYL ISOBUTYL KETONE 108-10-1	N/L	N/L	N/L	N/L	N/L	N/L	N/L
ETHANOL 64-17-5	N/L	N/L	N/L	N/L	N/L	N/L	N/L
ETHYL ACETATE 141-78-6	N/L	N/L	N/L	N/L	N/L	N/L	N/L

N/L = Not Listed; X = Listed

Any EU regulation not listed above is not applicable to this product.

SUBJECT TO INTERNATIONAL AGREEMENT

Not applicable

**SECTION 16: OTHER INFORMATION**
**REFERENCES**

Available upon request

**ABBREVIATIONS AND ACRONYMS**

**ACGIH** - American Conference of Governmental Industrial Hygienists; **AIHA WEEL** – American Industrial Hygiene Association Workplace Environment Exposure Levels; **CAESAR** – Computer Assisted Evaluation of industrial chemical Substances According to Regulations; **CAS** – Chemical Abstract Service; **CERCLA** – Comprehensive Environmental Response, Compensation, and Liability Act; **EC50** – Effective Concentration, 50%; **EPA** – Environmental Protection Agency; **GHS** – Global Harmonized System; **HMIS** – Hazardous Materials Information System; **HSE** – Health and Safety Executive; **HSIS** – Hazardous Substances Information System; **IARC** – International Agency for Research on Cancer; **IDLH** - Immediately Dangerous to Life or Health; **IRFMN** – Ready Biodegradability Model; **ISS** – Istituto Superiore Sanità; **LC50** – Lethal Concentration, 50%; **LD50** – Lethal Dose, 50%; **MSHA** - Mine Safety and Health Administration; **NIOSH** – National Institute for Occupational Safety and Health; **NTP** – National Toxicology Program; **OSHA PEL** – Occupational Safety & Health Administration Permissible Exposure Limits; **QSAR** – Quantitative Structure-activity relationship; **REL** - Recommended Exposure Limit; **SARA** – Superfund Amendments and Reauthorization Act; **STEL** – Short Term Exposure Limit; **TLV** – Threshold Limit Value; **TWA** – Time Weighted Average; **WHMIS** – Workplace Hazardous Materials Information System

**LAST REVISION**

02/2023

**SUPERSEDES**

05/2020

For a list of changes to the SDS since the last version, please communicate with MEDISCA at [www.medisca.com](http://www.medisca.com)

**DISCLAIMER**

This document was created in accordance with OSHA, Safe Work Australia and WHMIS regulations. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. MEDISCA® shall not be held liable for any damage resulting from handling or from contact with the above product. Recipients of the product must take responsibility for observing existing laws and regulations.

**SUPPLEMENTARY INFORMATION**

For all country specific requirements not outlined on this Safety Data Sheet, please request Supplementary Page to this Safety Data Sheet.