

SAFETY DATA SHEET

Revision Date: 10/16/2013

Print Date: 10/16/2013

DENATURED ALCOHOL
MC-DENATURED**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

Mad Chemist		
14271 Corporate Drive #C	Telephone	1-714-265-3744
Garden Grove, CA 92843	Emergency telephone number	1-800-535-5035
Product name	DENATURED ALCOHOL	
Product code	MC-DENATURED	
Product Use Description	No data	

2. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance: liquid

WARNING! FLAMMABLE LIQUID AND VAPOR. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY CAUSE EYE IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY THE SKIN AND CAUSE IRRITATION AND BURNS.

Potential Health Effects**Exposure routes**

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact

Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

Skin contact

May cause mild skin irritation. Symptoms may include redness and burning of skin. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, skin burns, and other skin damage.

Ingestion

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Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation

Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: Skin, lung (for example, asthma-like conditions), Liver, Central nervous system, male reproductive system, Individuals with preexisting heart disorders maybe more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), Cough, central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), involuntary eye movement, respiratory depression (slowing of the breathing rate), Lack of coordination, confusion, irregular heartbeat, anesthesia, respiratory failure, coma

Target Organs

This product contains ethanol. Alcoholic beverage consumption has been associated with brain damage, heart damage, and pancreatitis in humans. The relevance of these findings to ethanol exposure in industrial environments is uncertain., Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: pancreatic damage, liver damage, brain damage, testis damage, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans: liver damage

Carcinogenicity

This product contains ethanol. The International Agency for Research on Cancer (IARC) has determined that exposure to ethanol through chronic human consumption of alcoholic beverages can cause cancer. The relevance of this finding to ethanol exposure in industrial environments is uncertain.

Reproductive hazard

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This product contains ethanol. Alcoholic beverage consumption has been associated with birth defects in humans. The relevance of this finding to ethanol exposure in industrial environments is uncertain.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No.	Concentration
ETHANOL	64-17-5	$\geq 90 - \leq 100\%$

4. FIRST AID MEASURES**Eyes**

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

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Hazards: Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**Dry chemical, Carbon dioxide (CO₂), Water spray**Hazardous combustion products**

carbon dioxide and carbon monoxide, formaldehyde, Hydrocarbons

Precautions for fire-fighting

Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Water may be ineffective for extinguishment unless used under favorable conditions by experienced fire fighters. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

NFPA Flammable and Combustible Liquids Classification

Flammable Liquid Class IB

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Ensure adequate ventilation. Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Pay attention to the spreading of gases especially at ground level (heavier than air) and to the direction of the wind.

Environmental precautions

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Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.

Methods for 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).

Other information

Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapours/mists with a water spray jet.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77.

Storage

Store in a cool, dry, ventilated area, away from incompatible substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

ETHANOL		64-17-5
NIOSH	Recommended exposure limit (REL):	1,000 ppm
NIOSH	Recommended exposure limit (REL):	1,900 mg/m3
OSHA Z1	Permissible exposure limit	1,000 ppm
OSHA Z1	Permissible exposure limit	1,900 mg/m3

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ACGIH Short term exposure limit 1,000 ppm

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye protection

Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.
Wear resistant gloves (consult your safety equipment supplier).

Respiratory protection

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	no data available
Colour	no data available
Odour	alcohol-like
Boiling point/boiling range	173.5 °F / 78.6 °C @ 760.00 mmHg

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Melting point/range	-173 °F / -114 °C
Sublimation point	no data available
pH	no data available
Flash point	68 °F / 20 °C Tag open cup
Ignition temperature	no data available
Evaporation rate	3.3 n-Butyl Acetate
Lower explosion limit/Upper explosion limit	3.3 %(V) / 19.0 %(V)
Particle size	no data available
Vapour pressure	48.000 mmHg @ 68.00 °F / 20.00 °C
Relative vapour density	1.6 AIR=1
Density	0.794 g/cm ³ @ 60.00 °F / 15.56 °C 6.61 lb/gal @ 60.00 °F / 15.56 °C
Bulk density	No data
Water solubility	completely soluble
Solubility(ies)	no data available
Partition coefficient: n-octanol/water	no data available
log Pow	no data available
Autoignition temperature	no data available
Viscosity, dynamic	1.2 mPa.s
Viscosity, kinematic	no data available
Solids in Solution	no data available
Decomposition temperature	no data available
Burning number	no data available
Dust explosion constant	no data available
Minimum ignition energy	no data available

10. STABILITY AND REACTIVITY**Stability**

Stable.

Conditions to avoid

Heat, flames and sparks.

Incompatible products

Acids, Alkali metals, Ammonia, Bases, halogens, inorganic materials, Oxidizing agents, sodium

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carbon dioxide and carbon monoxide, formaldehyde, Hydrocarbons

Hazardous reactions

Product will not undergo hazardous polymerization.

Thermal decomposition

No data

11. TOXICOLOGICAL INFORMATION**Acute oral toxicity**

ETHANOL : LD 50 Rat: 7,060 mg/kg

Acute inhalation toxicity

ETHANOL : no data available

Acute dermal toxicity

ETHANOL : LD Lo Rabbit: 20 g/kg

12. ECOLOGICAL INFORMATION**Biodegradability**

ETHANOL : no data available

Bioaccumulation

ETHANOL : no data available

Ecotoxicity effects**Toxicity to fish**ETHANOL : 96 h static test LC 50 Rainbow trout,donaldson trout
(Oncorhynchus mykiss): 12,000.00 - 16,000.00 mg/l

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10,000.00 mg/l**Toxicity to algae**

ETHANOL : no data available

Toxicity to bacteria

ETHANOL : no data available

Biochemical Oxygen Demand (BOD)

ETHANOL : no data available

Chemical Oxygen Demand (COD)

ETHANOL : no data available

Additional ecological information

ETHANOL : no data available

13. DISPOSAL CONSIDERATIONS**Waste disposal methods**

Dispose of in accordance with all applicable local, state and federal regulations. Do not discharge effluent containing this product into lakes, streams, ponds or estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact MAD CHEMISTS Regulatory Department at 714-265-3744.

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14. TRANSPORT INFORMATION

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT /LTD. QTY.
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U.S. DOT - ROAD

UN 1987	ALCOHOLS, N.O.S.	3		II	
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U.S. DOT - RAIL

UN 1987	ALCOHOLS, N.O.S.	3		II	
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U.S. DOT - INLAND WATERWAYS

UN 1987	ALCOHOLS, N.O.S.	3		II	
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TRANSPORT CANADA - ROAD

UN 1987	ALCOHOLS, N.O.S. (ETHANOL)	3		II	
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TRANSPORT CANADA - RAIL

UN 1987	ALCOHOLS, N.O.S. (ETHANOL)	3		II	
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TRANSPORT CANADA - INLAND WATERWAYS

UN 1987	ALCOHOLS, N.O.S. (ETHANOL)	3		II	
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INTERNATIONAL MARITIME DANGEROUS GOODS

UN 1987	ALCOHOLS, N.O.S. (ETHANOL)	3		II	
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN 1987	Alcohols, n.o.s. (ETHANOL)	3		II	
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN 1987	Alcohols, n.o.s. (ETHANOL)	3		II	
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MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

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UN	1987	ALCOHOLES, N.E.P. (ETHANOL)	3	II
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*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

California Prop. 65

WARNING! This product contains a chemical known to the State of California to cause cancer.	ACETALDEHYDE
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SARA Hazard Classification

Fire Hazard
Acute Health Hazard
Chronic Health Hazard

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

New Jersey RTK Label Information

ETHANOL 64-17-5

Pennsylvania RTK Label Information

ETHANOL 64-17-5

Notification status

EU. EINECS y (positive listing)
US. Toxic Substances Control Act y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA). y (positive listing)
Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)

Japan. Kashin-Hou Law List

n (Negative listing)

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Korea. Toxic Chemical Control Law (TCCL) List n (Negative listing)
Philippines. The Toxic Substances and Hazardous and Nuclear y (positive listing)
Waste Control Act

China. Inventory of Existing Chemical Substances y (positive listing)

	HMIS	NFPA
Health	2*	2
Flammability	3	3
Physical hazards	0	
Instability		0
Specific Hazard	--	--

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by MAD CHEMIST's Regulatory Department (1-714-265-3744).