

COMPANY IDENTITY: CSD/STARTEX  
PRODUCT IDENTITY: DENATURED ALCOHOL  
NEW MSDS DATE: 03/03/2005  
CDSMSDS\Denatured Alcohol 030305

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#### MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet conforms to the requirements of ANSI Z400.1.  
THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)  
IMPORTANT: Read this MSDS before handling & disposing of this product.  
Pass this information on to employees, customers, & users of this product.

#### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

PRODUCT IDENTITY: DENATURED ALCOHOL  
COMPANY IDENTITY: CSD/STARTEX  
COMPANY ADDRESS: P O BOX 3087  
COMPANY CITY: CONROE, TX 77305  
COMPANY PHONE: 1-936-228-0865  
CHEMTREC PHONE: 1-800-424-9300

#### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CONTAINS: 65-75% ETHANOL (64-17-5) [200-578-6],  
15-25% METHANOL (67-56-1) [200-659-6],  
0- 5% ETHYL ACETATE (141-78-6) [205-500-4],  
0- 1% HEPTANE (142-82-5) [205-563-8]

Number in parentheses is CAS #, number in brackets is European EC #.

#### SECTION 3. HAZARDS IDENTIFICATION

##### RISK STATEMENTS:

R11 Highly Flammable.  
R18 In use, may form flammable/explosive vapor-air mixture.  
R41 Risk of serious damage to eyes.  
R65 Harmful: may cause lung damage if swallowed.  
R36/37/38 Irritating to eyes, respiratory system and skin.  
R39/25 Toxic: danger of very serious irreversible effects if swallowed.

##### SAFETY STATEMENTS:

S7 Keep container tightly closed.  
S9 Keep container in a well-ventilated place.  
S16 Keep away from sources of ignition. No smoking.  
S23 Do not breathe gas, fumes, vapor, or spray.  
S24 Avoid contact with skin.  
S29 Do not empty into drains.  
S33 Take precautionary measures against static discharges.  
S45 In case of accident, or if you feel unwell, seek medical advice immediately. (Show the label where possible).

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#### SECTION 4. FIRST AID MEASURES

##### EYE CONTACT:

For eyes, flush with plenty of water for 15 minutes & get medical attention.

##### SKIN CONTACT:

In case of contact with skin immediately remove contaminated clothing.  
Wash thoroughly with soap & water. Wash contaminated clothing before reuse.

##### INHALATION:

After high vapor exposure, remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped give artificial respiration.

##### SWALLOWING:

Induce vomiting promptly using physician's instructions or by having patient stick finger down throat. After vomiting has been induced, give two teaspoonsful of baking soda in a glass of water. CALL A PHYSICIAN. Never give anything by mouth to an unconscious person. Have patient lie down & keep warm. Cover eyes to exclude light.

#### SECTION 5. FIRE FIGHTING MEASURES

##### EXTINGUISHING MEDIA

NFPA Class B extinguishers (Carbon Dioxide or foam) for Class I B liquid fires.

##### SPECIAL FIRE FIGHTING PROCEDURES

Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used.  
Do not enter confined fire-space without full bunker gear.  
(Helmet with face shield, bunker coats, gloves & rubber boots).  
Use NIOSH approved positive-pressure self-contained breathing apparatus.

##### UNUSUAL EXPLOSION AND FIRE PROCEDURES

HIGHLY FLAMMABLE!! VAPORS CAN CAUSE FLASH FIRE

Keep container tightly closed.  
Isolate from oxidizers, heat, sparks, electric equipment & open flame.  
Closed containers may explode if exposed to extreme heat.  
Applying to hot surfaces requires special precautions.  
Empty container very hazardous! Continue all label precautions!

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

##### CONTAINMENT TECHNIQUES

Stop spill at source. Dike area & contain.

##### CLEAN-UP PROCEDURES:

Clean up remainder with absorbent materials. Mop up & dispose of. Persons without proper protection should be kept from area until cleaned up.

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## SECTION 7. HANDLING AND STORAGE

### HANDLING

Isolate from oxidizers, heat, sparks, electric equipment & open flame.  
Use only with adequate ventilation. Avoid breathing of vapor or spray mist.  
Avoid contact with skin & eyes.  
Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier.  
Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse.  
Avoid free fall of liquid. Ground containers when transferring. Do not flame cut, saw, drill, braze, or weld. Empty container very hazardous! Continue all label precautions!

### STORAGE

Do not store above 49 C/120 F. Store large amounts in structures made for OSHA Class I B liquids. Keep container tightly closed & upright when not in use to prevent leakage.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

### RESPIRATORY EXPOSURE CONTROLS

A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z86.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

### VENTILATION

LOCAL EXHAUST	: Necessary
MECHANICAL (GENERAL)	: Acceptable
SPECIAL	: None
OTHER	: None

### PERSONAL PROTECTIONS:

Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier.  
Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse.

### WORK & HYGIENIC PRACTICES:

Provide readily accessible eye wash stations & safety showers.  
Wash at end of each workshift & before eating, smoking or using the toilet.  
Promptly remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

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#### SECTION 9. PHYSICAL DATA

APPEARANCE : Liquid, Water-White  
ODOR : Ester  
BOILING RANGE : 63 75 79 C / 147 167 175 F  
AUTO IGNITION TEMPERATURE : 293 C / 560 F (Lowest Component)  
LOWER FLAMMABLE LIMIT IN AIR (% by vol): 4.9  
FLASH POINT (TEST METHOD): -1 C / 29 F (TCC) (Lowest Component)  
FLAMMABILITY CLASSIFICATION: Class I B  
GRAVITY @ 68/68 F / 20/20 C :  
API : 46.0  
SPECIFIC GRAVITY (Water=1) : 0.797  
POUNDS/GALLON : 6.639  
VOC'S (>0.44 Lbs/Sq In) : 100.0 Vol. % / 797.0 g/L / 6.638 Lbs/Gal  
TOTAL VOC'S (TVOC) : 100.0 Vol. % / 797.0 g/L / 6.638 Lbs/Gal  
NONEXEMPT VOC'S (CVOC) : 100.0 Vol. % / 797.0 g/L / 6.638 Lbs/Gal  
HAZARDOUS AIR POLLUTANTS (HAPS) : 23.7 Wt. % / 188.5 g/L / 1.570 Lbs/Gal  
VAPOR PRESSURE (mm of Hg)@20 C 61.3  
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C) 61.3  
VAPOR DENSITY (air=1) : 1.5  
WATER ABSORPTION : Appreciable  
REFRACTIVE INDEX : 1.355

#### SECTION 10. STABILITY & REACTIVITY

##### STABILITY

Stable under normal conditions.

##### CONDITIONS TO AVOID

Isolate from oxidizers, heat, sparks, electric equipment & open flame.

##### MATERIALS TO AVOID

Isolate from strong oxidizers such as permanganates, chromates & peroxides.

##### HAZARDOUS DECOMPOSITION PRODUCTS

Carbon Monoxide, Carbon Dioxide from burning.

##### HAZARDOUS POLYMERIZATION

Will not occur.

#### SECTION 11. TOXICOLOGICAL INFORMATION

MATERIAL	CAS #	TWA (OSHA)	TLV (ACGIH)	HAP
Ethanol	64-17-5	1000 ppm	1000 ppm A4	No
Methanol	67-56-1	200 ppm S	200 ppm S	Yes
Ethyl Acetate	141-78-6	400 ppm	400 ppm	No
Heptane	142-82-5	500 ppm	400 ppm	No

In addition to EPA Hazardous Air Pollutants showing 'Yes' under "HAP" above, using manufacturers' data, based on EPA Method 311, the following EPA Hazardous Air Pollutants may be present in trace amounts (less than 0.1%):  
Benzene

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#### SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

MATERIAL	CAS #	CEILING	STEL (OSHA/ACGIH)
Methanol	67-56-1	None Known	250 ppm
Heptane	142-82-5	None Known	500 ppm

#### ACUTE HAZARDS

##### EYE & SKIN CONTACT:

Primary irritation to skin, defatting, dermatitis.  
Primary irritation to eyes, redness, tearing, blurred vision.  
Liquid can cause eye irritation. Wash thoroughly after handling.

##### INHALATION:

Anesthetic. Irritates respiratory tract. Acute overexposure can cause serious nervous system depression. Vapor harmful. Breathing vapor can cause irritation.  
Acute overexposure can cause damage to kidneys, blood, nerves, liver & lungs. Repeated exposure over TLV can cause blindness.

##### SWALLOWING:

Can be fatal or cause blindness if swallowed. Cannot be made non-poisonous. POISON ! Can cause irreversible nervous system damage & death. Harmful or fatal if swallowed. Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.

#### SUBCHRONIC HAZARDS/CONDITIONS AGGREGATED

##### CONDITIONS AGGREGATED

Chronic overexposure can cause damage to kidneys, blood, nerves, liver & lungs. Persons with severe skin, liver or kidney problems should avoid use.

#### CHRONIC HAZARDS

##### CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:

Leukemia been reported in humans from Benzene.  
This product contains less than 1 ppm of Benzene.  
Not considered hazardous in such low concentrations.  
Absorption thru skin may be harmful. Studies with laboratory animals indicate this product can cause damage to fetus.

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## SECTION 12. ECOLOGICAL INFORMATION

### MAMMALIAN INFORMATION:

MATERIAL	CAS #	LOWEST KNOWN LETHAL DOSE DATA
		LOWEST KNOWN LD50 (ORAL)
Methanol	67-56-1	1000.0 mg/kg (Man)
		LOWEST KNOWN LC50 (VAPORS)
Ethyl Acetate	141-78-6	1600 ppm (Rats)
		LOWEST KNOWN LD50 (SKIN)
Methanol	67-56-1	20000.0 mg/kg (Rabbits)

### AQUATIC ANIMAL INFORMATION:

The most sensitive known aquatic group to any component of this product is:  
Goldfish 250 ppm/mg/L (24 hours). Keep out of sewers and natural water supplies.

### MOBILITY

This material is a mobile liquid.

### DEGRADABILITY

This product is partially biodegradable.

### ACCUMULATION

This product does not accumulate or biomagnify in the environment.

## SECTION 13. DISPOSAL CONSIDERATIONS

Recycle / dispose of observing national, regional, state, provincial and local health, safety & pollution laws.

If questions exist, contact the appropriate agencies.

## SECTION 14. TRANSPORT INFORMATION

IF CONTAINER HAS > PRODUCT RQ (SEE SECTION 15) PUT "RQ," BEFORE SHIPPING NAME.  
DOT SHIPPING NAME: Alcohols, n.o.s.

(Ethyl Alcohol, Methanol), 3, UN1987, PG-II

DRUM LABEL: (FLAMMABLE LIQUID)

IATA / ICAO: Alcohols, toxic, n.o.s.

(Ethyl Alcohol, Methanol), 3, UN1986, PG-II, POISON

IMO / IMDG: Alcohols, toxic, n.o.s.

(Ethyl Alcohol, Methanol), 3, UN1986, PG-II, POISON

EMERGENCY RESPONSE GUIDEBOOK NUMBER: 127

## SECTION 15. REGULATORY INFORMATION

### EPA REGULATION:

SARA SECTION 311/312 HAZARDS: Acute Health, Fire

All components of this product are on the TSCA list.

SARA Title III Section 313 Supplier Notification

This product contains the indicated <\*> toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material.

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#### SECTION 15. REGULATORY INFORMATION (CONTINUED)

SARA TITLE III INGREDIENTS	CAS#	WT. % (REG. SECTION)	RQ (LBS)
Ethanol	64-17-5	71 (311,312)	None
*Methanol	67-56-1	23 (311,312,313,RCRA)	5000
Ethyl Acetate	141-78-6	< 5 (311,312)	5000
Heptane	142-82-5	< 1 (311,312)	None

> 21140 LB / 9609 KG OF THIS PRODUCT IN 1 CONTAINER EXCEEDS THE "RQ" OF METHANOL.

Any release equal to or exceeding the RQ must be reported to the National Response Center (800-424-8802) and appropriate state and local regulatory agencies as described in 40 CFR 302.6 and 40 CFR 355.40 respectively. Failure to report may result in substantial civil and criminal penalties. State & local regulations may be more restrictive than federal regulations.

#### STATE REGULATIONS:

THIS PRODUCT MEETS REQUIREMENTS OF SOUTHERN  
CALIFORNIA AQMD RULE 443.1 & SIMILAR REGULATIONS

#### INTERNATIONAL REGULATIONS

The components of this product are listed on the chemical inventories of the following countries:  
Australia, Canada, Europe (EINECS), Japan, Korea, United Kingdom.

#### SECTION 16. OTHER INFORMATION

##### HAZARD RATINGS:

HEALTH (NFPA): 1, HEALTH (HMIS): 3, FLAMMABILITY: 3, REACTIVITY: 0  
This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating systems.

##### EMPLOYEE TRAINING

Employees should be made aware of all hazards of this material (as stated in this MSDS) before handling it.

##### NOTICE

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process. Unless updated, this Material Safety Data Sheet is valid until 03/03/2008.