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: ISOPROPYL ALCOHOL (TT-I-735A)
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: 99-100% ISOPROPANOL (67-63-0)[200-661-7]
Number in parentheses is CAS #, number in brackets is European EC #.

SECTION 3. HAZARDS IDENTIFICATION

RISK STATEMENTS:

R36/37/38	Irritating to eyes, respiratory system and skin.
R11	Highly Flammable.
R67	Vapors may cause drowsiness and dizziness.

SAFETY STATEMENTS:

S24/25	Avoid contact with skin and eyes.
S7	Keep container tightly closed.
S16	Keep away from sources of ignition. No smoking.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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, trained personnel should immediately begin artificial respiration. If the heart has stopped, trained personnel should immediately begin cardiopulmonary resuscitation (CPR).

SWALLOWING:
Rinse mouth. Do NOT induce vomiting. GET MEDICAL ATTENTION IMMEDIATELY.
Do NOT give liquids to an unconscious or convulsing person.

SECTION 5. FIRE FIGHTING MEASURES

FIRE & EXPLOSION PREVENTIVE MEASURES
NO open flames, NO sparks, & NO smoking. Above flash point, use a closed system, ventilation, explosion-proof electrical equipment, lighting.

EXTINGUISHING MEDIA
Use dry powder, alcohol-resistant foam, water in large amounts, carbon dioxide.

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

PERSONAL PROTECTIVE MEASURES:
Vapors may ignite explosively & spread long distances. Prevent vapor buildup.
Keep unprotected personnel away.
Remove all ignition sources.
Filter respirator for organic vapors.

CONTAINMENT AND CLEAN-UP MEASURES:
Stop spill at source. Dike and contain.
Collect leaking liquid in sealable containers.
Absorb remaining liquid in sand or inert absorbent.
Wash away remainder with plenty of water.

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

Keep in fireproof surroundings. Keep separated from strong oxidants. Keep cool.
Do not store above 49 C/120 F. 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

Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

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.

SECTION 9. PHYSICAL DATA

APPEARANCE :	Liquid, Water-White
ODOR :	Alcohol
BOILING RANGE :	80 81 83 C / 177 179 182 F
AUTO IGNITION TEMPERATURE :	398 C / 750 F (Lowest Component)
LOWER FLAMMABLE LIMIT IN AIR (% by vol):	2.0
FLASH POINT (TEST METHOD):	13 C / 56 F (TCC)
FLAMMABILITY CLASSIFICATION:	Class I B
GRAVITY @ 68/68 F / 20/20 C :	
API :	48.3
SPECIFIC GRAVITY (Water=1) :	0.787
POUNDS/GALLON :	6.556
VOC'S (>0.44 Lbs/Sq In) :	100.0 Vol. % / 787.0 g/L / 6.555 Lbs/Gal
TOTAL VOC'S (TVOC) :	100.0 Vol. % / 787.0 g/L / 6.555 Lbs/Gal
NONEXEMPT VOC'S (CVOC) :	100.0 Vol. % / 787.0 g/L / 6.555 Lbs/Gal
HAZARDOUS AIR POLLUTANTS (HAPS) :	0.0 Wt. % / 0.0 g/L / 0.000 Lbs/Gal
VAPOR PRESSURE (mm of Hg)@20 C	33.0
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C)	33.0
VAPOR DENSITY (air=1) :	2.1
WATER ABSORPTION :	Complete
REFRACTIVE INDEX :	1.378

SECTION 10. STABILITY & REACTIVITY

STABILITY
Stable under normal conditions.

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

MATERIALS TO AVOID
Reacts with strong oxidants, causing fire & explosion hazard.

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
Isopropanol	67-63-0	400 ppm	200 ppm A4	No

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 0.1%.

SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

MATERIAL	CAS #	CEILING	STEL (OSHA/ACGIH)
Isopropanol	67-63-0	None Known	400 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 harm to kidneys, blood, nerves, liver, lungs.

SWALLOWING:
Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.

SUBCHRONIC HAZARDS/CONDITIONS AGGRAVATED

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

CHRONIC HAZARDS

CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:
This product has no carcinogens listed by IARC,NTP,NIOSH, OSHA or ACGIH, as of this date, greater or equal to 0.1%.

SECTION 12. ECOLOGICAL INFORMATION

MAMMALIAN INFORMATION:

MATERIAL	CAS #	LOWEST KNOWN LETHAL DOSE DATA
		LOWEST KNOWN LD50 (ORAL)
Isopropanol	67-63-0	5840.0 mg/kg(Rats)
		LOWEST KNOWN LC50 (VAPORS)
Isopropanol	67-63-0	16000 ppm (Rats)
		LOWEST KNOWN LD50 (SKIN)
Isopropanol	67-63-0	16400.0 mg/kg (Rabbits)

AQUATIC ANIMAL INFORMATION:
The most sensitive known aquatic group to any component of this product is:
Chub 1000 ppm or mg/L (24 hour exposure).
Keep out of sewers and natural water supplies.

MOBILITY
This material is a mobile liquid.

DEGRADABILITY
This product is completely biodegradable.

ACCUMULATION
This product does not accumulate or biomagnify in the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Processing, use or contamination may change the waste management options.
Recycle / dispose of observing national, regional, state, provincial and local health, safety & pollution laws. If in doubt, contact appropriate agencies.

SECTION 14. TRANSPORT INFORMATION

DOT SHIPPING NAME: Isopropyl alcohol,3,UN1219,PG-II
DRUM LABEL: (FLAMMABLE LIQUID)
IATA / ICAO: Isopropyl alcohol,3,UN1219,PG-II
IMO / IMDG: Isopropyl alcohol,3,UN1219,PG-II
EMERGENCY RESPONSE GUIDEBOOK NUMBER: 129

SECTION 15. REGULATORY INFORMATION

EPA REGULATION:
SARA SECTION 311/312 HAZARDS: Acute Health, Fire

All components of this product are on the TSCA list.
This material contains no known products restricted under SARA Title III, Section 313 in amounts greater or equal to 1%.

SECTION 15. REGULATORY INFORMATION (CONTINUED)

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

EMPLOYEE TRAINING

See Section 3 for Risk & Safety Statements. 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.