Safety Data Sheet

100% Reagent Grade Alcohol

Section 1. Identification

Product Identifier	100% Reagent Grade Alcohol
Synonyms	MCHEM130; MSD_SDS0199
Manufacturer Stock Numbers	MCHEM130
Recommended use	For professional use only
Uses advised against	N/A

Manufacturer Contact Address

Medline
3 Lakes Drive
Northfield, IL, 60093
USA

Phone	Emergency Phone	Fax
(800) 633-5463	(800) 424-9300 CHEMTREC	(847) 643-4436

Website

www.Medline.com

Section 2. Hazards Identification

Classification	EYE DAMAGE/IRRITATION - Category 2A FLAMMABLE LIQUIDS - Category 2 SPECIFIC TARGET ORGAN TOXICITY (Single Exposure) - Category 1
Signal Word	Danger
Pictogram	
Hazard Statements	Causes damage to organs. Causes serious eye irritation Highly flammable liquid and vapor
Precautionary Statements	

Response	If exposed: Call a poison center/doctor. If eye irritation persists: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If inhaled: Remove person to fresh air and keep comfortable for breathing. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. In case of fire: Use appropriate media (see section 5) to extinguish. Specific treatment (see Section 4 on this SDS).
Prevention	Do not breathe mist, spray, vapors, gas. Do not eat, drink or smoke when using this product. Ground/bond container and receiving equipment. Keep away from heat, sparks, open flames, and hot surfaces. No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wash hands, forearms, and exposed areas thoroughly after handling. Wear protective gloves/eye protection/face protection
Storage	Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local, regional, national, and international regulations.

Ingredients of unknown toxicity	0%
Hazards not Otherwise Classified	
Other Hazards:	Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.
Unknown Acute Toxicity (GHS-US):	Not available

Section 3. Ingredients

CAS	Ingredient Name	Weight %
64-17-5	Ethyl alcohol	90.5 %
67-63-0	Isopropyl alcohol	5 %
67-56-1	Methanol	4.5 %

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-Aid Measures

Description of 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).

	Inhalation: When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention. Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. Get immediate medical advice/attention. Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.
Most Important Symptoms and Effects Both Acute and Delayed:	General: Causes serious eye irritation. Causes damage to organs. Inhalation: May cause drowsiness or dizziness. Skin Contact: Repeated or prolonged skin contact may cause dermatitis and defatting. Eye Contact: May cause slight irritation to eyes. Ingestion: Ingestion is likely to be harmful or have adverse effects. This material contains methanol, which, when ingested, may cause acidosis and ocular toxicity ranging from diminished visual capacity to complete blindness, and possible death. Chronic Symptoms: Not available
Indication of Any Immediate Medical Attention and Special Treatment Needed:	If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand. Some antidotes that are used for methanol poisoning (which is the primary concern with reagent alcohol) are ethanol and fomepizole, which compete with the enzyme that metabolizes methanol, slowing methanol metabolism into its harmful byproducts.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media	Water spray, dry chemical, foam, carbon dioxide.
Unsuitable Extinguishing Media	Do not use a heavy water stream. Use of heavy stream of water may spread fire.
Special Hazards Arising From the Substance or Mixture:	Fire Hazard: Highly flammable liquid and vapor. Explosion Hazard: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Product is not explosive. Reactivity: Reacts with strong oxidants causing fire and explosion hazard.
Advice for Firefighters:	Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Firefighting Instructions: Use water spray or fog for cooling exposed

containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO2).

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to other sections:	Refer to section 9 for flammability properties.

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:	General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. For Non-Emergency Personnel: Protective Equipment: Use appropriate personal protection equipment (PPE). Emergency Procedures: Evacuate unnecessary personnel. For Emergency Personnel: Protective Equipment: Use appropriate personal protection equipment (PPE). Equip cleanup crew with proper protection. Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.
Environmental Precautions:	Prevent entry to sewers and public waters. Avoid release to the environment. Collect spillage.
Methods and Material for Containment and Cleaning Up:	For Containment: Absorb and/or contain spill with inert material, then place in suitable container. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area. Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Do not take up in combustible material such as: saw dust or cellulosic material.
Reference to Other Sections:	See heading 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

Section 7. Handling and Storage

Precautions for Safe Handling:	Precautions for Safe Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area. Hygiene Measures: Handle in accordance with good industrial hygiene and

safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety procedures.

Conditions for Safe Storage, Including Any Incompatibilities:

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Store locked up. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

Specific End Use(s):

For professional use only.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits

Ingredient Name	ACGIH TLV	OSHA PEL	STEL
Ethyl alcohol	STEL: 1,000 ppm Note: Upper respiratory track irritation. Confirmed animal carcinogen with unknown relevance to humans.	TWA: 1,000 ppm 1,900mg/mm3 29 CFR 1910.1000 Table Z-1 Limits	N/A
Isopropyl alcohol	TWA: 200 ppm STEL: 400 ppm	TWA: 400 ppm STEL: 500 ppm	N/A
Methanol	TWA: 200 ppm STEL: 250 ppm	TWA: 200 ppm	N/A

Personal Protective Equipment

Goggles, Gloves, Apron, Face Shield

Control Parameters:

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Appropriate Engineering Controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide sufficient ventilation to keep vapors below permissible exposure limit. Ensure all national/local regulations are observed. Gas detectors should be used when toxic gases may be released.

Personal Protective Equipment:

Safety glasses. Face shield. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection. Protective goggles.

Materials for Protective Clothing:

Chemically resistant materials and fabrics.

Hand protection:

Wear chemically resistant protective gloves.

Eye protection:

Chemical safety goggles.

Skin and body protection:

Wear suitable protective clothing.

Respiratory protection:	Use NIOSH-approved full facepiece negative pressure respirators equipped with approved cartridges or canisters within the use limitations of these devices. (Present restrictions on cartridges and canisters do not permit them to be used for a full workshift.) In all other situations, use positive pressure respirators such as the positive-pressure air purifying respirator or the self-contained breathing apparatus (SCBA). If you use a negative pressure respirator, your employer must provide you with fit testing of the respirator at least once a year.
Other information:	When using, do not eat, drink or smoke.

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Clear, colorless liquid
Odor	Ethanol Odor
Odor Threshold	N.D.
Solubility	Soluble.
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	N.D.
Specific Gravity	0.79
Density lbs/Gal	N/A
Pounds per Cubic Foot	N/A
Flash Point	14 °C (57.2 °F)
FP Method	N/A
pH	N.D.
Melting Point	N/A
Boiling Point	N/A
Boiling Range	N/A
LEL	N/A
UEL	N/A
Evaporation Rate	N/A
Flammability	Flammable
Decomposition Temperature	N/A
Auto-ignition Temperature	N/A
Vapor Pressure	N/A
Vapor Density	N/A

Explosion Data – Sensitivity to Mechanical Impact: Not expected to present an explosion hazard due to mechanical impact.

Explosion Data – Sensitivity to Static Discharge: Not expected to present an explosion hazard due to static discharge.

Section 10. Stability and Reactivity

Reactivity:	Reacts with strong oxidants causing fire and explosion hazard.
Chemical Stability:	Stable under recommended handling and storage conditions (see section 7).
Possibility of hazardous reactions:	Hazardous polymerization will not occur.
Conditions to Avoid:	Direct sunlight, extremely high or low temperatures, and incompatible materials.
Incompatible Materials:	Strong acids, strong bases, strong oxidizers.
Hazardous Decomposition Products:	Carbon oxides (CO, CO2).

Section 11. Toxicological Information

Information on Toxicological Effects - Product:	Acute Toxicity: Not classified LD50 and LC50 Data: Not available Skin Corrosion/Irritation: Not classified pH: Not applicable Serious Eye Damage/Irritation: Causes serious eye irritation. Respiratory or Skin Sensitization: Not classified Germ Cell Mutagenicity: Not classified Teratogenicity: Not available Carcinogenicity: Not classified Specific Target Organ Toxicity (Repeated Exposure): Not classified Reproductive Toxicity: Not classified Specific Target Organ Toxicity (Single Exposure): Causes damage to organs. Aspiration Hazard: Not classified Symptoms/Injuries After Inhalation: May cause drowsiness or dizziness. Symptoms/Injuries After Skin Contact: Repeated or prolonged skin contact may cause dermatitis and defatting. Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes. Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. This material contains methanol, which, when ingested, may cause acidosis and ocular toxicity ranging from diminished visual capacity to complete blindness, and possible death.
Information on Toxicological Effects - Ingredient(s):	Ethyl Alcohol CAS No. 64-17-5 LD50 Oral Rat: 10470 mg/kg LD50 Dermal Rat: 20 ml/kg

LC50 Inhalation Rat: 124.7 mg/l/4h

Methanol CAS No. 67-56-1)
ATE US (oral): 100.00 mg/kg body weight
ATE US (dermal): 300.00 mg/kg body weight
ATE US (vapors): 3.00 mg/l/4h

Isopropyl alcohol CAS No. 67-63-0
LD50 Oral Rat: 4710 mg/kg
LD50 Dermal Rabbit: 4059 mg/kg
LC50 Inhalation Rat: 72.6 mg/l/4h (Exposure time: 4 h)

Ethyl alcohol CAS No. (64-17-5
IARC Group: 1
OSHA Hazard Communication Carcinogen List: In OSHA Hazard Communication Carcinogen list.

Isopropyl alcohol: 67-63-0
IARC Group: 3

Section 12. Ecological Information

Toxicity:

Ecology - General: Very toxic to aquatic life.

Ethyl alcohol CAS No. 64-17-5
EC50 Daphnia 1: 9268 - 14221 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2: > 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
ErC50 (algae): 1000 mg/l

Methanol CAS No. 67-56-1
LC50 Fish 1: 15400 mg/l
EC50 Daphnia 1: 1340 mg/l

Isopropyl alcohol CAS No. 67-63-0
LC50 Fish 1: 9640 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1: 13299 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Other Aquatic Organisms 1: 1000 mg/l (Exposure time: 96 h - Species: Desmodesmus subspicatus)
LC 50 Fish 2: 11130 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Other Aquatic Organisms 2: 1000 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)

Persistence and Degradability:

100% Reagent Alcohol
Persistence and Degradability: Not established.

Ethyl Alcohol CAS No. 64-17-5
Persistence and Degradability: Not established.

Bioaccumulative Potential:	100% Reagent Alcohol Bioaccumulative Potential: Not established. Ethyl Alcohol CAS No. 64-17-5 Log Pow: -0.32 Bioaccumulative Potential: Not established. Isopropyl alcohol CAS No. 67-63-0 Log Pow: 0.05 (at 25°C)
Mobility in soil:	Not available.
Other adverse effects:	Other information: Avoid release to the environment.

Section 13. Disposal

Waste disposal recommendations:	Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.
Additional Information:	Container may remain hazardous when empty. Continue to observe all precautions.
Ecology – Waste Materials:	Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

Section 14. Transport Information

UN Number	1170
UN Proper Shipping Name	Ethanol solutions
DOT Classification	3
Packing Group	II
DOT Special Provisions (49 CFR 172.102):	24 - Alcoholic beverages containing more than 70 percent alcohol by volume must be transported as materials in Packing Group II. Alcoholic beverages containing more than 24 percent but not more than 70 percent alcohol by volume must be transported as materials in Packing Group III. 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. T4 - 2.65 178.274(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.
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
Emergency Response Guide Number:	127
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:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
IMDG - EMS-No 1:	F-E
IMDG - EMS-No 2:	S-D
IMDG - Hazard Class:	3
IMDG - Packing Group:	II
IATA - Hazard Class:	3
IATA - Packing Group:	II

Section 15. Regulatory Information

SARA 311/312:	Refer to Section 2 of the SDS.
SARA 302:	N.A.
SARA 304:	N.A.
SARA 313:	Isopropyl alcohol. Methanol.
TSCA:	All components are listed or exempt.
CERCLA Hazardous Substance List:	N.A.
Clean Air Act (CAA) Section 112, 112 (r):	N.A.
New Jersey Right to Know Components:	ISOPROPYL ALCOHOL. METHYL ALCOHOL. ETHYL ALCOHOL.
Massachusetts Right to Know Components:	METHYL ALCOHOL. ETHYL ALCOHOL.
Pennsylvania Right to Know Components:	ISOPROPYL ALCOHOL. METHANOL. ETHANOL.
Rhode Island Right to Know Components:	isopropyl alcohol. methyl alcohol. ethyl alcohol.

Section 16. Other Information

Revision Date	2/21/2024
Legend	N.A. - Not Applicable N.E. - Not Established N.D. - Not Determined
HMIS (U.S.A.): Health Hazard	2
HMIS (U.S.A.): Flammability	3
HMIS (U.S.A.): Reactivity	1
National Fire Protection Association (U.S.A): Health Hazard	2

National Fire Protection Association (U.S.A): Flammability	3
National Fire Protection Association (U.S.A): Instability Hazard	1
Additional Information:	The information contained herein is furnished without warranty or legal responsibility of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees.