Safety Data Sheet

95% Reagent Grade Alcohol

Section 1. Identification

Product Identifier	95% Reagent Grade Alcohol
Synonyms	MSD_SDS0198; MCHEM131
Manufacturer Stock Numbers	MCHEM131
Recommended use	Histology/cytology and General Use Reagent.
Uses advised against	N/A
Manufacturer Contact Address	Medline 3 Lakes Driv 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 IRRITATION - Category 2A FLAMMABLE LIQUIDS - Category 2 SPECIFIC TARGET ORGAN TOXICITY (Single Exposure) - Category 2
Signal Word	Danger
Pictogram	

Hazard Statements	Causes serious eye irritation Highly flammable liquid and vapor May cause damage to organs (optic nerve (nervus opticus), central nervous system).
Precautionary Statements	
Response	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 on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. In case of fire: Use ... to extinguish.
Prevention	Do not breathe mist, spray, vapors. Do not eat, drink or smoke when using this product. Ground/bond container and receiving equipment. Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical, ventilating, and lighting equipment. Use only non-sparking tools. Wash hands, forearms, and exposed areas thoroughly after handling. Wear protective gloves, protective clothing, and eye protection.
Storage	N/A
Disposal	Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.
General	Store in a well-ventilated place. Keep cool. Store locked up.
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	85 %
67-63-0	Isopropyl alcohol	5 %
67-56-1	Methanol	4 %

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. May cause damage to organs. Inhalation: May cause respiratory irritation. Skin Contact: May cause skin irritation. Eye Contact: Causes serious eye irritation. Symptoms may include: Redness, pain, swelling, itching, burning, tearing, and blurred vision. Ingestion: May cause damage to organs (optic nerve (nervus opticus), central nervous system). 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: None expected under normal conditions of use.
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.

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: May form flammable/explosive vapor-air mixture. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Reactivity: Reacts with (strong) oxidizers: (increased) risk of fire.
Advice for Firefighters:	Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present. Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Hazardous Combustion Products: Carbon oxides (CO, CO2). Formaldehyde.

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: Use special care to avoid static electric charges. Keep away from open flames, hot surfaces and sources of ignition. Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray.
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.
Methods and Materials for Containment and Cleaning Up:	For Containment: Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as saw dust or cellulosic material. Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Use only non-sparking tools. Contact competent authorities after a spill.
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:	Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable. Keep away from heat, sparks, open flames, hot surfaces. – No smoking. 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. Contaminated work clothing should not be allowed out of the workplace.
Conditions for Safe Storage, Including Any Incompatibilities:	Technical Measures: Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical, ventilating, and lighting equipment. Comply with applicable regulations. Storage Conditions: Store in a dry, cool and well-ventilated place. Store locked up. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep in fireproof place. Incompatible Materials: Strong acids, strong bases, strong oxidizers.
Recommended Use:	Histology/cytology and General Use Reagent.

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: 1,000ppm 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
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 exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated above. All electrical equipment should comply with the National Electric Code. Gas detectors should be used when flammable gases/vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Ensure all national/local regulations are observed.
Personal Protective Equipment:	Protective clothing. Gloves. Protective goggles. Insufficient ventilation: wear respiratory protection.
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:	If exposure limits are exceeded or irritation is experienced, a NIOSH/MSHA approved respiratory protection should be worn.
Thermal Hazard Protection:	Wear fire/flame resistant/retardant clothing.
Other information:	When using, do not eat, drink or smoke.

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	N/A
Odor	N/A
Odor Threshold	N/A
Solubility	N/A
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	N/A
Specific Gravity	N/A

Density lbs/Gal	N/A
Pounds per Cubic Foot	N/A
Flash Point	<20˚C
FP Method	N/A
pH	N/A
Melting Point	N/A
Boiling Point	N/A
Boiling Range	N/A
LEL	N/A
UEL	N/A
Evaporation Rate	N/A
Flammability	N/A
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: Static discharge could act as an ignition source.

Section 10. Stability and Reactivity

Reactivity:	Reacts with (strong) oxidizers: (increased) risk of fire.
Chemical Stability:	Highly flammable liquid and vapor.
Possibility of hazardous reactions:	Hazardous polymerization will not occur.
Conditions to Avoid:	Direct sunlight, extremely high or low temperatures, and incompatible materials. Sparks, heat, open flame and other sources of ignition.
Incompatible Materials:	Strong acids, strong bases, strong oxidizers.
Hazardous Decomposition Products:	Carbon oxides (CO, CO2). Formaldehyde. Formaldeyhde is a potential carcinogen and can act as a potential skin and respiratory sensitizer. Formaldehyde can also cause respiratory and eye irritation.

Section 11. Toxicological Information

Acute Toxicity:	Not classified.
LD50 and LC50 Data:	Not available
Skin corrosion/irritation	Not classified pH: 9.8 - 10.8
Serious eye damage/irritation:	Causes serious eye irritation.
Respiratory/Skin sensitization:	Not classified.
Germ cell mutagenicity:	Not classified.
Teratogenicity:	Not classified.

Carcinogenicity:	Not classified.
Specific target organ toxicity (repeated exposure):	Not classified.
Reproductive toxicity:	Not classified.
Specific Target Organ Toxicity (Single Exposure):	May cause damage to organs.
Aspiration hazard:	Not classified.
Symptoms/Injuries After Inhalation:	May cause respiratory irritation.
Symptoms/Injuries After Skin Contact:	May cause skin irritation.
Symptoms/Injuries After Eye Contact:	Causes serious eye irritation. Symptoms may include: Redness, pain, swelling, itching, burning, tearing, and blurred vision.
Symptoms/Injuries After Ingestion:	May cause damage to organs (optic nerve (nervus opticus), central nervous system). 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:	None expected under normal conditions of use.
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:	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:	95% Reagent Alcohol Persistence and Degradability: Not established. Ethyl alcohol CAS No. 64-17-5 Persistence and Degradability: Not established.
Bioaccumulative Potential:	95% 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

Sewage Disposal Recommendations:	Do not empty into drains; dispose of this material and its container in a safe way.
Waste disposal recommendations:	Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.
Additional Information:	Handle empty containers with care because residual vapors are flammable.

Section 14. Transport Information

UN Number	1987
UN Proper Shipping Name	Alcohols, n.o.s. (ETHANOL, ISOPROPANOL)
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
DOT Vessel Stowage Location:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
DOT Quantity Limitations Passenger Aircraft/Rail (49 CFR 173.27):	5 L
DOT Quantity Limitations Cargo Aircraft Only (49 CFR 175.75):	60 L
Emergency Response Guide Number:	127
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	3/12/2024
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.): Physical Hazard	0
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	0
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