



# MATERIAL SAFETY DATA SHEET

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Approved by: Darius Nicpon

Section 1 Chemical Product and Company Name		
Product	DNA PRECIPITATION SOLUTION.	ITEM No: CASE-B028
Synonyms	Ethyl alcohol denatured with methanol, Isopropyl , Methyl Isobutyl Ketone	
CHEMTREC	24 Hour Emergency Phone Number (800) 424-9300	

Section 2 Composition/Ingredients Information			
Chemical Name	CAS#	%	TLV Units
Ethanol	64-17-5	82.1%	TWA: 1000ppm
*Denaturants			
Isopropanol	67-63-0	12.8%	TWA: 400ppm STEL: 500ppm
Methanol	67-56-1	4.12%	TWA: 200ppm STEL: 250ppm
Methyl isobutyl ketone	108-10-1	0.87%	TWA: 205ppm STEL: 300ppm

Section 3		Hazards Identification									
<p>DANGER!</p> <p>FLAMMABLE. HARMFUL OR FATAL IF SWALLOWED. HARMFUL IF INHALED HARMFUL IF ABSORBED THROUGH SKIN. CAUSES EYE IRRITATION. <b>Target organs:</b> liver, kidneys, CNS depressant</p>		<p>0 = Minimal</p> <p>1 = Slight</p> <p>2 = Moderate</p> <p>3 = Serious</p> <p>4 = Severe</p>	<table><tr><td>Health</td><td>2</td></tr><tr><td>Flammability</td><td>3</td></tr><tr><td>Physical Hazard</td><td>0</td></tr><tr><td>Personal Protection</td><td>C</td></tr></table>	Health	2	Flammability	3	Physical Hazard	0	Personal Protection	C
Health	2										
Flammability	3										
Physical Hazard	0										
Personal Protection	C										
		HMIS									

Section 4 First Aid Measures	
<b>INGESTION:</b> Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Induce vomiting by medical or experienced first-aid Get medical attention immediately. <b>INHALATION:</b> Remove to fresh air. Get medical attention if necessary. <b>EYE CONTACT:</b> Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if irritation develops. <b>SKIN CONTACT:</b> Remove contaminated clothing. Flush thoroughly with mild soap and water. Get medical attention if irritation develops.	

Section 5

Fire Fighting Measures

Flammable liquid.

Extinguishing Media:

Use TriClass, dry chemical extinguisher or water spray for small fires. Water spray to cool fire-exposed containers and structures. Firefighters should use self-contained breathing apparatus and protective clothing.

Flash point:

58°F

Autoignition temperature:

683°F

Explosion limits: Lower:

3.3%

Upper:

19.0%

0 = Minimal

1 = Slight

2 = Moderate

3 = Serious

4 = Severe

Section 6 Accidental Release Measures	
Restrict unprotected personnel from the area. Contain the spill with an inert absorbent material and deposit in a sealed bag or container. For small spill use paper towel. Place the wet medium under the hood or outside the building to minimize a vapor concentration in the area. Do not leave it unattended. Dry material place in trash. Ventilate and wash spill area with soap and water.	

Section 7 Handling and Storage	
Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. For laboratory use only. Not for drug, food, or household use. Use only under adult supervision. Vapor forms from this product and may travel, or be moved by air currents and ignited by pilot lights, static discharges, flames, sparks, heaters or other ignition sources. <b>Handling:</b> Use hood or with adequate ventilation. Keep away from heat, sparks and flame. Avoid breathing vapor. Wash hands thoroughly after handling. <b>Storage:</b> Flammable cabinet. Keep container in cool, well-ventilated area.	

Section 8 Exposure Controls/ Personal Protection	
<b>Engineering controls:</b> Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits. <b>Respiratory protection:</b> Non should be needed if normal laboratory handling at room temperature. Use NIOSH approved respiratory protection in high vapor concentrations.	

Section 9 Physical and Chemical Properties	
<b>Physical state:</b> Liquid <b>Appearance:</b> Transparent, Colorless, Clear. <b>Odor:</b> Strong alcohol odor. Fragrant <b>pH:</b> N/A <b>Vapor Pressure ( mm Hg):</b> 42 <b>Vapor Density:</b> 1.6 <b>Evaporation Rate:</b> 3.1 <b>Viscosity:</b> N/A	<b>Boiling point:</b> 170.6-179.6°F/77-82°C <b>Melting point:</b> N/A <b>Freezing point:</b> <-80°C/<-112°F <b>Decomposition temp:</b> N/A <b>Solubility:</b> Miscible in water and many organic solvents. <b>Specific gravity (H<sub>2</sub>O = 1):</b> 0.791 at 20°C <b>Percent volatile (%):</b> 100 Wt% <b>Molecular formula:</b> Mixture <b>Molecular weight:</b> N/A

Section 10 Stability and Reactivity	
<b>Chemical Stability:</b> Stable <b>Conditions to Avoid:</b> High temperatures, sparks open flames and incompatible materials. <b>Incompatibilities:</b> Strong oxidizing agents, acids, peroxides, acid chlorides, acid anhydrides, alkali metals, ammonia. <b>Hazardous decomposition:</b> N/A <b>Hazardous polymerization:</b> Will not occur.	

Section 11 Toxicological Information	
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<b>Effects of overexposure:</b> Toxic due to inhalation or ingestion. Ingested doses will produce nausea, dizziness and headache. Material is irritating to eyes and mucous membrane.	
ORAL LD <sub>50</sub> Ethanol: 7060mg/kg [Rat]. 3450mg/kg [Mouse] VAPOR LC <sub>50</sub> Ethanol: 20000ppm 8h [Rat]. 39000 mg/m <sup>3</sup> 4h [Mouse]	
ORAL LD <sub>50</sub> Isopropyl alcohol: 5045mg/kg [Rat]. 3600mg/kg [Mouse]. 6410 mg/kg [Rabbit] DERMAL LD <sub>50</sub> Isopropyl alcohol: 12800 mg/kg 4h [Rabbit].	
ORAL LD <sub>50</sub> Methyl alcohol: 5628mg/kg [Rat]. VAPOR LC <sub>50</sub> Methyl alcohol: 640000ppm 4h [Rat]. DERMAL LDLD <sub>50</sub> Methyl alcohol: 15800mg/kg [Rabbit]	

Section 12 Ecological Information	
Data not available.	

Section 13 Disposal Considerations	
Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.	

Section 14 Transport Information	
<b>UN number:</b> 1987 <b>NA:</b> N/A <b>Shipping name:</b> ALCOHOLS, NOS <b>Hazard Class:</b> 3 <b>Packing group:</b> PG II <b>Exceptions:</b> Lty Qty ≤1L	

Section 15 Regulatory Information	
TSCA-listed, EINECS-listed (200-578-6)	

Section 16 Other Information	
The Material Safety Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Lab-Aids, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond Lab-Aids, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).	