



# MATERIAL SAFETY DATA SHEET

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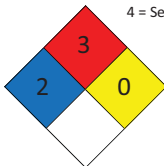
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Section 1 Chemical Product and Company Name		
Product	<b>SOLUTION B</b>	ITEM No: CASE-B007
Synonyms	Denatured alcohol and chloroform and acidic acid solution.	
CHEMTREC	24 Hour Emergency Phone Number (800) 424-9300	

Section 2 Composition/Ingredients Information			
Chemical Name	CAS#	%	TLV Units
Ethanol	64-17-5	N/A	TWA: 1000ppm
Chloroform	67-66-3	N/A	TWA: 2mg/m <sup>3</sup>
Acetic acid	64-19-7	N/A	TWA: 10mg/m <sup>3</sup>

Section 3		Hazards Identification									
<p>DANGER! FLAMMABLE, WARNING! CORROSIVE.</p> <p>TOXIC BY INGESTION AND INHALATION.</p> <p>CORROSIVE TO EYES, SKIN AND MUCOUS MEMBRANE.</p> <p>HARMFUL IF INGESTED, INHALED AND IF ABSORBED THROUGH SKIN.</p> <p><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>3</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	3	Flammability	3	Physical Hazard	0	Personal Protection	C
Health	3										
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. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention. <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, toxic and corrosive liquid.	
<b>Extinguishing Media:</b> 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.	
<b>Flash point:</b> 58°F <b>Autoignition temperature:</b> 683°F <b>Explosion limits: Lower:</b> 3.3% <b>Upper:</b> 19.0%	
	

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
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**Engineering controls:** 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.  
**Respiratory protection:** 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> Alcohol odor. Fragrant <b>pH:</b> Acidic <b>Vapor Pressure ( mm Hg):</b> Not available <b>Vapor Density:</b> Not available <b>Evaporation Rate:</b> Not available <b>Viscosity:</b> Not available	<b>Boiling point:</b> Not available <b>Melting point:</b> N/A <b>Freezing point:</b> Not available <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> Not available <b>Percent volatile (%):</b> Not available <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, metals, organic materials, amines. <b>Hazardous decomposition:</b> Not available <b>Hazardous polymerization:</b> Will not occur.	

Section 11 Toxicological Information	
<b>Effects of overexposure:</b> Eye: Corrosive to eyes. Splashes may cause burns and permanent eye damage. Skin: Corrosive to skin. Can cause redness, pain and skin burns. Inhalation: Inhalation of vapors can cause coughing, choking with irritation of the nose, throat, and upper respiratory tract. May affect behavior and Nervous system. Ingestion: Toxic. Harmful if swallowed. Swallowing causes gastrointestinal track irritation with possible burns associated with pain of the mouth, throat. Ingested doses of alcohol will produce nausea, dizziness and headache. Ingestion of chloroform may affect liver, kidneys. Prolonged or repeated ingestion may damage these organs. California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects, or other reproductive harm, which would require a warning under the statue: Chloroform.	

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]  
Acute oral toxicity ORAL LD<sub>50</sub>: 695mg/kg[Rat], as chloroform  
Acute vapor toxicity IHL-LC<sub>50</sub>: 47700 mg/m<sup>3</sup> [Rat]/4h, as chloroform  
DERMAL LD<sub>50</sub>: >20000mg/kg[Rabbit], as chloroform  
Acute oral toxicity LD<sub>50</sub>: 3310mg/kg [Rat], as acidic acid  
Acute dermal toxicity LD<sub>50</sub> 1060mg/kg [Rabbit], as acidic acid  
Acute vapor toxicity LC<sub>50</sub>: 5620ppm 1h [Mouse], as acidic acid

Section 12 Ecological Information	
Ecotoxicity in water (LC50): 43.8mg/l 96h [Trout].	

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> 3286 <b>Shipping name:</b> Flammable liquid, toxic, corrosive, n.o.s. <b>Hazard Class:</b> 3, 6.1, 8 <b>Packing group:</b> PG II <b>Exceptions:</b> Lty Qty ≤1L	

Section 15 Regulatory Information	
TSCA-listed, EINECS-listed (200-578-6) as alcohol. DSCL (EEC) R22-Harmful if swallowed. R40 Limited evidence of carcinogenic effect as chloroform. R48/20/22– Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed as chloroform.	

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).	