

## BBC Biochemical

## MATERIAL SAFETY DATA SHEET

**Section 1. Chemical Product and Company Information**

Common Name:	Glacial Acetic Acid	Code:	8550, 8554, 8551
Supplier:	BBC Biochemical	MSDS#:	8550, 8554, 8551
Synonym:	Acetic Acid	Validation Date:	3-4-09
Trade Name:	Not Available	Print Date:	3-4-09
Material Uses:	Not Available	Responsible Name:	Dr. B
Manufacturer:	BBC Biochemical PO Box 1320 409 Eleanor Lane Mount Vernon, WA 98273 1-800-635-4477	<b>In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-635-4477</b>	

**Section 2. Composition and Information on Ingredients**

Name	CAS#	% by Weight	Exposure Limits
1) Glacial Acetic Acid	64-19-7	100	Not available.

**Section 3. Hazards Identification**

Physical State and Appearance	Colorless liquid.
Emergency Overview	Not available.
Routes of Entry	May be harmful by inhalation, ingestion or skin absorption.
Potential Acute Health Effects	
Eyes	Slightly hazardous in case of eye contact (irritant).
Skin	Slightly hazardous in case of skin contact.
Inhalation	Slightly hazardous in case of inhalation
Ingestion	Slightly hazardous in case of ingestion
Potential Chronic Health Effects	Not Available.
Medical Conditions Aggravated by Overexposure/Signs/Symptoms	Repeated or prolonged exposure is not known to aggravate medical condition.  Loss of appetite, inability to concentrate. Headache, irritation of eyes, nose, throat.

**Section 4. First Aid Measures**

Eye Contact	Immediately flush eyes with copious amounts of water for at least 15 minutes.
Skin Contact	Immediately wash skin with copious amounts of water.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen.
Ingestion	Wash out mouth with water provided person is conscious. Loosen clothing such as a collar, tie, belt or waistband. Do not induce vomiting. Provided person is conscious, have victim drink several glasses of water or milk.
Notes to Physician	Not available.

**Section 5. Fire Fighting Measures**

Flammability of the Product	Flammable.
Auto-ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Products of Combustion	These products are carbon oxides (CO, CO <sub>2</sub> ), nitrogen oxides (NO, NO <sub>2</sub> ...), sulfur oxides (SO <sub>2</sub> , SO <sub>3</sub> ...). Some metallic oxides.
Fire Hazards in Presence Of Various Substances	Not available.
Explosion Hazards in Presence of Various	Vapor may travel considerable distance to source of ignition and flash back.

**Substances**

<b>Fire Fighting Media and Instructions</b>	Carbon dioxide, dry chemical powder or appropriate foam. Water spray.
<b>Protective Clothing (Fire)</b>	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
<b>Special Remarks on Fire Hazards</b>	Emits toxic fumes under fire conditions.
<b>Special Remarks on Explosion Hazards</b>	Vapor may travel considerable distance to source of ignition and flash back.

**Section 6. Accidental Release Measures**

<b>Small Spill and Leak</b>	Evacuate area. Shut off all sources of ignition. Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
<b>Large Spill and Leak</b>	Evacuate area. Shut off all sources of ignition. Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

**Section 7, Handling and Storage**

<b>Handling</b>	Avoid prolonged exposure or repeated exposure. See section 8.
<b>Storage</b>	Keep away from heat, sparks, and open flame. Store in a cool dry place.

**Section 8. Exposure Controls / Personal Protection**

<b>Engineering Controls</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
<b>Personal Protection</b>	
<b>Eyes</b>	Safety goggles required.
<b>Body</b>	Protective clothing advised. Lab coat.
<b>Respiratory</b>	Wear appropriate NIOSH/MSHA-approved respirator.
<b>Hands</b>	Chemical resistant gloves.
<b>Feet</b>	Rubber boots advised.
<b>Personal Protection in Case of a Large Spill</b>	Same as above.
<b>Product Name</b>	<b>Exposure Limits</b>
1) Glacial Acetic Acid	ACGIH- 10ppm TWA, 15ppm STEL, 25 mg/m3 REL NIOSH- 15 ppm 37 mg/m3 STEL OSHA- 10ppm, 25 mg/m3 PEL

Consult Local authorities before acceptable exposure limits.

**Section 9. Physical and Chemical Properties**

<b>Physical State and Appearance</b>	Colorless liquid	<b>Odor:</b>	Vinegar, pungent
<b>Molecular Weight</b>	60.05	<b>Taste:</b>	Not available.
<b>Molecular Formula</b>	C2H4O2	<b>Color:</b>	colorless
<b>pH</b>	2.4		
<b>Boiling/Condensation Point</b>	118 deg C.		
<b>Melting/Freezing Point</b>	17 deg C		
<b>Critical Temperature</b>	Not applicable.		
<b>Specific Gravity</b>	1.05 (20 deg C)		
<b>Vapor Pressure</b>	20 deg C; 15.2 mbar		
<b>Vapor Density</b>	2.1		
<b>Volatility</b>	Not applicable.		
<b>Odor Threshold</b>	0.48 ppm		
<b>Evaporation Rate</b>	0.87 (n-butyl acetate = 1)		
<b>VOC</b>	Not available.		
<b>Viscosity</b>	1.2 mPa.s (20 deg C).		
<b>Ionicity (in water)</b>	Not available.		
<b>Dispersion Properties</b>	Not available.		
<b>Solubility</b>	complete		
<b>Physical Chemical Comments</b>	Not available.		

**Section 10. Stability and Reactivity**

<b>Stability and Reactivity</b>	Stable.
<b>Conditions of Instability</b>	Not available.

**Incompatibility with Various Substances** Incompatible with strong oxidizing agents.

**Hazardous Decomposition Products** Not available.

**Hazardous Polymerization** Not available.

### Section 11. Toxicological Information

**Toxicity to Animals** CAS# 64-19-7  
**Oral LD-50: (rat):** 3,310-3,530 mg/kg  
**Oral LD-50: mouse):** 4,960 mg/kg  
**Inhalation LC-50: (mouse) :** 1h: 5620 ppm  
**Dermal LD-50: (rabbit):** 1,060 mg/kg  
**Skin Irritation (rabbit):** severe  
**Eye Irritation (rabbit):** severe

**Chronic Effects on Humans** May be harmful by inhalation, ingestion, or skin absorption.

**Other Toxic Effects on Humans** To the best of our knowledge, the chemical, physical, and toxicological properties have not be thoroughly investigated.

**Special Remarks on Toxicity to Animals** Not available.

**Special Remarks on Chronic Effects on Humans** Not available.

**Special Remarks on Other Toxic Effects on Humans** Not available.

### Section 12. Ecological Information

**Ecotoxicity** Acute Aquatic Effects Data:  
 96 h LC-50 (fathead minnow): > 100mg/L  
 48 h LC-50 (golden orfe): 410 mg/L  
 48 h LC-50 (mosquito fish): 251 mg/L  
 96 h LC-50 (daphnid): > 100 mg/L

**BODS and COD** This material is a strongly acidic aqueous solution, and this property may cause adverse environmental effects.  
 Oxygen Demand Data:  
 BOD-5: 340-880 mg/g  
 BOD-20: 900 mg/g  
 COD: 1,030 mg/g

**Biodegradable/OEDC** Not available.

**Mobility** Not available.

**Toxicity of the Products of Biodegradation** The product itself and its products of degradation are not toxic.

**Special Remarks on The Products of Biodegradation** Not available.

### Section 13. Disposal Considerations

**Waste Information** Not available.

**Waste Stream** Not available.

**Consult your local or regional authorities.**

### Section 14. Transport Information

**DOT Classification** Reportable Quantity: 2,270 kg (acetic acid)  
 Acetic acid, glacial 8 (3) UN 2789 II

**Marine Pollutant** Not available.

**Hazardous Substances Reportable Quantity** Not available.

**Special Provisions for Transport** Not applicable.

**TDG Classification** Not available

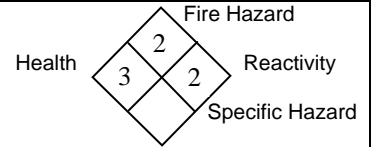
**ADR/RID Classification** Not available

**IMO/IMDG Classification** Not available

**ICAO/IATA Classification** Not available

**Section 15. Other Information**

<b>Label requirements</b>	HIGHLY FLAMMABLE LIQUID AND VAPOR, VAPOR MAY CAUSE FLASH FIRE. CONTAINS MATERIAL WHICH MAY CAUSE BLOOD, NERVOUS SYSTEM, REPRODUCTIVE SYSTEM, LIVER, RESPIRATORY TRACT, SKIN, EYES DAMAGE.		
<b>Hazardous Material Information System (U.S.A.)</b>	<b>Health</b>	3	<b>National Fire Protection Association (U.S.A.)</b>
	<b>Fire Hazard</b>	2	
	<b>Reactivity</b>	2	
	<b>Personal Protection</b>	a	



**References**

**Other Special Considerations**

**Notice to Reader**  
 To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.