

BBC Biochemical

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Information

| | | | |
|----------------|--|---|---------|
| Common Name: | Glutaraldehyde | Code: | 0341 |
| Supplier: | BBC Biochemical PO Box 1320 409 Eleanor Lane Mount Vernon, WA 98273 1-800-635-4477 | MSDS#: | 0341 |
| Synonym: | Glutaric Dialdehyde, 1,5-Pentanedial; Glutaral, Glutaraldehyde Solution | Validation Date: | 3-27-09 |
| Trade Name: | Not available | Print Date: | 3-27-09 |
| Material Uses: | Not available | Responsible Name: | Dr. B |
| Manufacturer: | AMRESKO Inc. 30175 Solon Industrial Parkway Solon, Ohio 44139 1-800-366-1313 | In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-635-4477 | |

Section 2. Composition and Information on Ingredients

| Name | CAS# | % by Weight | Exposure Limits |
|-------------------|-----------|-------------|-----------------|
| 1) Water | 7732-18-5 | 50 | Not available |
| 2) Glutaraldehyde | 111-30-8 | 50 | Not available |

Section 3. Hazards Identification

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|---|---|
| Physical State and Appearance | Clear to yellowish liquid. |
| Emergency Overview | Not available. |
| Routes of Entry | Eye contact, inhalation, ingestion, skin contact. |
| Potential Acute Health Effects | |
| Eyes | Irritation, may cause permanent damage. |
| Skin | Irritation. |
| Inhalation | Irritation to nose, throat and respiratory system. |
| Ingestion | May cause allergic reaction. Irritation to throat and respiratory system. |
| Potential Chronic Health Effects | Not available. |
| Medical Conditions Aggravated by Overexposure | Not available. |
| Overexposure/Signs/Symptoms | Not available. |

Section 4. First Aid Measures

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|--------------------|--|
| Eye Contact | Immediately flush thoroughly with water for at least 15 minutes. May cause chemical conjunctivitis and corneal damage. |
| Skin Contact | Wash thoroughly with water. Remove contaminated clothing at once (launder before reuse); discard contaminated shoes. |
| Inhalation | Remove to fresh air; give artificial respiration if breathing has stopped. |
| Ingestion | If conscious, dilute, inactivate, or absorb the ingested aldehyde by giving milk, activated charcoal, or water. Get immediate medical attention. |
| Notes to Physician | Not available. |

Section 5. Fire Fighting Measures

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|-----------------------------|----------------|
| Flammability of the Product | Not available. |
| Auto-ignition Temperature | Not available. |
| Flash Points | Not available. |
| Flammable Limits | Not available. |
| Products of Combustion | Not available. |
| Fire Hazards in Presence | Not available. |

Of Various Substances

Explosion Hazards in Presence of Various Substances Thermal decomposition produces toxic fumes.

Fire Fighting Media and Instructions CO₂, foam, water. Wear self-contained breathing apparatus and protective clothing.

Protective Clothing (Fire)

Special Remarks on Fire Hazards

Special Remarks on Explosion Hazards

Section 6. Accidental Release Measures

Small Spill and Leak Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under section VIII. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Take up and containerize for proper disposal as described under Waste Disposal Method. Comply with Federal, State and local regulations on reporting releases. Always contact a permitted waste disposer (TSD) to assure compliance with all current local, state and federal regulations.

Large Spill and Leak Same as above.

Section 7, Handling and Storage

Handling Do not breathe vapor or mist. Do not get in eyes, on skin, or on clothing.

Storage Keep container tightly closed. Store away from heat, sparks, open flame.

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

Eyes Safety glasses with side shields must be worn at all times.

Body Impervious protective clothing must be worn to prevent skin contact.

Respiratory If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your safety supplier). Engineering and/or administrative controls should be implemented to reduce exposure. Material must be handled or transferred in an approved fume hood or with adequate ventilation.

Hands Neoprene, nitrile or equivalent gloves.

Feet Not available.

Personal Protection in Case of a Large Spill Safety glasses with side shields, impervious protective clothing, respirator if necessary and neoprene, nitrile or equivalent gloves.

Product Name**Exposure Limits**

1)Glutaraldehyde ACGIH 0.05 ppm Ceiling

Consult Local authorities before acceptable exposure limits.

Section 9. Physical and Chemical Properties

| | | | |
|--------------------------------------|--|---------------|---|
| Physical State and Appearance | Clear to yellowish liquid. | Odor: | Sharp odor, fruity odor, medicinal odor |
| Molecular Weight | 100.12 | Taste: | Not available. |
| Molecular Formula | C ₅ H ₈ O ₂ | Color: | Clear to yellowish |
| pH (1%/Water) | Not applicable. | | |
| Boiling/Condensation Point | 101 deg C | | |
| Melting/Freezing Point | -21 deg C | | |
| Critical Temperature | Not applicable. | | |
| Specific Gravity | 1.13 | | |
| Vapor Pressure | 15 mm Hg @ 20 deg C | | |
| Vapor Density | 1.05 (air =1) | | |
| Volatility | Not applicable. | | |
| Odor Threshold | Not applicable. | | |
| Evaporation Rate | 0.93 (BuAc =1) | | |
| VOC | Not available. | | |
| Viscosity | Not available. | | |
| Ionicity (in water) | Not available. | | |
| Dispersion Properties | Not available. | | |
| Solubility | Soluble in water | | |

Physical Chemical Comments Not available.

Section 10. Stability and Reactivity

Stability and Reactivity Stable under normal temperatures and conditions.
Conditions of Instability Avoid contact with ignition sources.
Incompatibility with Various Substances Acids, oxidizers, strong alkalies. Contact with HCl may cause formation of the potent carcinogen, bischloromethyl ether. Alkaline solutions of glutaraldehyde react with alcohol, ketones, amines, hydrazines and proteins.
Hazardous Decomposition Products Metal•O, HCl, CL, CO_x Carbon dioxide, carbon monoxide
Hazardous Polymerization Not available.

Section 11. Toxicological Information

Toxicity to Animals **LD50/LC50:**
CAS# 111-30-8:
Draize test, rabbit, eye: 1 mg Severe;
Draize test, rabbit, eye: 250 ug/24H Severe;
Draize test, rabbit, skin: 2 mg/24H Severe;
Inhalation, rat: LC50 = 480 mg/m³/4H;
Oral, mouse: LD50 = 100 mg/kg;
Oral, mouse: LD50 = 231 mg/kg;
Oral, rat: LD50 = 134 mg/kg;
Oral, rat: LD50 = 140 mg/kg;
Skin, rabbit: LD50 = 560 uL/kg;
Skin, rat: LD50 = >2500 mg/kg;
.
CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg;

Chronic Effects on Humans Not listed as a carcinogen.

Other Toxic Effects on Humans

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 Not available.

BODS and COD Not available.

Biodegradable/OEDC Not available.

Mobility Not available.

Toxicity of the Products of Biodegradation Not available.

Special Remarks on The Products of Biodegradation Not available.

Section 13. Disposal Considerations

Waste Information Product cannot be put down any drain without first neutralizing the aldehyde. Aldehyde neutralizers are available if desired. Consult your local waste authorities for disposal regulations.

Waste Stream Aldehydes

Consult your local or regional authorities.

Section 14. Transport Information

DOT Classification UN2927, Toxic Liquids, Corrosive, organic, N.O.S., 6.4, II

Marine Pollutant Not available.

Hazardous Substances Not available.

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| Reportable Quantity | |
| Special Provisions for Transport | Not applicable. |
| TDG Classification | UN2927, Toxic Liquids, Corrosive, organic, N.O.S., 6.4, III |
| ADR/RID Classification | ADR (Europe) information not available. |
| IMO/IMDG Classification | IMDG information not available. |
| ICAO/IATA Classification | See IATA Regulations, UN2927, Toxic Liquids, Corrosive, organic, N.O.S., 6.4, II |

Section 15. Other Information

Label requirements

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|---|----------------------------|---|--|---|
| Hazardous Material Information System (U.S.A.) | Health | 3 | National Fire Protection Association (U.S.A.) | <p>Fire Hazard Reactivity Specific Hazard</p> |
| | Fire Hazard | 1 | | |
| | Reactivity | 1 | | |
| | Personal Protection | | | |

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.