

MATERIAL SAFETY DATA SHEET

JUNGBUNZLAUER INC.

Product: **Gluconic Acid 50%**

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Review Date: **4/12/2005**

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMMERCIAL PRODUCT NAME Gluconic Acid 50%
COMPANY/SUPPLIER Jungbunzlauer Inc.
 7 Wells Avenue
 Newton Centre, MA 02459
Emergency Phone 1- 617-969-0900; 8:30 - 5:00 M-F Eastern Time
24 Hour Emergency Phone Number CHEMTREC 1-800-424-9300
PRODUCT USE Cleaning and pickling metals, sequestrant, cleansers, paint strippers.
MSDS Revision July 17, 1996: reason for revision: reclassification and reformatting.

2. COMPOSITION, INFORMATION ON INGREDIENTS

CHEMICAL NAME OF THE MATERIAL Gluconic Acid solution in water
CHEMICAL FORMULA C₆H₁₂O₇ + 50% water
CHEMICAL FAMILY Organic acid, aqueous solution
SYNONYMS D-Gluconic Acid, Dextronic acid, maltonic acid,
 glyconic acid, glycogenic acid, pentahydroxycaproic
 acid,

<u>COMPOSITION</u>	<u>CAS Reg. No.</u>	<u>%</u>
Gluconic Acid	526-95-4	Min. 50
Water	7732-18-5	Max. 50

HAZARDOUS IMPURITIES None

3. HAZARDS IDENTIFICATION

Emergency Overview Clear yellow to light brown liquid with slight acetous odor.
Most important Hazard Irritating to eyes, skin and respiratory tract.
Inhalation Mist may cause irritation of mucous membrane and respiratory tract.
Eye contact May cause severe irritation, redness, tearing, blurred vision.
Skin contact Prolonged or repeated contact can cause moderate irritation, defatting,
 dermatitis.
Ingestion Can cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic No data available
Carcinogen status None

4. FIRST AID MEASURES

General advice No hazards which require special first aid measures. If you feel unwell, seek
 medical advice.
Inhalation Move to fresh air. If symptoms persist, call a physician.
Skin contact Wash off with soap and plenty of water. If skin irritation persists, call a physician.
Eye contact Immediately Flush eyes with water for 15 minutes. If eye irritation persists,
 consult a specialist.
Ingestion Drink water as a precaution. Do not induce vomiting. Get medical attention.
Protection of first-aiders Use personal protective equipment.

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5. FIRE FIGHTING MEASURES

FLASH POINT	not applicable
FLAMMABLE LIMITS	not applicable
Autoignition temperature	not applicable
General Hazards	Acid reacts with most metals to release hydrogen gas which can form explosive mixtures.
Suitable extinguishing media	water, water spray, dry powder, foam, carbon dioxide (CO ₂)
Extinguishing media which must not be used for safety reasons	None
Hazardous decomposition products	carbon oxides
Special protective equipment	Use personal protective equipment including self-contained breathing apparatus when fighting fire in enclosed area.
Specific methods	Standard procedure for chemical fires.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Use personal protective equipment.
Environmental precautions	Dispose according to federal, state and local authorities.
Methods for cleaning up	Small spills can be flushed into normal drainage or taken up with absorbent material. Larger spills should be contained by diking or otherwise held for collection and disposal. Do not allow contact with skin or eyes. Spills tend to be tacky and slippery. Can be neutralized with lime or soda. After cleaning, flush away traces with copious amounts of water.
Is a hazardous waste under current RCRA criteria.	

7. HANDLING AND STORAGE

HANDLING	
Technical measures/Precautions	No special technical protective measures required.
Safe handling advice	Use personal protective equipment.
STORAGE	
Technical measures/Storage conditions	Keep tightly closed in a dry and cool place. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.
Incompatible products	No special restrictions on storage with other products.
Packaging material	Store in original container.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering measures	Provide general dilute ventilation. Eye wash and safety shower available to work area.
Exposure limit(s)	None established for this ingredient, use OSHA PEL, ACGIH TLV for Nuisance dusts of 5 mg/ m ³ .
Personal protection equipment	
Respiratory protection	Not required unless aerosols are produced.
Hand protection	Gloves
Eye Protection	Safety glasses
Skin and body protection	Lightweight protective clothing
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice

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9. PHYSICAL AND CHEMICAL PROPERTIES

Form		aqueous solution, approx. 50%
Color		yellow/brown
Odor		slight acetous
pH	(10%)	1.2-1.3
Vapor pressure		not available
Vapor density		not applicable
Boiling point		>100 °C
Freezing Point		~15 °C, ~60 °F crystallizes
Evaporation rate		not applicable
Coefficient of water/oil distribution		not available
Melting point/range		not applicable
Decomposition temperature		not applicable
Relative density		1.23
Bulk density		
Explosive properties		none
Water solubility	g/kg	miscible

10. STABILITY AND REACTIVITY

Stability	Stable
Conditions to avoid	Freezing
Materials to avoid	Incompatible strong bases and oxidizers.
Hazardous decomposition products	No decomposition if stored normally. Thermal decomposition can lead to release of irritating gases and vapors.
Hazardous polymerization	Does Not occur

11. TOXICOLOGICAL INFORMATION

Acute toxicity	no data available
Local effects	contact with eyes may cause irritation
Chronic toxicity	no data available
Human experience	Health injuries are not known or expected under normal use.

12. ECOLOGICAL INFORMATION

Mobility	completely soluble
Persistence and degradability	
Chemical oxygen demand	897 mg O ₂ /g
Biochemical oxygen demand within 5 days	(BOD ₅) = 634 mg/O ₂ /g
Readily biodegradable	98% after 3 days
Bioaccumulation	no data available
Ecotoxicity effects	Toxicity to fish LD ₅₀ =360 mg/l Toxicity to bacteria EC ₀ . 10,000 mg/l

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13. DISPOSAL CONSIDERATIONS

Waste from residues/unused products

Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environmental agency for specific rules).

Is a hazardous waste under current RCRA criteria.

14. TRANSPORT INFORMATION

Not a Hazardous Material for DOT shipping.

15. REGULATORY INFORMATION

The ingredients are listed on the TSCA Inventory List.

CERCLA (Comprehensive Response Compensation, and Liability Act):

HMIS Health=2, Fire=0, Reactivity=0, Persistence=0

SARA Title III (Superfund Amendments and Reauthorization Bill): Not Considered Hazardous

16. OTHER INFORMATION

HMIS* Health=2, Fire=0, Reactivity=0

*Hazardous Material Information System of the National Paint and Coating Association.

MSDS Status: Revised 9/1/99 by Technical Service Department of Jungbunzlauer Inc. to update exposure information. Reviewed 4/12/2005

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