

SAFETY DATA SHEET

May be used to comply with OSHA's Hazard Communication Standard, 29CFR 1910.1200. Standard must be consulted for specific regulations.

BIOPURE (TM) GLDA

Quick Identifier

Common Name (Used on Label and List)

SECTION I - IDENTIFICATION

Biopure (TM) GLDA

Manufacturer's Name	-	JARCHEM INDUSTRIES, INC.	
Address	-	414 Wilson Avenue	
		Newark, NJ 07105	
Emergency Telephone #	-	(973) 344-0600	Secondary Telephone No.: CHEMTREC
Other Information Calls	-	(973) 344-0600	(800) 424-9300
			24 Hours a Day
Date Prepared	-	3/20/2014	
Date Revised	-	4/18/2019	

SECTION II - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING

Corrosion Category 1 - H290 May be corrosive to metals

P234 Keep only in original container.

P390 Absorb spillage to prevent material damage.

P406 Store in corrosive resistant container with a resistant inner liner.

HMIS HAZARD RATINGS

HEALTH	1
FLAMMABILITY	0
REACTIVITY	1

Pictograms

Corrosion

EYES: Eye contact may cause mild irritation

SKIN: Skin contact is not expected to cause irritation

INHALATION: Exposure to an excessive concentration of vapors, mist, fumes, or aerosols may cause respiratory tract discomfort and/or mild irritation

INGESTION: This product is expected to have low order of acute toxicity

(See section for Toxicological Information)

SECTION III - COMPOSITION / INFORMATION ON INGREDIENT

PRODUCT NAME: Biopure (TM) GLDA

SYNONYMS: L-Glutamic acid, N-N-diacetic acid tetrasodium salt (GLDA-Na4)

CHEMICAL NAME: Tetrasodium N, N-bis(carboxymethyl)-L- glutamate CAS#: 51981-21-6 EC#:

Ingredients	CAS#	% by Weight
Biopure (TM) GLDA	51981-21-6	46.5 - 47.5
Sodium hydroxide	1310-73-2	0 - 0.4
Water	7732-18-5	Balance

See sections on Exposure Guidelines and Regulatory Classifications.

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SECTION IV - FIRST-AID MEASURES

EYES: Immediately wash the eyes thoroughly, opening eyelashes from time to time. Check if the victim is wearing contact lenses; if yes, remove them. Wash for at least 10 minutes. Consult a doctor in case of irritation.

SKIN: Remove contaminated clothing and shoes. Rinse area with large amounts of water. Get medical aid

INHALATION: Remove to fresh air, keep warm and at rest, administer oxygen if necessary.

INGESTION: Do NOT induce vomiting. If victim is conscious and alert, give several glasses of water. Get medical aid immediately.

SECTION V - FIRE-FIGHTING MEASURES

NFPA Rating

FLAMMABLE PROPERTIES: Not flammable or combustible

HEALTH 1

FLASH POINT: OPEN CUP Not applicable CLOSED CUP Not applicable

FLAMMABILITY 0

REACTIVITY 1

EXTINGUISHING MEDIA AND INSTRUCTIONS:

Use water fog or spray, dry chemical foam or carbon dioxide.

SPECIAL REMARKS: If heated to 600°C (1112°F) it may release irritating fumes or gases.

SECTION VI - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE OF SPILL OR LEAK:

SMALL SPILLS: Evacuate the spill area safely to permit authorized personnel to handle the spill.

LARGE SPILLS: Evacuate the spill area safely to permit authorized personnel to handle the spill.

Environmental precautions:

Keep out of drains and watercourses. Use containment walls to contain, reclaim or safely dispose of spills. Follow local regulations for safe disposal of contaminated absorbent materials and containers.

Wash spill areas with water. Contain the spilled material by bunding. Avoid direct discharge into drains.

Methods and material for containment and cleaning up:

a) Recovery: Recover as much of the product as possible. Absorb the product onto porous material. Transfer the product into a spare container: - suitably labelled. Then take the emergency containers to an area reserved for subsequent recycling or disposal.

B) Neutralization: Neutralize with: - calcium hydroxide. - Sodium bicarbonate. Absorb spillage with: - diatomaceous earth - sand or inert absorbent.

C) Cleaning/Decontamination: Wash non-recoverable remainder with large amounts of water.

D) Disposal: Do NOT discharge into drains.

SECTION VII - HANDLING AND STORAGE

USUAL SHIPPING CONTAINERS: Store in PVC, PE, stainless steel, or bituminized tanks.

STORAGE/TRANSPORT TEMPERATURE: Store the containers in cool dry place below 77°F

STORAGE/TRANSPORT PRESSURE:

PRECAUTIONS: Avoid contact with aluminium, copper, copper alloys, nickel, and zinc

SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: No specific additional engineering controls are required. Provide good natural or

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artificial ventilation.

PERSONAL PROTECTIVE EQUIPMENT:

EYES: Use face shield and/or chemical goggles. Have eye wash facilities immediately available at any location where eye contact can occur.

SKIN: Wear gloves of suitable material. Wear suitable protective clothing including aprons, boots, or a suitable acid resistant chemical suit. Wash thoroughly after handling.

RESPIRATORY PROTECTION: Avoid breathing vapor/mist. Use approved respiratory protection equipment when airborne exposure is excessive. Consult respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer. In case of insufficient ventilation, wear suitable respiratory equipment.

EXPOSURE GUIDELINES:

OSHA PEL: Not known.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

ORGANIC VOLATILE IMPURITIES

APPEARANCE:	Liquid	
ODOR:	Slight ammonia odor	FLAMMABILITY, FLASH POINT, LFL/UFL, AUTO IGNITION TEMP: See Section V
PHYSICAL STATE:	Liquid	
pH:	11-12 of 1% solution	DECOMPOSITION TEMP: See Section X
VAPOR PRESSURE (mm Hg):	Same as water	
VISCOSITY:	approx. 200 mPa.S (at 25 °C)	
BOILING POINT:	105-110 °C (221-130 °F)	
MELTING POINT:	<-15 °C (<5 °F)	
SPECIFIC GRAVITY (H ₂ O=1):	1.38-1.43 g/mL	PARTITION COEF (octanol/H ₂ O): NA
SOLUBILITY IN WATER:	Miscible in water	

SECTION X - STABILITY AND REACTIVITY

CONDITIONS TO AVOID:	Avoid contact with aluminium, nickel, zinc, copper, and copper alloys.
INCOMPATIBILITY WITH OTHER MATERIALS:	Acidic and strong oxidizers
HAZARDOUS DECOMPOSITION:	Carbon oxide fumes (CO, CO ₂), nitrogen oxides, sodium hydroxide, and ammonia

SECTION XI - TOXICOLOGICAL INFORMATION

EYES:	Rabbit: Method OECD 405 (Based on test on similar product containing 71% GLDA Na4) Result: not irritating
SKIN:	Rat: LD50: >2000 mg/kg
INHALATION:	Rat: Method was OECD 403: LC50: >4.2 mg/L air
INGESTION:	Rat LD50: >2000 mg/kg (Based on test on similar product containing 71% GLDA Na4)
REPRODUCTION:	No classification is required for Reproductive toxicity

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NOAEL (P): > 5000 ppm (male/female)
NOAEL (F1, F2): >15000 ppm (male/female)
Based on reproduction or developmental effect.
Administered in the diet (0, 1500, 5000, 15000 ppm)

SECTION XII - ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:

Based on test on similar product containing 71% GLDA Na4:

Toxicity on fish: *Oncorhynchus mykiss*

Duration: 96 h

LC 50: >100 mg/L

Toxicity on Invertebrates: *Daphnia magna*

Duration: 48 h

EC50: >100 mg/L

Toxicity on Algae

Duration: 72 h

EC50: >=100 mg/L

CHEMICAL FATE INFORMATION:

OECD 301D (Ready Biodegradability: Closed Bottle Test) 28 d

Degree Removal: 91%

OECD Guideline 306 (Biodegradability in Seawater) 60 d

Degree Removal: 83%

Bio-accumulative potential: Log Pow <0

SECTION XIII - DISPOSAL CONSIDERATIONS

SPECIAL INSTRUCTIONS: All local and national regulations should be followed.

For small quantities neutralize with lime or soda ash and flush away with plenty of water.

For large quantities send to special waste disposal system and burn in proper incinerator.

This product should not be dumped in public storage and sewage waterways.

WASTE CLASSIFICATION: This material when discarded is a hazardous waste as that term is defined by the Resource, Conservation, and Recovery Act (RCRA), 40 CFR 261. See disposal considerations below for U.S. EPA disposal requirements. Consult regulatory officials for performance standards. Hazardous Waste Number: D002

SECTION XIV - TRANSPORT INFORMATION

DOT DESCRIPTION: Not regulated. Class See additional Packing Group
notes Section 16

PROPER SHIPPING NAME: Corrosive liquid, basic, organic, n.o.s. (Glutamic acid N,N-diacetic acid tetrasodium salt 47% solution, Sodium hydroxide)

ICAO/IATA DESCRIPTION: UN3267 Class 8 Packing Group III

IMDG DESCRIPTION: Not regulated Class Packing Group

EMS No.:

SECTION XV - REGULATORY INFORMATION

US FEDERAL REGULATIONS

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OSHA HAZARD COMMUNICATION STANDARD CLASSIFICATION: This material is not considered hazardous by the OSHA Hazard Communication Standard

TSCA INVENTORY LISTING: This material is listed on the TSCA inventory.

COMPONENT: Tetrasodium N, N-bis(carboxymethyl)-L-glutamate; Sodium Hydroxide; Water

CAS#: 51981-21-6; 1310-73-2; 7732-18-5

SARA 302 Status: Not applicable

SARA 311/312 CLASSIFICATION: Not applicable

SARA 313 CHEMICALS: None

CERCLA HAZARDOUS SUBSTANCE:

WHMIS CLASSIFICATION:

Class E (Corrosive to metals)

EUROPEAN EINECS LISTING: ☒

CANADIAN (DSL) LISTING: ☒

CANADIAN (NDSL) LISTING: ☐

CHINA INVENTORY LISTING: ☒

TAIWAN LISTING: ☒

JAPANESE (MITI) LISTING: ☒

KOREAN INVENTORY LISTING: ☒

AUSTRALIAN (AICS) LISTING: ☒

NEW ZEALAND LISTING: ☒

PHILIPPINES (PICCS) LISTING: ☒

CALIFORNIA PROP. 65 LISTING: ☐

To the best of our knowledge, this product does not contain any of the listed chemicals in Prop 65

SECTION XVI - OTHER INFORMATION

This product is not regulated as hazardous by DOT, per 49CFR §173.154 (d) exception for materials corrosive to metals (steel and/or aluminum).

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