BIO BASIC INC.

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MATERIAL SAFETY DATA SHEET REQUIRED UNDER SAFETY AND HEALTH REGULATION FOR SHIP REPAIRING

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DATE UPDATED: SEPTEMBER 28, 2015

SECTION 1. - - - - - CHEMICAL IDENTIFICATION - - - - - -

Product Name Glutathione, Reduced

Product Code(s) GB0229

Recommended Use For Further Manufacturing Use Only

Not for Human or Animal Drug Use

Synonyms COPREN * DELTATHIONE * GLUTATHION * GLUTATHIONE *

GLUTATHIONE(REDUCED) * GLUTATHIONE SH * GLUTATIOL *

GLUTATIONE* L-GLUTATIONE *GLUTIDE * GLUTINAL * GSH * ISETHION *

NEUTHION *PANARON * REDUCED GLUTATHIONE * TATHION *

TATHIONE * TRIPTIDE*

SECTION 2. ----- HAZARDS IDENTIFICATION -----

GHS - Classification

Classification Not classified as a hazard

SECTION 3. ---- COMPOSITION/INFORMATION ON INGREDIENTS -----

Chemical Name	EC No.	REACH Reg. No.	CAS-No	Weight %	Classification
Glutathione	EEC No. 200-725-4	Not available	70-18-8	95-100	-

SECTION 4. ----- FIRST-AID MEASURES-----

Eye ContactRinse thoroughly with plenty of water for at least 15 minutes and consult a

physician

Skin Contact Wash off immediately with soap and plenty of water removing all contaminated

clothes and shoes

Inhalation Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult,

give oxygen.

Ingestion Clean mouth with water and afterwards drink plenty of water

Notes to Physician Treat symptomatically

SECTION 5. ----- FIRE FIGHTING MEASURES -----

Flammable Properties Not flammable

Flash Point Not determined

Suitable Extinguishing Media Dry chemical, CO2, water spray or regular foam.

Hazardous Combustion Products Nitrogen oxides (NOx), Sulfur oxides,

Explosion Data

Sensitivity to Mechanical Impact
Sensitivity to Static Discharge
Not sensitive
Not sensitive

Protective Equipment and Precautions for FirefightersAs in any fire, wear self-contained breathing apparatus

pressure-demand, MSHA/NIOSH (approved or equivalent) and

full protective gear

SECTION 6. - - - - - - ACCIDENTAL RELEASE MEASURES- - - - - -

Personal Precautions Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

Methods for Containment Prevent further leakage or spillage if safe to do so

Methods for Cleaning Up Avoid dust formation. Pick up and transfer to properly labeled containers. Ventilate area

and wash spill site after material pickup is complete.

SECTION 7. ----- HANDLING AND STORAGE-----

Handling Handle in accordance with good industrial hygiene and safety practice.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place

Incompatible Products Strong oxidizing agents.

SECTION 8. - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION - - - -

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Glutathione			
70-18-8			
	0.		

Engineering Measures Showers

Eyewash stations Ventilation systems

Personal Protective Equipment

Eye/Face ProtectionSafety glasses with side-shields.

Skin and Body Protection
Wear protective gloves/clothing.

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA

Respiratory Protection approved

respiratory protection should be worn. Positive-pressure supplied air respirators

may be

required for high airborne contaminant concentrations. Respiratory protection must

hΔ

provided in accordance with current local regulations

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

Appearance White to almost white Odor No information available **Odor Threshold** No information available **Decomposition Temperature °C** No information available **Freezing Point** No information available **Initial Boiling Point** No information available **Physical State** Crystalline Powder На No data available Not determined Flash Point **Autoignition Temperature** No data available **Boiling Point/Range** No data available Melting Point/Range 192 to 195 °C

Flammability Limits in Air Upper No data available Lower No data available

No data available

Explosive Properties

Oxidizing Properties

Evaporation Rate

MMHG @ 37.8 C

No information available

No data available

No data available

Specific Gravity 0.30

Solubility No information available

Partition Coefficient No data available

(n-octanol/water)

Vapor Density

Viscosity No information available

SECTION 10. ------STABILITY AND REACTIVITY -----

Stability Stable under recommended storage conditions

Incompatible Products Strong oxidizing agents.

Conditions to Avoid None known based on information supplied

Hazardous Decomposition Products Carbon oxides. Nitrogen oxides (NOx). Sulfur oxides.

Hazardous Polymerization Hazardous polymerization does not occur

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

Acute Toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information

Chronic Toxicity

Chronic Toxicity No known effect based on information supplied

Target Organ Effects None known.

SECTION 12. ----- ECOLOGICAL INFORMATION -----

Ecotoxicity

The environmental impact of this product has not been fully investigated

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

Waste Disposal Method Dispose of material in accordance with all federal, state, and local regulations

Contaminated Packaging Dispose of in accordance with all federal, state and local regulations

SECTION 14. ----- TRANSPORT INFORMATION -----

IATA Not regulated

DOT Not regulated

SECTION 15. ----- REGULATORY INFORMATION ------

REACH Title VII Restrictions No information available.

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on the Label	Pollution Release and Transfer Registry (Class II):	Pollution Release and Transfer Registry (Class I):	Poison and Deleterious Substances Control Law:
Glutathione	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Component	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Glutathione 70-18-8 (95-100)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

International Inventories

TSCA Complies
EINECS/ELINCS Complies
ENCS Complies
IECSC Complies
KECL Complies
PICCS Does not Comply

AICS Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health HazardNoChronic Health HazardNoFire HazardNoSudden Release of Pressure HazardNoReactive HazardNo

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990

CERCLA

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

International Regulations

Mexico - Grade No information available.

Canada

WHMIS Hazard Class

Not determined

SECTION 16. ----- OTHER INFORMATION-----

Issuing Date 13-Aug-2009 **Revision Date** 28-Sept-2015

Revision Note No information available.

Recommended Restrictions No information available

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS