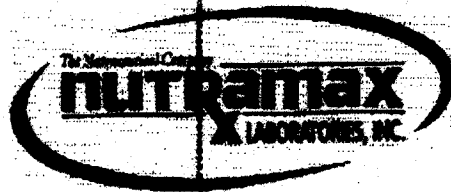


MATERIAL SAFETY DATA SHEET



Cosequin

2208 Lakeside Boulevard • Edgewood, Maryland 21040

Date Prepared: 6/15/00

File Name: Chondroitin Sulfate

Prepared by: Corrine Bonneville

Section I

Emergency Phone Number: 1-800-925-5187 pg. 1

1. **Product:** CHONDROITIN SULFATE

2. **Composition/Information on Ingredients:** 95% Pure Bovine Trachea

3. **Hazards Identification:** Not a hazardous material¹ as defined by Federal Standard No.313. Section 520.1.2.

Potential Health Hazards

Routes of Entry: Could be inhaled, ingested or absorbed through the skin or eyes.

Human Effects and Symptoms of an Acute Overexposure: Acutely hyperallergenic persons may develop response to high levels of airborne dust.

Chronic Effects: No chronic effects known.

4. First Aid Measures

Eyes: Flush with copious amounts of water

Skin: Wash exposed skin with water and soap. If irritation occurs consult a physician.

Ingestion: Consult a physician

Inhalation: Seek medical attention immediately if breathed and hyperallergenic reaction occurs.

5. Fire & Explosion Hazard Data

Flammable Properties: N/A

Flammable limits: N/A

Auto-ignition Temperature: N/A

Hazardous Combustion Products: N/A

Extinguishing Media: N/A

Fire Fighting Instructions: N/A

6. Handling and Storage Store in a sealed container. Avoid breathing dust.

7. Personal Protection / Occupational Control Measures

Respiratory Protection: NIOSH approved respirators or dust masks may be used.

Skin Protection: Latex/Nitrile gloves may be worn.

Airborne Exposure Limits: N/A

Eye Protection: Safety goggles may be worn for dust.

Ventilation Systems: Local exhaust or fume hood

8. Physical and Chemical Properties

Solubility in water- 30%

Appearance and color- Light tan powder, slight meaty odor

9. Toxicological Information N/A

10. Disposal Considerations Dispose of waste in accordance with all applicable Federal, State and local laws.

11. Transport Information N/A

12. Regulatory Information N/A

13. Leak and Spill Information Sweep up powder.

14. Storage Cool dry area

15. Reactivity Data Stable

13. Other Information

To the best of our knowledge, the information contained in this MSDS is accurate. However, the preparer and Company Name do not deem this information as any warranty, neither written nor implied. Although certain hazards may be described in about the chemical in this MSDS, we cannot guarantee that these are the only hazards that exist. All data has been extracted from the MSDS supplied by the manufacturer.

MATERIAL SAFETY DATA SHEET



2208 Lakeside Boulevard • Edgewood, Maryland 21040

Date Prepared: 6-24-00

File Name: Manganese Ascorbate Dihydrate

Prepared by: Corrine Bonneville

Section I

Emergency Phone Number: 1-800-925-5187

pg. 1

1. **Product:** MANGANESE ASCORBATE DIHYDRATE

2. **Composition/Information on Ingredients:** $(C_{11}H_{14}MnO_{12} \cdot 2H_2O)$ L-Ascorbic Acid Manganese Salt

3. Hazards Identification:

Potential Health Hazards

Routes of Entry: Could be inhaled, ingested or absorbed through the skin or eyes.

Human Effects and Symptoms of an Acute Overexposure: None known.

Chronic Effects: None known but observe outlined cautions.

4. First Aid Measures

Eyes: Irrigate with copious amounts of water.

Skin: Always wash exposed skin areas with water.

Ingestion: LD₅₀ (mouse) > 8gm/kg for ascorbic acid.

Inhalation: Immediately remove to clean air/ventilation area.

5. Fire & Explosion Hazard Data

Flammable Properties: N/A

Flammable limits: N/A

Autoignition Temperature: N/A

Hazardous Combustion Products: N/A

Extinguishing Media: Water spray, dry chemical, CO₂ or foam.

Fire Fighting Instructions: Evacuate to an area of upwind direction. Keep any exposed material cool with H₂O spray. Wear self-contained breathing equipment.

6. Handling and Storage

Material is regarded as safe but exercise good handling procedures at all times.
Keep within tightly closed light resistant containers. Store on pallets and for short periods.

7. Personal Protection / Occupational Control Measures

Respiratory Protection: NIOSH approved dust respirator.
Skin Protection: Always wear full-length clothing. Never use dust contaminated clothing.
Airborne Exposure Limits: N/A
Eye Protection: Wear safety glasses
Ventilation Systems: Mechanical

8. Physical and Chemical Properties

Specific Gravity: Approximately 1g/cc
Solubility in water: Freely soluble in hot water.
Appearance and odor: Tan to off white, to lavender tri-clinic crystals.

9. Toxicological Information N/A

10. Disposal Considerations All waste should be transferred to an approved landfill in accordance with all applicable Federal, State and local laws.

11. Transport Information N/A

12. Regulatory Information N/A

13. Leak and Spill Information Sweep all spills and transfer to labeled containers.

14. Storage see handling and storage #6.

15. Reactivity Data

Stability: Stable but hygroscopic

Conditions to Avoid: Exposure to aqueous solutions, to air, or oxidants, prolonged storage (ppt of MnO).

Incompatibility (Materials to avoid): Red /ox systems-especially oxidants.

Hazardous Decomposition Products: Not applicable.

Hazardous

13. Other Information

To the best of our knowledge, the information contained in this MSDS is accurate. However, the preparer and Company Name do not deem this information as any warranty, neither written nor implied. Although certain hazards may be described in about the chemical in this MSDS, we cannot guarantee that these are the only hazards that exist. All data has been extracted from the MSDS supplied by the manufacturer.

MATERIAL SAFETY DATA SHEET



2208 Lakeside Boulevard • Edgewood, Maryland 21040

Date Prepared: 6/15/00

File Name: Glucosamine HCl-G114

Prepared by: Corrine Bonneville

Section I

Emergency Phone Number: 1-800-925-5187

pg. 1

1. Product: GLUCOSAMINE HYDROCHLORIDE

2. Composition/Information on Ingredients: (2-Amino-2-deoxy-D-glucose; Chitosamine) Found in chitin, in mucoproteins, and in mucopolysaccharides

3. Hazards Identification: Not a hazardous material as defined by Federal Standard No. 313. Section 520.1.2.

Potential Health Hazards

Routes of Entry: Could be inhaled, ingested, or absorbed through the skin or eyes.

Human Effects and Symptoms of an Acute Overexposure: Acutely hyperallergenic persons may develop response to high levels of airborne dust.

Chronic Effects: No chronic effects known

4. First Aid Measures

Eyes: Flush with copious amounts of water

Skin: Wash exposed skin with water and soap. If irritation occurs, consult a physician.

Ingestion: Consult a physician

Inhalation: Seek medical attention immediately if breathed and hyperallergenic reaction occurs.

5. Fire & Explosion Hazard Data

Flammable Properties: N/A

Flammable limits: N/A

Auto-ignition Temperature: N/A

Hazardous Combustion Products: N/A

Extinguishing Media: N/A

Fire Fighting Instructions: N/A

6. Handling and Storage Store in a sealed container. Avoid breathing dust.

7. Personal Protection / Occupational Control Measures

Respiratory Protection: NIOSH approved respirators or dust masks may be used.

Skin Protection: Latex/Nitrile gloves may be worn.

Airborne Exposure Limits: N/A

Eye Protection: Safety goggles may be worn for dust.

Ventilation Systems: Local exhaust or fume hood

8. Physical and Chemical Properties

Solubility in water- soluble

Appearance and color- White crystalline powder, characteristic odor

9. Toxicological Information To date no direct toxic effects of Glucosamine has been reported in the scientific literature.

10. Disposal Considerations Dispose of waste in accordance with all applicable Federal, State and local laws.

11. Transport Information N/A

12. Regulatory Information N/A

13. Leak and Spill Information Sweep up powder.

14. Storage Cool dry area

15. Reactivity Data Stable

13. Other Information

To the best of our knowledge, the information contained in this MSDS is accurate. However, the preparer and Company Name do not deem this information as any warranty, neither written nor implied. Although certain hazards may be described in about the chemical in this MSDS, we cannot guarantee that these are the only hazards that exist. All data has been extracted from the MSDS supplied by the manufacturer.