

HARRELL INDUSTRIES, INC.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME:
BISMUTH NITRATE

ISSUE DATE: 4/06/98
REVISED DATE: 09/23/10

HARRELL INDUSTRIES, INC.
2495 COMMERCE DRIVE
ROCK HILL, SC 29730

EMERGENCY:
(800) 633-8253 PERS
INFORMATION:
(803) 327-6335

MSDS # 0630

SECTION I – PRODUCT IDENTIFICATION

Chemical Name: Bismuth Nitrate, Pentahydrate
Synonym: Bismuth(III)Nitrate, Hydrate; bismuth nitrate, hydrate (1:5)
CAS # 10035-06-0
Formula: $\text{Bi}(\text{NO}_3)_3 \cdot 5\text{H}_2\text{O}$
Molecular Weight: 485.07 g/mol

SECTION II – HAZARDOUS INGREDIENTS

INGREDIENT NAME	CAS NO.	Percent	SARA 313
BISMUTH NITRATE	10035-06-0	98 - 100	NO

SECTION III – HAZARD IDENTIFICATION

Emergency Overview:

OSHA Hazards: Oxidizer

Target Organs: Kidney

HMIS Classification:

Health Hazard: 1

Flammability: 0

Physical hazards: 2

NFPA Rating:

Health Hazard: 0

Fire: 0

Reactivity Hazard: 2

Special hazard.: OX

Potential Health Effects:

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

SECTION IV – FIRST AID MEASURES

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

Skin Contact: Wash off with soap and plenty of water. Consult a physician.

Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION V – FIRE FIGHTING PROCEDURES**Flammable properties:**

Flash point: no data available.

Ignition temperature: no data available

Suitable extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters: Wear self contained breathing apparatus for fire fighting if necessary.

Further information: Use water spray to cool unopened containers.

SECTION VI – ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions: Do not let product enter drains.

Methods for cleaning up: Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

SECTION VII – HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition – No smoking. Keep away from combustible material.

Storage: Keep container tightly closed in a dry and well-ventilated place. Hygroscopic

SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal Protective Equipment:

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection: Handle with gloves. For prolonged or repeated contact use protective gloves.

Eye protection: Safety glasses

Skin and body protection: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION IX – PHYSICAL/CHEMICAL PROPERTIES

Appearance:	Form solid
pH:	no data available
Melting point:	30 °C (86 °F)
Boiling point:	75 - 80 °C (167 - 176 °F)
Flash point:	no data available
Ignition temperature:	no data available
Lower explosion limit:	no data available
Upper explosion limit:	no data available
Density:	2.83 g/cm ³
Water solubility:	no data available

SECTION X – STABILITY/REACTIVITY

Storage stability: Stable under recommended storage conditions.

Conditions to avoid: Avoid moisture.

Materials to avoid: Organic materials, Strong reducing agents, Strong acids, Powdered metals

Hazardous decomposition products: Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

SECTION XI – TOXICOLOGICAL INFORMATION

Acute toxicity:

LD50 Oral - mouse - 3,710 mg/kg

LD50 Intraperitoneal - mouse - 71 mg/kg

Irritation and corrosion: No data available

Sensitization and Chronic Exposure: No data available

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated., Symptoms of chronic bismuth toxicity in humans consists of decreased appetite, weakness, rheumatic pain, diarrhea, fever, metal line on the gums, foul breathe, gingivitis, and dermatitis. Jaundice and conjunctival hemorrhage are rare, but have been reported. Bismuth nephropathy with proteinuria may occur. The kidney is the site of highest concentration with the liver being considerably lower. Bismuth does pass into the amniotic fluid and into the fetus.

Potential Health Effects:

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

Target Organs: Kidney,

SECTION XII – ECOLOGICAL INFORMATION

No data available.

SECTION XIII – DISPOSAL CONSIDERATIONS

Product: Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging: Dispose of as unused product.

SECTION XIV – TRANSPORT INFORMATION

DOT (US):

UN-Number: 1477 **Class:** 5.1 **Packing group:** II

Proper shipping name: Nitrates, inorganic, n.o.s.

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN-Number: 1477 **Class:** 5.1 **Packing group:** II **EMS-No:** F-A, S-Q

Proper shipping name: NITRATES, INORGANIC, N.O.S.

Marine pollutant: No

IATA

UN-Number: 1477 **Class:** 5.1 **Packing group:** II

SECTION XV – REGULATORY INFORMATION

OSHA Hazards: Oxidizer

DSL Status: This product contains the following components that are not on the Canadian DSL nor NDSL lists. Bismuth nitrate, hydrate (1:5) CAS-No. 10035-06-0

SARA 302 Components: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: Reactivity Hazard

Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components: Bismuth nitrate, hydrate (1:5) CAS-No.10035-06-0

New Jersey Right To Know Components: Bismuth nitrate, hydrate (1:5) CAS-No.10035-06-0

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

SECTION XVI – OTHER INFORMATION

NFPA CODES: HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0

IF YOU REQUIRE ADDITIONAL INFORMATION REGARDING ANY LEGAL OR REGULATORY REQUIREMENTS REFERRED TO IN THIS MSDS, WE SUGGEST YOU CONSULT WITH AN APPROPRIATE REGULATORY AGENCY, OR WITH A PROFESSIONAL WITH EXPERTISE IN THIS AREA.

THIS INFORMATION IS TAKEN FROM SOURCES OR BASED UPON DATA BELIEVED TO BE RELIABLE; HOWEVER, HARRELL INDUSTRIES, INC. MAKES NO WARRANTY AS TO THE ABSOLUTE CORRECTNESS OR SUFFICIENCY OF ANY OF THE FOREGOING OR THAT ADDITIONAL OR OTHER MEASURES MAY NOT BE REQUIRED UNDER PARTICULAR CONDITIONS.

ADDITIONAL INFORMATION IF APPLICABLE

THIS MSDS WAS PREPARED IN ACCORDANCE WITH THE ANSI Z400.1 1993 GUIDELINE FOR THE PREPARATION OF MATERIAL SAFETY DATA SHEETS.