

Material Safety Data Sheet

Detection Solution (Part # HS-3, HS-3-L, HS-3-F-X, HS-2-b)

1. Product Identification

Synonyms: HS-3, HS-3-L, HS-3-F-X, HS-3-b.

Specific Physical Form: Liquid. Low viscosity aqueous solution

Odor, Color, Grade: Odorless, slight amber color.

General Physical Form: liquid

Caustic Solution: pH=13.1

2. Company Identification

Berylliant Inc.

4541 East Fort Lowell Road Tucson, Arizona 85712

For Information, Call: (520) 321-7680

Verisk 3E Response Hotline Telephone Number in the US/North America Call: 855-243-2288

Verisk 3E Response Hotline Telephone Number for assistance outside the US Call: 760-602-8703

Verisk 3E Account # 14712

3. Composition/Information on Ingredients

Ingredient	C.A.S. No.	% by Wt.
Ethylenediaminetetraacetic acid	6381-92-6	< 2
Sulfonate Dye	Trade secret	< 0.1
Sodium Hydroxide	1310-73-2	1 to 2
Water	7732-18-5	95 to 97

4. Hazards Identification (based on sodium hydroxide solution)

EMERGENCY OVERVIEW

Corrosive. Causes burns.

HMIS RATING

HEALTH: 3

FLAMMABILITY: 0

REACTIVITY: 1

NFPA RATING

HEALTH: 3

FLAMMABILITY: 0

REACTIVITY: 1

For additional information on toxicity, please refer to Section 12.

5. First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician. Do not induce vomiting.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

6. Fire Fighting Measures

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Dry chemical powder.

Unsuitable: Do not use water.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective

clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

7. Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal.

Ventilate area and wash spill site after material pickup is complete.

8. Handling and Storage

HANDLING

User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing.

Avoid prolonged or repeated exposure.

STORAGE

Incompatible Materials: Absorbs carbon dioxide from air. Store in a cool, dry, well-ventilated place. Keep container tightly closed, and away from incompatible materials.

SPECIAL REQUIREMENTS

Air sensitive and light sensitive

9. Exposure Controls/Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

Other: Faceshield (8-inch minimum).

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

EXPOSURE LIMITS, RTECS

Country	Source	Type	Value
USA	ACGIH	Ceiling CO ₂	mg/m ³
USA	MSHA	Standard Ceiling CO ₂	mg/m ³
USA	OSHA.	PEL	8H TWA 2 mg/m ³
New Zealand	OEL		

Remarks: check ACGIH TLV
USA NIOSH Ceiling CO₂ mg/m³/15M

10. Physical and Chemical Properties

Appearance: Slight yellow colored liquid

Odor: Odorless

Basic Solution pH = 13.1

11. Stability and Reactivity

STABILITY

Stable: Stable.

Conditions of Instability: Absorbs carbon dioxide from air.

Materials to Avoid: Acids, Organic materials, Chlorinated solvents, Aluminum, Phosphorus, Tin/tin oxides, Zinc.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Sodium/sodium oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

12. Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: Causes burns.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes burns.

Inhalation: Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema.

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

TOXICITY DATA

Intraperitoneal
Mouse
40 MG/KG
LD50
IRRITATION DATA

Eyes
Monkey
1 %
24H
Remarks: Severe irritation effect

Skin
Rabbit
500 mg
24H
Remarks: Severe irritation effect

Eyes
Rabbit
0.4 mg
Remarks: Mild irritation effect
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Eyes
Rabbit
1 %
Remarks: Severe irritation effect

Eyes
Rabbit
0.05 mg
24H
Remarks: Severe irritation effect

Eyes
Rabbit
1 mg
24H
Remarks: Severe irritation effect

Eyes
Rabbit
1 mg
30S
Remarks: Rinsed

CHRONIC EXPOSURE - MUTAGEN

Species: Hamster
Dose: 10 MMOL/L
Cell Type: lung
Mutation test: Cytogenetic analysis

Species: Hamster
Dose: 16 MMOL/L
Cell Type: ovary
Mutation test: Cytogenetic analysis

13. Ecological Information

No Data Available

14. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

15. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: SODIUM HYDROXIDE, SOLUTION
Hazard Class: 8
UN/NA: UN1824
Packing Group: II
PIH: Not PIH

International (Water, I.M.O.)

Proper Shipping Name: SODIUM HYDROXIDE, SOLUTION
Hazard Class: 8
UN/NA: UN1824
Packing Group: II

16. Regulatory Information

EU DIRECTIVES CLASSIFICATION

Symbol of Danger: C
Indication of Danger: Corrosive.
R: 34
Risk Statements: Causes burns.
S: 26 37/39 45
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Corrosive.
Risk Statements: Causes burns.
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take off immediately all contaminated clothing. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

17. Other Information

Product Use:

For laboratory and manufacturing use only not for drug, food or household use.

Disclaimer:

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