SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: (3N) 99.9% Barium Hydroxide Hydrate

Product Code: BA-OH-03-C.XHYD

CAS Number: 40226-30-0

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351
Emergency telephone number:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Appearance: white solid.
Danger! Causes burns by all exposure routes. Harmful if inhaled or swallowed. Air sensitive.
Target Organs: Respiratory system, gastrointestinal system, muscles, eyes, skin.
Potential Health Effects
Eye: Causes eye burns.
Skin: Causes skin burns.
Ingestion: Harmful if swallowed. Causes gastrointestinal tract burns.
Inhalation: Harmful if inhaled. Causes chemical burns to the respiratory tract.
Chronic: Repeated exposure may cause baritosis characterized by deposition of particulate matter in the lung.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS# Chemical Name Percent EINECS/ELINCS
40226-30-0 Barium hydroxide hydrate 99 unlisted

SECTION 4. FIRST AID MEASURES

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid imme
diately.
Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and
shoes.
Ingestion: Do not induce vomiting. Get medical aid immediately.
Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If
breathing is difficult, give oxygen.
Notes to Physician: Treat symptomatically and supportively.

SECTION 5. FIREFIGHTING MEASURES

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent),
and full protective gear.
Extinguishing Media: Use foam, dry chemical, or carbon dioxide.
Flash Point: Not available.
Autoignition Temperature: Not available.
Explosion Limits, Lower:Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 3; Flammability: ; Instability:

SECTION 6. ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container.

SECTION 7. HANDLING AND STORAGE

Handling: Do not breathe dust, mist, or vapor. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.
Storage: Store in a cool, dry place. Store in a tightly closed container. Corrosives area. Store under nitrogen.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate
ventilation to keep airborne concentrations low.
Exposure Limits
Chemical Name ACGIH NIOSH OSHA - Final PELs
Barium hydroxide hydrate
0.5 mg/m3 TWA (as Ba) (listed
under Barium, soluble

compounds).
0.5 mg/m3 TWA (as Ba, except barium sulfate) (listed under Barium, soluble compounds).
0.5 mg/m3 TWA (as Ba) (listed under Barium, soluble compounds).
Barium hydroxide
0.5 mg/m3 TWA (as Ba) (listed under Barium, soluble compounds).
0.5 mg/m3 TWA (as Ba, except barium sulfate) (listed under Barium, soluble compounds).
0.5 mg/m3 TWA (as Ba) (listed under Barium, soluble compounds).
OSHA Vacated PELs: Barium hydroxide hydrate: No OSHA Vacated PELs are listed for this chemical.
Barium hydroxide: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: Wear chemical splash goggles.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid
Appearance: white
Odor: odorless
pH: 12.5 (5% aq. solution)
Vapor Pressure: Not available.
Vapor Density: Not available.
Evaporation Rate:Not available.
Viscosity: Not available.
Boiling Point: Not available.
Freezing/Melting Point:Not available.
Decomposition Temperature:Not available.
Solubility: Soluble.
Specific Gravity/Density:Not available.
Molecular Formula:H2BaO2.xH2O
Molecular Weight:171.35

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures. Absorbs carbon dioxide from the air. Absorbs carbon dioxide from air to

form nonvolatile carbonate. Takes up CO2 from air and becomes incompletely soluble.
Conditions to Avoid: Dust generation, prolonged exposure to air.
Incompatibilities with Other Materials: Acids.
Hazardous Decomposition Products: Barium oxide.
Hazardous Polymerization: Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

RTECS#:
CAS# 40226-30-0 unlisted.
CAS# 17194-00-2: CQ9200000
LD50/LC50:
Not available.
CAS# 17194-00-2:
Oral, rat: LD50 = 308 mg/kg;
Carcinogenicity:
CAS# 40226-30-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 17194-00-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
Epidemiology: No data available.
Teratogenicity: No data available.
Reproductive Effects: No data available.
Mutagenicity: No data available.
Neurotoxicity: No data available.
Other Studies:

SECTION 12. ECOLOGICAL INFORMATION

No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the
classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste
regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

SECTION 14. TRANSPORT INFORMATION

Shipping Name: CORROSIVE SOLID, TOXIC, N.O.S.* Corrosive Solid, Toxic, N.O.S.
Hazard Class: 8 8(6.1)
UN Number: UN2923 UN2923
Packing Group: III III

SECTION 15. REGULATORY INFORMATION

US FEDERAL
TSCA
CAS# 40226-30-0 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form
is on the inventory (40CFR720.3(u)(2)).
CAS# 17194-00-2 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 17194-00-2: immediate, delayed.
Section 313
This material contains Barium hydroxide (listed as Barium compounds, n.o.s.), -%, (CAS# 17194-00-2) which is subject to the reporting
requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 40226-30-0 can be found on the following state right to know lists: California, (listed as Barium, soluble compounds), Minnesota, (listed
as Barium, soluble compounds).
CAS# 17194-00-2 can be found on the following state right to know lists: California, (listed as Barium, soluble compounds), New Jersey,
(listed as Barium compounds, n.o.s.), Pennsylvania, (listed as Barium compounds, n.o.s.), Minnesota, (listed as Barium, soluble compounds).
California No Significant Risk Level: None of the chemicals in this product are listed.
European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
C
Risk Phrases:
R 20/22 Harmful by inhalation and if swallowed.
R 34 Causes burns.
Safety Phrases:
S 26 In case of contact with eyes, rinse immediately with plenty of
water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face pr
otection.
S 45 In case of accident or if you feel unwell, seek medical advice
immediately (show the label where possible).
S 28A After contact with skin, wash immediately with plenty of water
.
WGK (Water Danger/Protection)
CAS# 40226-30-0: No data available.
CAS# 17194-00-2: 1
Canada - DSL/NDSL
CAS# 17194-00-2 is listed on Canada's DSL List.
Canada - WHMIS
This product has a WHMIS classification of E, D1B.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the
information required by those regulations.
Canadian Ingredient Disclosure List
CAS# 40226-30-0 (listed as Barium, soluble compounds) is listed on the Canadian Ingredient Disclosure List.
CAS# 17194-00-2 (listed as Barium, soluble compounds) is listed on the Canadian Ingredient Disclosure List.

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16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.