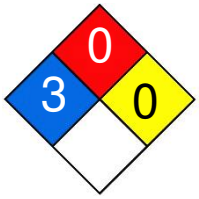
Material Safety Data Sheets



Revision 3

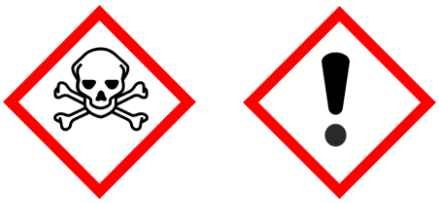
1. IDENTIFICATION

Product Name	**Barium chloride Dihydrate**
Other Names	**BARYTA MURIATICA; BARIUM CHLORIDE HYDRATE**
Uses	**General chemical reagent**
Chemical Family	**No Data Available**
Chemical Formula	**$C_4H_{10}O$**
Chemical Name	
Product Description	**No Data Available**
Company	**Arman sina.co**
Contact Information	**info@armansina.com** **www.armansina.com**

2. HAZARD IDENTIFICATION

Hazard Categories	Acute toxicity, category 3, oral Acute toxicity, category 4, inhalation
Signal Word	Danger
Hazard Statements	Toxic if swallowed. Harmful if inhaled.
Precautionary Statements	Avoid breathing dust/fume/gas/mist/vapours/spray. Wash … thoroughly after handling. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product IF SWALLOWED: Immediately call a POISON CENTER/ doctor/… IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor/…/if you feel unwell. Specific treatment (see … on this label). Store locked up. P501 Dispose of contents/container to …

symbol



3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Barium chloride dihydrate	$BaCl_2.2H_2O$	10326-27-9	≥99.0%

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	**Rinse mouth thoroughly with water. Rinse mouth immediately and drink 1 glass of of water. Do NOT induce vomiting. Put victim at rest, cover with a blanket and keep warm. Immediately call a POISON CENTRE/doctor.**
Eye	**Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist.**
Skin	**Remove contaminated, saturated clothing immediately. Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician**
Inhaled	**In case of symptoms, Remove casualty to fresh air and keep warm and at rest. Immediately call a POISON CENTRE/doctor. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Symptoms of poisoning may appear later.**
Advice to Doctor	**Consult a doctor in case of discomfort showing the SDS for the product.**

5. FIRE FIGHTING MEASURES

General Measures	Do not allow run-off from fire-fighting to enter drains or water courses. Do not inhale explosion and combustion gases. Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen. Use water spray jet to protect personnel and to cool endangered containers. In case of fire: Evacuate area.
Flammability Conditions	No Data Available
Extinguishing Media	Suitable extinguishing media Co-ordinate fire-fighting measures to the fire surroundings. Water spray. ABC-powder Carbon dioxide (CO_2). Nitrogen
Fire and Explosion Hazard	
Hazardous Products of Combustion	Fire may produce irritating, corrosive and/or toxic gases. In case of fire may be liberated: Hydrogen chloride (HCl)
Special Fire Fighting Instructions	Non-combustible toxic substances. In case of fire and/or explosion do not breathe fumes. Special protective equipment for firefighters: Wear a self-contained breathing apparatus and chemical protective clothing. Use water spray jet to protect personnel and to cool endangered containers. DO NOT fight fire when fire reaches explosives.
Personal Protective Equipment	No Data Available
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	For non-emergency personnel: Use personal protective equipment as required. Do not breathe dust. Use a dust mask if there is a lot of dust. Avoid substance contact. Remove victim out of the danger area. Remove victim to fresh air and keep at rest in a position comfortable for breathing
Clean Up Procedures	Take up mechanically, placing in appropriate containers for disposal. Rinse affected areas with water. Avoid dust formation. Dispose according to local legislation.
Containment	No Data Available
Decontamination	No Data Available
Environmental Precautionary Measures	Avoid release to the environment. Clean contaminated articles and floor according to the environmental legislation.
Evacuation Criteria	No Data Available
Personal Precautionary Measures	**Personal protection equipment: see section 8 Disposal information: see section 13**

7. HANDLING AND STORAGE

Handling	Use personal protective equipment as required. Avoid substance contact. Use extractor hood (laboratory). If handled uncovered, arrangements with local exhaust ventilation have to be used. Use of small quantities within laboratory settings, including material transfers and equipment cleaning. Measures to prevent fire, aerosol and dust generation Usual measures for fire prevention. Measures required to protect the environment Do not empty into drains. Collect spillage. Cover drains.
Storage	Store in a well-ventilated place. Keep container tightly closed. Packaging materials: High density polyethylene (HDPE) Glass Unsuitable container/equipment material: Metal container
Container	Keep only in the original container or packaging

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No Data Available
Exposure Limits	None of the components have assigned exposure limits.
Biological Limits	No information available.
Engineering Measures	No special requirements under ordinary conditions of use and with adequate ventilation.

Personal Protection Equipment	**No Data Available**
Special Hazards Precaustions	**No Data Available**
Work Hygienic Practices	**No Data Available**

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystals or powder
Odour	Odorless
Colour	white
pH	5-8 (50 g/l; H2O; 20 °C)
Vapour Pressure	0.01 kPa (192.15 °C)
Relative Vapour Density	No Data Available
Boiling Point	**1560 °C (1013** hPa**)**
Melting Point	960 °C
Freezing Point	No Data Available
Solubility	Solubility in water: 357 g/l (20 °C)
Specific Gravity	No Data Available
Flash Point	No information available.
Auto Ignition Temp	No information available.
Evaporation Rate	No information available.
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	3.86 g/cm³ (25 °C)
Specific Heat	No Data Available
Molecular Weight	244.26 g/mol
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Not applicable.

Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	No information available.
Reactions That Release Gases or Vapours	No information available.
Release of Invisible Flammable Vapours and Gases	No information available. No information available.

10. STABILITY AND REACTIVITY

General Information	This material is non-reactive under normal conditions
Chemical Stability	The product is chemically stable under standard ambient conditions (room temperature).
Conditions to Avoid	No further relevant information available.
Materials to Avoid	Reaction with: Oxidising agent, strong. Acids. Reducing agent.
Hazardous Decomposition Products	Not determined
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information

Irritant and corrosive effects: Primary irritation to the skin: not applicable Irritation to eyes: not applicable Irritation to respiratory tract: not applicable .
Respiratory or skin sensitisation In case of skin contact: not sensitising After inhalation: not sensitising

Acute

Acute oral toxicity: LD50: > 118 mg/kg - Rat - (IUCLID)
Acute dermal toxicity: no data available
Acute inhalation toxicity: no data available

12. ECOLOGICAL INFORMATION

Ecotoxicity	No Data Available
Persistence/Degradability	Readily biodegradable; Low persistence in water/soil; Low persistence in air.
Mobility	The product is water soluble and may spread in water systems.
Environmental Fate	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Bioaccumulation Potential	No Data Available
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose according to local legislation. Handle contaminated packages in the same way as the substance itself.
Special Precautions for Land Fill	No Data Available

14. TRANSPORT INFORMATION

Land Transport

Proper Shipping Name	Barium chloride dihydrate
Class	6.1
Subsidiary Risk(s)	No Data Available
EPG	No Data Available
UN Number	1564
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Sea Transport

Proper Shipping Name	Barium chloride dihydrate
Class	6.1
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	1564
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available

Marine Pollutant	No

Air Transport

Proper Shipping Name	Barium chloride dihydrate
Class	6.1
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	1564
Pack Group	No Data Available
Special Provision	No Data Available
	No Data Available

15. OTHER INFORMATION

Revision	3

Key/Legend

< Less Than
> Greater Than

atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm² Square Centimetres
CO2 Carbon Dioxide
COD Chemical Oxygen Demand
deg C (° C) Degrees Celcius

deg F (° F) Degrees Farenheit
g Grams
g/cm³ Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluable in each other.
inHg Inch of Mercury
inH2O Inch of Water
K Kelvin
kg Kilogram
kg/m³ Kilograms per Cubic Metre
lb Pound
LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or L Litre
m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre

Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH2O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight