Printing date 05/24/2024

Reviewed on 05/24/2024

1 Identification

- · Product identifier
- Trade name: Barium Chloride 10% w/v Aqueous Solution
- Article number: ODP007
- · Application of the substance / the mixture Laboratory chemicals
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier: Aqua Solutions, Inc. 6913 Highway 225 DEER PARK, TX 77536 USA 800-256-2586
- Information department: techservices@ofite.com Technical Coordinator Sherman Nelson shermann@aquasolutions.org
- Emergency telephone number: Chemtrec: 800-424-9300 Canutec: 613-996-6666

2 Hazard(s) identification

· Classification of the substance or mixture

GHS07

Acute Toxicity - Oral 4 H302 Harmful if swallowed.

- · Label elements
- *GHS label elements* The product is classified and labeled according to the Globally Harmonized System (GHS). *Hazard pictograms*



- · Signal word Warning
- *Hazard-determining components of labeling: Barium Chloride Dihydrate*
- · Hazard statements
- Harmful if swallowed.
- · Precautionary statements
- Wash thoroughly after handling.
- Wear protective gloves/protective clothing/eye protection/face protection.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Dispose of contents/container in accordance with local/regional/national/international regulations.

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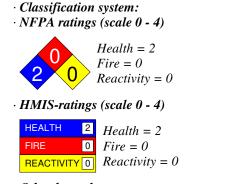
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9.363%

90.637%



· Other hazards

· Results of PBT and vPvB assessment

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 10326-27-9 Barium Chloride Dihydrate

· Table of Nonhazardous Ingredients

CAS: 7732-18-5 Water

4 First-aid measures

· Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Immediately call a doctor.

• Information for doctor:

- Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.

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· Advice for firefighters

· Protective equipment: No special measures required.

6 Accidental release measures

 Personal precautions, protective equipment and emergency procedures Not required. Environmental precautions: Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water. Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to section 13. Reference to other sections See Section 7 for information on safe handling. See Section 13 for disposal information. Protective Action Criteria for Chemicals
• PAC-1:
CAS: 10326-27-9 Barium Chloride Dihydrate 2.7 mg/m ³
· PAC-2:
CAS: 10326-27-9 Barium Chloride Dihydrate 330 mg/m ³
· PAC-3:
CAS: 10326-27-9 Barium Chloride Dihydrate 2,000 mg/m ³

7 Handling and storage

· Handling:

- Precautions for safe handling No special precautions are necessary if used correctly.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities

· Storage:

- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: None.

• Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

· Control parameters

· Components with limit values that require monitoring at the workplace:

CAS: 10326-27-9 Barium Chloride Dihydrate

PEL Long-term value: 0.5 mg/m³

as Ba

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REL Long-term value: 0.5 mg/m³ as Ba TLV Long-term value: 0.5 mg/m³ as Ba, A4

• Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures: Wash hands before breaks and at the end of work.
- · Breathing equipment: Not required.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation \cdot *Material of gloves*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection: Goggles recommended during refilling.
- · Body protection: Protective work clothing

9 Physical and chemical properties

Appearance:			
Form:	Liquid		
Color:	Clear to slightly turbid Odorless		
Odor:			
Odor threshold:	Not determined.		
pH-value:	Not determined.		
Change in condition			
Melting point/Melting range:	Undetermined.		
Boiling point/Boiling range:	100 °C (212 °F)		
Flash point:	Not applicable.		
Flammability (solid, gaseous):	Not applicable.		
Decomposition temperature:	Not determined.		
Ignition temperature:	Product is not selfigniting.		
Danger of explosion:	Product does not present an explosion hazard.		

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· Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
· Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)	
· Density at 20 °C (68 °F):	1.07305 g/cm³ (8.9546 lbs/gal)	
· Relative density	Not determined.	
· Vapor density	Not determined.	
· Evaporation rate	Not determined.	
· Solubility in / Miscibility with		
Water:	Fully miscible.	
· Partition coefficient (n-octanol/wate	e r): Not determined.	
· Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
· Solvent content:		
Water:	90.6 %	
VOC content:	0.00~%	
	0.0 g/l / 0.00 lb/gal	
Solids content:	9.4 %	
• Other information	No further relevant information available.	

10 Stability and reactivity

· Reactivity No further relevant information available.

· Chemical stability

• Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· Possibility of hazardous reactions No dangerous reactions known.

 \cdot Conditions to avoid No further relevant information available.

· Incompatible materials: No further relevant information available.

· Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

• Acute toxicity:

· LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

 Oral
 LD50
 1,068 mg/kg

 Inhalative
 LC50/4h
 16 mg/l

· Primary irritant effect:

• on the skin: No irritant effect.

• on the eye: No irritating effect.

• Sensitization: No sensitizing effects known.

· Additional toxicological information: Harmful

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· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:

· General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information · UN-Number

- · DOT, ADN, IMDG, IATA Not regulated · UN proper shipping name · DOT, ADN, IMDG, IATA Not regulated · Transport hazard class(es) · DOT, ADN, IMDG, IATA · Class Not regulated (Contd. on page 7)
 - US

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Trade name: Barium Chloride 10% w/v Aqueous Solution

		(Contd. of page
· Packing group · DOT, IMDG, IATA	Not regulated	
· Environmental hazards: · Marine pollutant:	No	
· Special precautions for user	Not applicable.	
• Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.	
· UN "Model Regulation":	Not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

CAS: 10326-27-9 Barium Chloride Dihydrate

· TSCA (Toxic Substances Control Act):

Water

· Hazardous Air Pollutants

None of the ingredients is listed.

· Proposition 65

 \cdot Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

CAS: 10326-27-9 Barium Chloride Dihydrate

· TLV (Threshold Limit Value)

CAS: 10326-27-9 Barium Chloride Dihydrate

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

• GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS). (Contd. on page 8)

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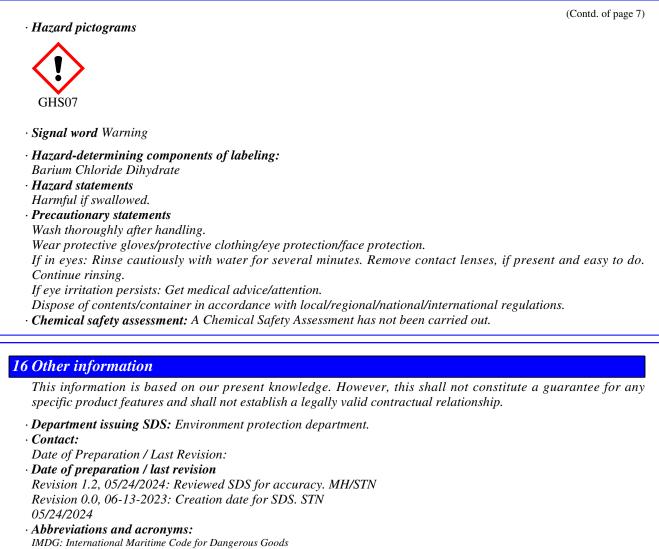
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ACTIVE

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DOT: US Department of Transportation IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit **REL:** Recommended Exposure Limit Acute Toxicity - Oral 4: Acute toxicity - Category 4 \cdot * Data compared to the previous version altered.