Printing date 07/21/2021

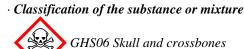
CHEMICALS.

Reviewed on 07/21/2021

## **1** Identification

- · Product name
- · Trade name: Barium bromide, anhydrous, min. 95%
- Item number: 93-5606
- · CAS Number:
- 10553-31-8 • **EC number:**
- 234-140-0
- Details of the supplier of the safety data sheet • Manufacturer/Supplier: Strem Chemicals, Inc.
- 7 Mulliken Way NEWBURYPORT, MA 01950 USA info@strem.com
- · Information department: Technical Department
- Emergency telephone number: EMERGENCY: CHEMTREC: + 1 (800) 424-9300 During normal opening times: +1 (978) 499-1600

## 2 Hazard(s) identification



Acute Tox. 3 H331 Toxic if inhaled.



Acute Tox. 4 H302 Harmful if swallowed.

## · Label elements

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



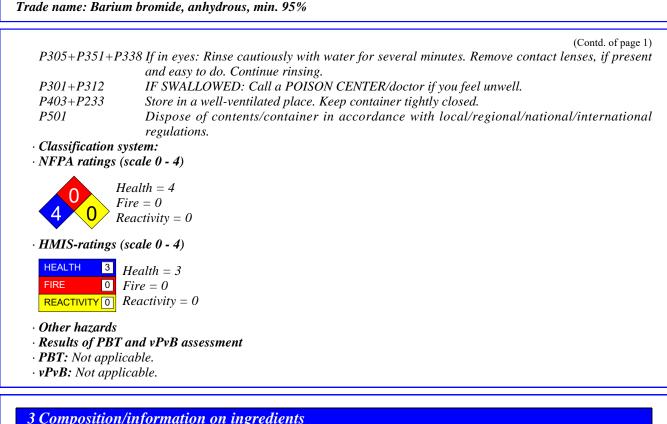
· Signal word Danger

• Hazard-dete	rmining components of labeling:	
Barium bror	nide, anhydrous, min. 95%	
• Hazard state	ements	
H302 Harm	ful if swallowed.	
H331 Toxic	if inhaled.	
· Precautiona	ry statements	
P280	Wear protective gloves/protective clothing/eye protection/face protection.	
P261	Avoid breathing dust/fume/gas/mist/vapors/spray	
		(Co

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- · Chemical characterization: Substances
- · CAS No. Description 10553-31-8 Barium bromide, anhydrous, min. 95%
- Identification number(s)
- · EC number: 234-140-0

## **4** First-aid measures

#### · Description of first aid measures

- · General information:
- Immediately remove any clothing soiled by the product.

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

Remove breathing apparatus only after contaminated clothing have been completely removed.

- In case of irregular breathing or respiratory arrest provide artificial respiration.
- After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- 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.

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## **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.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

## 6 Accidental release measures

• *Personal precautions, protective equipment and emergency procedures Not required.* • *Environmental precautions:* 

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

• Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

- Ensure adequate ventilation.
- Reference to other sections
- See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

- See Section 13 for disposal information.
- · Protective Action Criteria for Chemicals

#### • PAC-1:

Substance is not listed.

· PAC-2:

Substance is not listed.

· PAC-3:

Substance is not listed.

## 7 Handling and storage

- · Handling:
- · Precautions for safe handling

Thorough dedusting.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

· Information about protection against explosions and fires: Keep respiratory protective device available.

· 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: Keep receptacle tightly sealed.
- 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 item 7.

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US

## HEMICALS, INC.

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Trade name: Barium bromide, anhydrous, min. 95%

	(Contd. of page 3)
· Control parameters	
• Components with limit values that require monitoring at the workplace: Not required.	
• Additional information: The lists that were valid during the creation were used as basis.	
· Exposure controls	
· Personal protective equipment:	
· General protective and hygienic measures:	
Keep away from foodstuffs, beverages and feed.	
Immediately remove all soiled and contaminated clothing.	
Wash hands before breaks and at the end of work.	
Store protective clothing separately.	
• Breathing equipment: A NIOSH approved respirator in accordance with 29 CFR 1910.134	l.
· Protection of hands:	
Protective gloves	
	<i>,</i> •
The glove material has to be impermeable and resistant to the product/ the substance/ the pr	
Due to missing tests no recommendation to the glove material can be given for the product chemical mixture.	i/ the preparation/ the
Selection of the glove material on consideration of the penetration times, rates of diffusion a	nd the degradation
• Material of gloves	nu me degradation
The selection of the suitable gloves does not only depend on the material, but also on furthe	r marks of avality and
varies from manufacturer to manufacturer.	r marks of quality and
· 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: Safety glasses

## 9 Physical and chemical properties

Appearance:		
Form:	Powder	
Color:	White	
Odor:	Odorless	
Odor threshold:	Not determined.	
pH-value:	Not applicable.	
Change in condition		
Melting point/Melting range:	850 °C (1562 °F)	
Boiling point/Boiling range:	Undetermined.	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not determined.	
Ignition temperature:		
Decomposition temperature:	Not determined.	
Auto igniting:	Not determined.	



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Trade name: Barium bromide, anhydrous, min. 95%

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Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
Vapor pressure:	Not applicable.	
<i>Density at 20 •C (68 •F):</i>	4.781 g/cm <sup>3</sup> (39.89745 lbs/gal)	
Relative density	Not determined.	
Vapor density	Not applicable.	
Evaporation rate	Not applicable.	
Solubility in / Miscibility with		
Water:	Insoluble.	
Partition coefficient (n-octanol/we	ater): Not determined.	
Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
Solvent content:		
Organic solvents:	0.0 %	
VOC content:	0.0 g/l / 0.00 lb/gl	
Solids content:	100.0 %	
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.
- · 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:
- Primary irritant effect:
- on the skin: No irritant effect.
- $\cdot$  on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- · Additional toxicological information:

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

Substance is not listed.

#### · NTP (National Toxicology Program)

Substance is not listed.

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· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not 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: Not known to be hazardous to water.
- · 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.

· UN-Number		
· DOT, IMDG, IATA	UN1564	
· UN proper shipping name		
· DOT	Barium compounds, n.o.s.	
· IMDG, IATA	BARIUM COMPOUND, N.O.S.	
· Transport hazard class(es)		
·DOT		
Toxic		
· Class	6.1 Toxic substances	
· Label	6.1	



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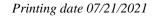
nde name: Barium bromide, anhydrous,	min. 95%
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·IMDG	
6	
· Class	6
· Label	6.1
·IATA	
6	
· Class	6.1 Toxic substances
·Label	6.1
· Packing group · DOT, IMDG, IATA	III
• Environmental hazards:	111
• <i>Environmental hazaras:</i> • <i>Marine pollutant:</i>	No
· Special precautions for user	Not applicable.
· ÊMS Number:	F-A,S-A
· Stowage Category	Α
• Transport in bulk according to Annex	
MARPOL73/78 and the IBC Code	Not applicable.
• Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 100 kg On cargo aircraft only: 200 kg
· IMDG	0 · · · · · · · · · · · · · · · · · · ·
· Limited quantities (LQ)	5kg
$\cdot Excepted$ quantities $(\widetilde{EQ})$	Code: E1
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
· UN "Model Regulation":	UN 1564 BARIUM COMPOUNDS, N.O.S., 6.1, III

## **15 Regulatory information**

 $\cdot$  Safety, health and environmental regulations/legislation specific for the substance or mixture  $\cdot$  Sara

· Section 355 (extremely hazardous substances):	
Substance is not listed.	
· Section 313 (Specific toxic chemical listings):	
Substance is not listed.	
· TSCA (Toxic Substances Control Act):	
Substance is listed.	
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· Proposition 65

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· Chemicals known to cause cancer:

Substance is not listed.

 $\cdot$  Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is not listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

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

Substance is not listed.

· GHS label elements

*The substance is classified and labeled according to the Globally Harmonized System (GHS).* • *Hazard pictograms* 



· Signal word Danger

	<b>ining components of labeling:</b> e, anhydrous, min. 95%
Hazard stateme	
H302 Harmful	
H331 Toxic if it	nhaled.
<b>Precautionary</b>	statements
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P305+P351+P	338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## **16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Technical Department.

· Contact: Technical Director

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## Trade name: Barium bromide, anhydrous, min. 95%

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Date of preparation / last revision 07/21/2021 / -	
Abbreviations and acronyms:	
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning	the International
Carriage of Dangerous Goods by Road)	
IMDG: International Maritime Code for Dangerous Goods	
DOT: US Department of Transportation	
IATA: International Air Transport Association	
ACGIH: American Conference of Governmental Industrial Hygienists	
EINECS: European Inventory of Existing Commercial 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)	
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 Tox. 4: Acute toxicity – Category 4	
Acute Tox. 3: Acute toxicity – Category 3	
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