acc. to OSHA and ANSI

Printing date 12/19/2007

Reviewed on 06/22/2004

1 Identification of substance:

Product details:

Product name: Silver bromide

Stock number: 11425

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company Johnson Matthey Catalog Company, Inc. 30 Bond Street Ward Hill, MA 01835-8099 Emergency Phone: (978) 521-6300 CHEMTREC: (800) 424-9300 Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department Emergency information:

During normal hours the Health, Safety and Environmental Department. After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization: Description: (CAS#) Silver bromide (CAS# 7785-23-1), 100% Identification number(s): EINECS Number: 232-076-8

3 Hazards identification

Hazard description: Not applicable Information pertaining to particular dangers for man and environment Not applicable Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System)

HEALTH 1 FIRE 0 REACTIVITY 0

Health (acute effects) = 1 Flammability = 0 Reactivity = 0

4 First aid measures

After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After swallowing Seek medical treatment.

(Contd. on page 2)

acc. to OSHA and ANSI

Printing date 12/19/2007

Reviewed on 06/22/2004

Product name: Silver bromide

(Contd. of page 1)

5 Fire fighting measures

Suitable extinguishing agents
Product is not flammable. Use fire fighting measures that suit the
surrounding fire.
Special hazards caused by the material, its products of combustion or
resulting gases:
In case of fire, the following can be released:
Hydrogen bromide (HBr)
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

6 Accidental release measures

Person-related safety precautions: Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Measures for environmental protection: Do not allow material to be released to the environment without proper governmental permits. Measures for cleaning/collecting: Pick up mechanically. Additional information: See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

7 Handling and storage

Handling

Information for safe handling: Keep container tightly sealed. Store in cool, dry place in tightly closed containers. No special precautions are necessary if used correctly. Information about protection against explosions and fires: The product is not flammable

Storage

Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Store away from oxidizing agents. Further information about storage conditions: Protect from exposure to light. Keep container tightly sealed. Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection

Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with limit values that require monitoring at the workplace: None

Additional Occupational Exposure Limit Values for possible hazards during processing:

None

USA

acc. to OSHA and ANSI

Printing date 12/19/2007

No data

Reviewed on 06/22/2004

Product name: Silver bromide

Additional information:

(Contd. of page 2)

None Personal protective equipment General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Breathing equipment: Use suitable respirator when high concentrations are present. Protection of hands: Impervious gloves Eye protection: Safety glasses Body protection: Protective work clothing.

9 Physical and chemical properties:

Form:	Powder
Color: Odor:	Light yellow Odorless
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start:	423°C (793°F) >1300°C (>2372°F) ((dec))
Flash point:	Not applicable
Flammability (solid, gaseous)	Product is not flammable.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not determined
Density at 20°C (68°F):	6.473 g/cm³
Solubility in / Miscibility with Water at 100°C (212°F):	0.037 g/l

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications. Materials to be avoided: Light Ammonia Oxidizing agents

(Contd. on page 4)

USA

acc. to OSHA and ANSI

Printing date 12/19/2007

Reviewed on 06/22/2004

(Contd. of page 3)

Product name: Silver bromide

Dangerous reactions Silver may react with acetylene or ammonia to form shock sensitive compounds. Dangerous products of decomposition: Hydrogen bromide Metal oxide fume

11 Toxicological information

Acute toxicity: Primary irritant effect: on the skin: Powder: irritant effect on the eye: Powder: irritant effect Sensitization: No sensitizing effects known. Subacute to chronic toxicity: Absorption of silver compounds by ingestion, inhalation or through broken skin can cause argyria, a permanent bluish-grey discoloration of the skin, conjuctiva and mucous membranes. Inorganic bromides may produce depression, emaciation and in severe cases, psychosis and mental deterioration. Bromoderma, a bromide rash, often occurs when bromide inhalation or administration is prolonged. This rash is usually found on the face and resembles acne and furunculosis. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is

12 Ecological information:

General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

Product:

Recommendation

Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14 Transport information

Not a hazardous material for transportation.

available from the EPA, IARC, NTP, OSHA or ACGIH.

DOT regulations:

Hazard class: None

Land transport ADR/RID (cross-border)

ADR/RID class: None

(Contd. on page 5)

USA

USA

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 12/19/2007

Reviewed on 06/22/2004

Product name: Silver bromide

(Contd. of page 4)

Maritime transport IMDG: IMDG Class: None

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: None

Transport/Additional information:

Not dangerous according to the above specifications.

15 Regulations

Product related hazard informations:

Observe the general safety regulations when handling chemicals

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

Information about limitation of use:

For use only by technically qualified individuals.

This product contains silver and is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department. **Contact:** Paul V. Connolly