

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 06/11/2009

Reviewed on 06/11/2009

1 Identification of substance:**Product details:****Product name:** Atropine sulfate monohydrate**Stock number:**

A10236

L05185

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#)**

Atropine sulfate monohydrate (CAS# 73791-47-6): 100%

Identification number(s):**EINECS Number:** 200-235-0**Index number:** 614-011-00-9**3 Hazards identification****Hazard description:**

T+ Very toxic

Information pertaining to particular dangers for man and environment

R 26/28 Very toxic by inhalation and if swallowed.

Classification system**HMIS ratings (scale 0-4)****(Hazardous Materials Identification System)**

HEALTH	3
FIRE	1
REACTIVITY	1

Health (acute effects) = 3

Flammability = 1

Reactivity = 1

GHS label elements**Danger**

3.1/2 - Fatal if swallowed.

3.1/2 - Fatal if inhaled.

Prevention:

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear respiratory protection.

Response:

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

Immediately call a POISON CENTER or doctor/physician.

Specific treatment is urgent (see label).

Specific treatment (see label).

Rinse mouth.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

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Disposal:

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

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 immediate medical advice.

5 Fire fighting measures**Suitable extinguishing agents**

Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards caused by the material, its products of combustion or resulting gases:

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

Sulfur oxides (SOx)

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:

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

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.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires: Keep ignition sources away.

Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility:

Store in the dark.

Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

Protect from exposure to light.

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: Not required.

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Additional information: No data**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.

Avoid contact with the eyes and skin.

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:****General Information**

Form:	Powder
Color:	White
Odor:	Not determined

Change in condition**Melting point/Melting range:** 189-192°C (372-378°F)**Boiling point/Boiling range:** Not determined**Sublimation temperature / start:** Not determined**Flash point:** Not applicable**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:** Not determined**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

Oxidizing agents

Dangerous reactions No dangerous reactions known**Dangerous products of decomposition:**

Carbon monoxide and carbon dioxide

Nitrogen oxides

Sulfur oxides (SOx)

11 Toxicological information**Acute toxicity:****Primary irritant effect:****on the skin:** Irritant to skin and mucous membranes.**on the eye:** Irritating effect.**Sensitization:** No sensitizing effects known.**Subacute to chronic toxicity:****Subacute to chronic toxicity:**

The Registry of Toxic Effects of Chemical Substances (RTECS) reports the following effects in laboratory animals:

Behavioral - excitement.

Lungs, Thorax, or Respiration - respiratory stimulation.

Skin and Appendages - hair.

Following test data is for anhydrous form.

Behavioral - ataxia.

Behavioral - hallucinations, distorted perceptions.

Behavioral - headache.

Behavioral - convulsions or effect on seizure threshold.

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Behavioral - muscle weakness.
 Behavioral - tremor.
 Related to Chronic Data - death.
 Endocrine - changes in adrenal weight.
 Lungs, Thorax, or Respiration - other changes.
 Lungs, Thorax, or Respiration - cyanosis.
 Autonomic Nervous System - parasympatholytic.
 Cardiac - change in rate.
 Cardiac - pulse rate increase, without fall in BP.
 Cardiac - arrhythmias (including changes in conduction).
 Kidney, Ureter, Bladder - urine volume decreased.
 Kidney, Ureter, Bladder - other changes.
 Sense Organs and Special Senses (Eye) - effect, not otherwise specified.
 Sense Organs and Special Senses (Eye) - mydriasis (pupillary dilation).
 Sense Organs and Special Senses (Eye) - visual field changes.
 Lungs, Thorax, or Respiration - acute pulmonary edema.
 Gastrointestinal - other changes.
 Gastrointestinal - nausea or vomiting.
 Nutritional and Gross Metabolic - body temperature decrease.
 Nutritional and Gross Metabolic - weight loss or decreased weight gain.
 Vascular - regional or general arteriolar or venous dilation.
 Reproductive - Fertility - mating performance (e.g. # sperm positive females per # females mated; # copulations per # estrus cycles)
 Reproductive - Fertility - pre-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea)
 Reproductive - Fertility - other measures of fertility.
 Reproductive - Specific Developmental Abnormalities - musculoskeletal system.
 Reproductive - Paternal Effects - spermatogenesis.

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

12 Ecological information:**General notes:**

Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 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**DOT regulations:****Hazard class:**

6.1

Identification number:

UN1544

Packing group:

II

Proper shipping name (technical name): ALKALOIDS, SOLID, N.O.S. (Atropine sulfate monohydrate)

Label

6.1

Land transport ADR/RID (cross-border)**ADR/RID class:**

6.1 (T2) Toxic substances

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Danger code (Kemler):	60
UN-Number:	1544
Packaging group:	II
Description of goods:	1544 ALKALOIDS, SOLID, N.O.S. (Atropine sulfate monohydrate)

Maritime transport IMDG:

IMDG Class:	6.1
UN Number:	1544
Label	6.1
Packaging group:	II
Proper shipping name:	ALKALOIDS, SOLID, N.O.S. (Atropine sulfate monohydrate)

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class:	6.1
UN/ID Number:	1544
Label	6.1
Packaging group:	II
Proper shipping name:	ALKALOIDS, SOLID, N.O.S. (Atropine sulfate monohydrate)

UN "Model Regulation": UN1544, ALKALOIDS, SOLID, N.O.S., 6.1, II**15 Regulations****Product related hazard informations:****Hazard symbols:**

T+ Very toxic

Risk phrases:

26/28 Very toxic by inhalation and if swallowed.

Safety phrases:

25 Avoid contact with eyes.

45 In case of accident or if you feel unwell, seek medical advice immediately.

National regulations

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

All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL).

Information about limitation of use: For use only by technically qualified individuals.**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:** Zachariah Holt**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)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

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GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
HMIS: Hazardous Materials Identification System (USA)

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