

**1 Identification of substance:****Product details:**Product name: Potassium bromate

Stock number: 40013

**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](http://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#)

Potassium bromate (CAS# 7758-01-2); 100%

**Identification number(s):**

EINECS Number: 231-829-8

Index number: 035-003-00-6

**3 Hazards identification****Hazard description:**

T Toxic

O Oxidizing

**Information pertaining to particular dangers for man and environment**

R 45 May cause cancer.

R 9 Explosive when mixed with combustible material.

R 25 Also toxic if swallowed.

**Classification system**

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	1
FIRE	0
REACTIVITY	2

Health (acute effects) = 1

Flammability = 0

Reactivity = 2

**GHS label elements**

Danger

2.14/1 - May cause fire or explosion; strong oxidizer.



Danger

3.1/2 - Fatal if swallowed.

**Prevention:**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep/Store away from clothing/combustible materials.

Take any precaution to avoid mixing with combustibles.

Wash thoroughly after handling.

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

Wear protective gloves/protective clothing/eye protection/face protection.

Wear fire/flame resistant/retardant clothing.

**Response:**

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

IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

Specific treatment (see label).

Rinse mouth.

**Material Safety Data Sheet**  
acc. to OSHA and ANSI

Printing date 05/21/2009

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Product name: Potassium bromate

Store in cool, dry conditions in well sealed containers.

(Contd. of page 2)

### 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.

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.

Store protective clothing separately.

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:	Crystalline
Color:	White
Odor:	Odorless
Change in condition	
Melting point/Melting range:	434°C (813°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:	Explosive when mixed with combustible material.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not determined
Density at 20°C (68°F):	3.27 g/cm <sup>3</sup>
Solubility in / Miscibility with	
Water:	Soluble

### 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:**

Reducing agents, easily oxidized materials

Organic materials

Sulfides

Aluminum/aluminum alloys.

**Dangerous reactions**

Reacts with reducing agents

Reacts with flammable substances

**Dangerous products of decomposition:**

Hydrogen bromide

Oxygen

USA

(Contd. on page 4)

Product name: Potassium bromate

(Contd. of page 3)

## 11 Toxicological information

### Acute toxicity:

#### LD/LC50 values that are relevant for classification:

Oral	LD50	289 mg/kg (mouse)
		321 mg/kg (rat)

### 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:

The toxicity of potassium compounds is generally due to the anion.

### Subacute to chronic toxicity:

Exposure to bromates has been reported to cause central nervous system effects, blood effects with the formation of methemoglobin, kidney, ureter and bladder injury, diarrhea and respiratory depression.

### Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

IARC-2B: Possibly carcinogenic to humans: limited evidence in humans in the absence of sufficient evidence in experimental animals.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for components in this product.

## 12 Ecological information:

### General notes:

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely 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.

Recommended cleansing agent: Water, if necessary with cleansing agents.

## 14 Transport information

### DOT regulations:



Hazard class: 5.1  
Identification number: UN1484  
Packing group: II  
Proper shipping name (technical name): POTASSIUM BROMATE  
Label: 5.1

### Land transport ADR/RID (cross-border)



ADR/RID class: 5.1 (O2) Oxidizing substances  
Danger code (Kemler): 50  
UN-Number: 1484  
Packaging group: II

(Contd. on page 5)

USA

Product name: Potassium bromate

(Contd. of page 4)

Description of goods: 1484 POTASSIUM BROMATE

Maritime transport IMDG:



IMDG Class: 5.1  
UN Number: 1484  
Label 5.1  
Packaging group: II  
EMS Number: F-H,S-Q  
Proper shipping name: POTASSIUM BROMATE

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 5.1  
UN/ID Number: 1484  
Label 5.1  
Packaging group: II  
Proper shipping name: POTASSIUM BROMATE

UN "Model Regulation": UN1484, POTASSIUM BROMATE, 5.1, II

## 15 Regulations

Product related hazard informations:

Hazard symbols:

T Toxic  
O Oxidizing

Risk phrases:

45 May cause cancer.  
9 Explosive when mixed with combustible material.  
25 Also toxic if swallowed.

Safety phrases:

53 Avoid exposure - obtain special instructions before use.  
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.  
This product contains a chemical known to the state of California to cause cancer or reproductive toxicity.

Information about limitation of use:

For use only by technically qualified individuals.  
This product 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: 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

(Contd. on page 6)  
USA

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ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
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)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent

(Contd. of page 5)

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