

Safety Data Sheet

According to OSHA and ANSI

Printing date 01/31/2013

Reviewed on 11/13/2012

1 Identification of the substance/mixture and of the company/undertaking

Product identifier**Product name:** Iron powder, spherical**Stock number:** 10214**CAS Number:**

7439-89-6

EC number:

231-096-4

Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

Alfa Aesar, A Johnson Matthey Company

Johnson Matthey Catalog Company, Inc.

30 Bond Street

Ward Hill, MA 01835-8099

Tel: 800-343-0660

Fax: 800-322-4757

Email: tech@alfa.com

www.alfa.com

Information Department: Health, Safety and Environmental Department**Emergency telephone number:**

During normal hours the Health, Safety and Environmental Department at (800) 343-0660. After normal hours call Carechem 24 at (866) 928-0789.

2 Hazards identification

Classification of the substance or mixture**Classification according to Regulation (EC) No 1272/2008**

GHS02 Flame

Flam. Sol. 1 H228 Flammable solid.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xi; Irritant

R36/37: Irritating to eyes and respiratory system.



F; Highly flammable

R11: Highly flammable.

Information concerning particular hazards for human and environment: Not applicable**Label elements****Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS02



GHS07

Signal word Danger**Hazard statements**

H228 Flammable solid.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

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P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard description:**WHMIS classification**

B4 - Flammable solid

D2B - Toxic material causing other toxic effects

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

HEALTH	1
FIRE	3
REACTIVITY	1

Health (acute effects) = 1

Flammability = 3

Reactivity = 1

Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances**CAS# Description:**

7439-89-6 Iron

Identification number(s):**EC number:** 231-096-4

4 First aid measures

Description of 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.**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 Firefighting measures

Extinguishing media**Suitable extinguishing agents** Special powder for metal fires. Do not use water.**For safety reasons unsuitable extinguishing agents** Water**Special hazards arising from the substance or mixture**

If this product is involved in a fire, the following can be released:

Metal oxide fume

Advice for firefighters**Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

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Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Methods and material for containment and cleaning up:

Ensure adequate ventilation.

Keep away from ignition sources.

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.

7 Handling and storage

Handling**Precautions 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:

Protect against electrostatic charges.

Conditions for safe storage, including any incompatibilities**Storage****Requirements to be met by storerooms and receptacles:** Store in a cool location.**Information about storage in one common storage facility:** Store away from oxidizing agents.**Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

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

8 Exposure controls/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.

Control parameters**Components with limit values that require monitoring at the workplace:****7439-89-6 Iron (100.0%)**

EV (Canada)	1* 5** mg/m ³ as iron;*salts, water-soluble;**welding fume
TLV (Canada)	5 mg/m ³

Additional information: No data**Exposure controls****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.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use suitable respirator when high concentrations are present.**Protection of hands:**

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality.

Quality will vary from manufacturer to manufacturer.

Eye protection: Safety glasses**Body protection:** Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties**General Information****Appearance:**

Form:	Powder
Color:	Grey
Odor:	Not determined

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Odor threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/Melting range:	1538°C (2800 °F)
Boiling point/Boiling range:	2740°C (4964 °F)
Sublimation temperature / start:	Not determined
Flammability (solid, gaseous)	Highly flammable.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Auto igniting:	Not determined.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not applicable.
Density at 20°C (68 °F):	7.87 g/cm ³ (65.675 lbs/gal)
Bulk density at 20°C (68 °F):	2900 kg/m ³
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity

Chemical stability

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions No dangerous reactions known

Incompatible materials: Oxidizing agents

Hazardous decomposition products: Metal oxide fume

11 Toxicological information

Information on toxicological effects

Acute toxicity:

Primary irritant effect:

on the skin: May cause irritation

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Other information (about experimental toxicology): Irritating to respiratory system

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.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute and/or other multiple dose toxicity data for components in this product.

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:

Do not allow material to be released to the environment without proper governmental permits.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

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Other adverse effects No further relevant information available.




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13 Disposal considerations

Waste treatment methods
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

UN-Number	
DOT, ADR, IMDG, IATA	UN3089
UN proper shipping name	
DOT, IMDG, IATA	METAL POWDER, FLAMMABLE, N.O.S. (Iron)
ADR	3089 METAL POWDER, FLAMMABLE, N.O.S. (Iron)
Transport hazard class(es)	
DOT	
	
Class	4.1 Flammable solids, self-reactive substances and solid desensitised explosives.
Label	4.1
ADR	
	
Class	4.1 (F3) Flammable solids, self-reactive substances and solid desensitised explosives
Label	4.1
IMDG, IATA	
	
Class	4.1 Flammable solids, self-reactive substances and solid desensitised explosives.
Label	4.1
Packing group	
DOT, ADR, IMDG, IATA	II
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Warning: Flammable solids, self-reactive substances and solid desensitised explosives
Danger code (Kemler):	40
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	UN3089, METAL POWDER, FLAMMABLE, N.O.S. (Iron), 4.1, II

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
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 Domestic Substances List (DSL).

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Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations
Substances of very high concern (SVHC) according to REACH, Article 57

Substance is not listed.

REACH - Pre-registered substances Substance is listed.

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

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 C. Holt

Global EHS Manager

Abbreviations and acronyms:

ICAO: International Civil Aviation Organization

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

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

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)

WHMIS: Workplace Hazardous Materials Information System (Canada)

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