

# Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 13.07.2010

Revision: 13.07.2010

## 1 Identification of substance

### Product details

Trade name

**Iron aluminide**

Stock number:

40006

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG  
Benzstrasse 3  
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com  
www.alfa-chemcat.com

Informing department:

Product safety department.

Emergency information:

Giftnotruf Universität Mainz / Poison Information Center Mainz  
www.giftinfo.uni-mainz.de Telefon: +49(0)6131/19240

## 2 Hazards identification

Hazard designation:

Xi Irritant  
F Highly flammable

Information pertaining to particular dangers for man and environment

R 11 Highly flammable.  
R 36/37 Irritating to eyes and respiratory system.

GHS label elements

**Danger**

H228 - Flammable solid.

**Warning**

H319 - Causes serious eye irritation.  
 H335 - May cause respiratory irritation.  
 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.

Prevention:

P405 Store locked up.

Response:

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

Storage:

Disposal:

## 3 Composition/information on ingredients

Chemical characterization:

Designation: (CAS#)

Iron aluminide (CAS# ?), 97-98%  
Chromium (CAS# 7440-47-3), 2-3%

## 4 First aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.  
Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.  
Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing

Seek immediate medical advice.

## 5 Fire fighting measures

Suitable extinguishing agents

Special powder for metal fires. Do not use water.

For safety reasons unsuitable extinguishing agents

Water.  
Halocarbon extinguisher  
Wear self-contained breathing apparatus.  
Wear full protective suit.

Protective equipment:

## 6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

Ensure adequate ventilation

Measures for cleaning/collecting:

Keep away from ignition sources

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

Additional information:

Ensure adequate ventilation.

Keep away from ignition sources.

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

## 7 Handling and storage

Handling

Information for safe handling:

Keep containers tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Fumes can combine with air to form an explosive mixture.

Storage

Requirements to be met by storerooms and containers:

Store in cool location.

Information about storage in one common storage facility:

Store away from oxidizing agents.  
Store away from halogens.

Further information about storage conditions:

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 critical values that require monitoring at the workplace:

Chromium metal  
mg/m3(Contd. on page 2)  
GB

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ACGIH TLV	0.5; Not classifiable as a human carcinogen
Belgium TWA	0.5
Denmark TWA	0.5
Finland TWA	0.01
France VME	0.5
Japan OEL	0.5
Korea TLV	0.5
Netherlands MAC-TGG	0.5
Norway TWA	0.5
Poland TWA	0.5
Sweden NGV	0.5
United Kingdom TWA	0.5
USA PEL	1

**Components with critical values that require monitoring at the workplace:**  
**Additional information:** No data

**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.  
 Keep away from foodstuffs, beverages and food.  
 Instantly remove any soiled and impregnated garments.  
 Wash hands during breaks and at the end of the work.  
 Avoid contact with the eyes.  
 Avoid contact with the eyes and skin.  
 Use breathing protection with high concentrations.  
 Safety glasses  
 Face protection  
 Protective work clothing.

**Breathing equipment:****Eye protection:****Body protection:****9 Physical and chemical properties:****General Information**

<b>Form:</b>	Powder
<b>Colour:</b>	Grey
<b>Smell:</b>	Odourless

<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	1540°C
<b>Boiling point/Boiling range:</b>	Not determined
<b>Sublimation temperature / start:</b>	Not determined

<b>Flash point:</b>	Not applicable
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<b>Inflammability (solid, gaseous)</b>	Highly flammable.
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<b>Ignition temperature:</b>	Not determined
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<b>Decomposition temperature:</b>	Not determined
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<b>Critical values for explosion:</b>	
<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined

<b>Steam pressure:</b>	Not determined
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<b>Density at 20°C</b>	6.72 g/cm³
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<b>Solubility in / Miscibility with Water:</b>	Insoluble
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**10 Stability and reactivity**

**Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications.  
**Materials to be avoided:** Oxidizing agents  
 Halogens  
 Interhalogens

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

**11 Toxicological information**

**Acute toxicity:**  
**Primary irritant effect:**  
**on the skin:** Irritant for skin and mucous membranes.  
**on the eye:** Irritant effect.  
**Sensitization:** No sensitizing effect known.  
**Additional toxicological information:** To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
 IARC-3: Not classifiable as to carcinogenicity to humans.  
 ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

**12 Ecological information:**

**Additional ecological information:**  
**General notes:** Generally not hazardous for water.  
 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 for proper disposal.  
 Hand over to disposers of hazardous waste.  
 Must be specially treated under adherence to official regulations.

**Uncleaned packagings:**  
**Recommendation:** Disposal must be made according to official regulations.

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## 14 Transport information

### Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)



**ADR/RID-GGVS/E Class:** 4.1 (F3) Flammable solids, self-reactive substances and solid desensitised explosives.  
**Kemler Number:** 40  
**UN-Number:** 3178  
**Packaging group:** II  
**Label:** 4.1  
**Designation of goods:** 3178 FLAMMABLE SOLID, INORGANIC, N.O.S. (Iron aluminide)  
**Limited quantities (LQ):** LQ8  
**Transport category:** 2  
**Tunnel restriction code:** E

### Maritime transport IMDG/GGVSea:



**IMDG/GGVSea Class:** 4.1  
**UN Number:** 3178  
**Label:** 4.1  
**Packaging group:** II  
**Marine pollutant:** No  
**Correct technical name:** FLAMMABLE SOLID, INORGANIC, N.O.S. (Iron aluminide)

### Air transport ICAO-TI and IATA-DGR:



**ICAO/IATA Class:** 4.1  
**UN/ID Number:** 3178  
**Label:** 4.1  
**Packaging group:** II  
**Correct technical name:** FLAMMABLE SOLID, INORGANIC, N.O.S. (Iron aluminide)

### UN "Model Regulation":

UN3178, FLAMMABLE SOLID, INORGANIC, N.O.S., 4.1, II

## 15 Regulatory information

### Designation according to EC guidelines:

#### Code letter and hazard designation of product:



Xi Irritant  
 F Highly flammable

#### Risk phrases:

11 Highly flammable.  
 36/37 Irritating to eyes and respiratory system.

#### Safety phrases:

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

#### National regulations

#### Information about limitation of use:

For use only by technically qualified individuals.  
 Employment restrictions concerning young persons must be observed.

#### Water hazard class:

Generally not hazardous for water.

## 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 data specification sheet:** 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

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)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)