

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 01/11/2001

Reviewed on 05/10/2000

1 Identification of substance:

Product details:

Trade name: **Nickel Chromium Iron powder**

Stock number: 36604

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#)

Iron (CAS# 7439-89-6), 72%

Chromium (CAS# 7440-47-3), 14-17%

Nickel (CAS# 7440-02-0), 6-10%

3 Hazards identification

Hazard description:



T Toxic

Information pertaining to particular dangers for man and environment

R 45 May cause cancer.

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 40 Possible risks of irreversible effects.

R 43 May cause sensitization by skin contact.

4 First aid measures

General information

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing has been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

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.

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After swallowing

Do not induce vomiting; immediately call for medical help.

Seek immediate medical advice.

Information for doctor

The following symptoms may occur:

Gastric or intestinal disorders.

Nausea

5 Fire fighting measures

Suitable extinguishing agents Extinguishing powder. Do not use water.

For safety reasons unsuitable extinguishing agents

Water

Halogenated extinguisher

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

Risk of dust explosion.

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:**

Handle under dry argon.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Open and handle container with care.

Prevent formation of dust.

Information about protection against explosions and fires:

Dust can combine with air to form an explosive mixture.

Storage**Requirements to be met by storerooms and receptacles:**

No special requirements.

Information about storage in one common storage facility:

Do not store together with oxidizing and acidic materials.

Store away from halogens.

Further information about storage conditions:

Store under dry inert gas.

Keep container tightly sealed.

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Store in cool, dry conditions in well sealed containers.
Store under lock and key and with access restricted to technical experts or their assistants only.

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:

Chromium metal

	mg/m3
ACGIH TLV	0.5; A4
Belgium TWA	0.5
Denmark TWA	0.5
Finland TWA	0.01
France TWA	0.5
Ireland TWA	0.5
Netherlands TWA	0.5
Sweden TWA	0.5
United Kingdom TWA	0.5
USA PEL	1

Nickel and inorganic compounds, as Ni

	mg/m3
ACGIH TLV	1.5, A5-inhalable particulate (metal) 0.2, A1-inhalable particulate (insoluble compounds)
Belgium TWA	0.1, A4-inhalable particulate (soluble compounds) 1; 1 (insoluble compounds)
Denmark TWA	0.05-carcinogen; 0.5 (dust) 1 (insoluble compounds)
Finland TWA	0.1-carcinogen 0.1-skin-carcinogen (insoluble compounds)
France TWA	1
Hungary TWA	0.005-STEL-carcinogen 0.005-STEL-carcinogen (insoluble compounds)
Ireland TWA	0.5 (metal and insoluble compounds) 0.1 (soluble compounds)
Netherlands TWA	1 (metal); 0.1 (insoluble compounds)
Russia	0.05-STEL
Sweden TWA	0.5; 0.5 (dust)
Switzerland TWA	0.5-carcinogen; 0.5 (insoluble compounds)
United Kingdom TWA	0.5 (metal and soluble compounds) 0.1 (insoluble compounds)
USA PEL	1 (metal and soluble compounds)

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.

Avoid contact with the eyes and skin.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Protection of hands: Impervious gloves

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Eye protection: Safety glasses

Body protection: Protective work clothing.

9 Physical and chemical properties:

Form:	Powder
Color:	Silver grey
Odor:	Odorless
Change in condition	
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined
Flash point:	Not applicable
Flammability (solid, gaseous)	Fine powder: highly flammable
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Danger of explosion:	The material is not explosive but the formation of explosive dust/air mixtures may be possible.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not determined
Density:	Not determined
Solubility in / Miscibility with Water:	Insoluble

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:

Acids

Oxidizing agents

Sulfur

Interhalogens

Dangerous reactions Risk of dust explosion

Dangerous products of decomposition: Toxic metal oxide fume

11 Toxicological information

Acute toxicity:

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: Sensitization possible through skin contact.

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Subacute to chronic toxicity:

Chromium powder, chromium (II) and chromium (III) compounds may cause nausea, diarrhea, vomiting, skin and eye irritation and pneumoconiosis. Although less likely than Cr(VI) compounds, the NTP considers all chromium to be potentially carcinogenic. Iron compounds may cause vomiting, diarrhea, pink urine, black stool, and liver damage. May cause damage to the kidneys. Irritating to the respiratory tract, they may cause pulmonary fibrosis if dusts are inhaled.

Nickel and nickel compounds may cause a form of dermatitis known as nickel itch. They may also cause intestinal disorders, convulsions and asphyxia. Airborne nickel contaminated dusts are regarded as carcinogenic to the respiratory tract.

Additional toxicological information:

Danger through skin absorption.

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

EPA-A: human carcinogen: sufficient evidence from epidemiologic studies to support a causal association between exposure and cancer. IARC-2B: Possibly carcinogenic to humans: limited evidence in humans in the absence of sufficient evidence in experimental animals.

NTP-2: Reasonably anticipated to be a carcinogen: limited evidence from studies in humans or sufficient evidence from studies in experimental animals.

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.

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 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.

Uncleaned packagings:**Recommendation:**

Disposal must be made according to official regulations.

14 Transport information**DOT regulations:****Hazard class:**

4.1

Identification number:

UN3089

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Packing group: III
 Proper shipping name (technical name): Metal powders, flammable, n.o.s., nickel/chromium/iron

Land transport ADR/RID (cross-border)



ADR/RID class: 4.1 Flammable solids
 Item: 13c
 Danger code (Kemler): 40
 UN-Number: 3089
 Description of goods: Metal powders, flammable, n.o.s., nickel/chromium/iron

Maritime transport IMDG:



IMDG Class: 4.1
 UN Number: 3089
 Packaging group: III
 Proper shipping name: Metal powders, flammable, n.o.s., nickel/chromium/iron

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 4.1
 UN/ID Number: 3089
 Packaging group: III
 Proper shipping name: Metal powders, flammable, n.o.s., nickel/chromium/iron

15 Regulations

Product related hazard informations:

Hazard symbols:
 T Toxic

Risk phrases:

45 May cause cancer.
 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
 36/37/38 Irritating to eyes, respiratory system and skin.
 40 Possible risks of irreversible effects.
 43 May cause sensitization by skin contact.

Safety phrases:

22 Do not breathe dust.
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 28 After contact with skin, wash immediately with plenty of ...

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36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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

This product contains nickel 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: Darrell R. Sanders

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