

Safety Data Sheet
according to 1907/2006/EC, Article 31

Revision: 13.07.2010

Printing date 13.07.2010

1 Identification of substance**Product details**

Trade name

Nickel arsenide

Stock number:

36269

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:

T Toxic
N Dangerous for the environment

Information pertaining to particular dangers for man and environment

R 49 May cause cancer by inhalation.
 R 43 May cause sensitisation by skin contact.
 R 48/23 Also toxic: danger of serious damage to health by prolonged exposure through inhalation.
 R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

GHS label elements

**Danger**

H350i - May cause cancer by inhalation.
 H372 - Causes damage to organs through prolonged or repeated exposure.

**Warning**

H400 - Very toxic to aquatic life.
 H410 - Very toxic to aquatic life with long lasting effects.

**Warning**

H317 - May cause an allergic skin reaction.
 P201 Obtain special instructions before use.
 P273 Avoid release to the environment.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Prevention:

Response:

Disposal:

3 Composition/information on ingredients

Chemical characterization:

Designation: (CAS#)

Nickel arsenide (CAS# 27016-75-7)

Identification number(s):

EINECS Number:

235-103-1

Index number:

028-051-00-4

4 First aid measures

General information

Instantly remove any clothing soiled by the product.
 Remove breathing apparatus only after soiled clothing has been completely removed.
 In case of irregular breathing or respiratory arrest provide artificial respiration.
 Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
 After inhalation: Seek immediate medical advice.
 After skin contact: Instantly wash with water and soap and rinse thoroughly.
 After eye contact: Seek immediate medical advice.
 After swallowing: Rinse opened eye for several minutes under running water. Then consult doctor.
 Do not induce vomiting; instantly call for medical help.
 Seek immediate medical advice.

5 Fire fighting measures

Suitable extinguishing agents
 Special hazards caused by the material, its products of combustion or flue gases:

Use fire fighting measures that suit the environment.

Protective equipment:

Can be released in case of fire:
 Arsenic oxides (As₂O₃)
 Toxic metal oxide smoke
 Wear self-contained breathing apparatus.
 Wear full protective suit.

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.
 Ensure adequate ventilation

Measures for environmental protection:

Measures for cleaning/collecting:

Do not allow material to be released to the environment without proper governmental permits.
 Dispose of 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 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.
 Open and handle container with care.
 Prevent formation of dust.

Information about protection against explosions and fires:

Formation of poisonous gases during heating or in fires.
 The product is not flammable

Storage

Requirements to be met by storerooms and containers:

No special requirements.

Information about storage in one common storage facility:

Store away from oxidizing agents.
 Do not store together with acids.

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Further information about storage conditions:

Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Store in a locked cabinet or with access restricted to technical experts or their assistants.

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:

Arsenic, elemental, and inorganic compounds (except arsine), as As
mg/m³

ACGIH TLV	0.01; Carcinogen
Belgium TWA	0.2
Denmark TWA	0.05
Finland	Carcinogen
France VME	0.2
Hungary TWA	0.5; Carcinogen
Ireland TWA	0.1; Carcinogen
Korea TLV	0.01; Carcinogen
Netherlands TWA	0.05; 0.1-STEEL
Norway TWA	0.02
Poland TWA	0.1
Sweden NGV	0.03; Carcinogen
Switzerland TWA	0.1; Carcinogen
United Kingdom TWA	0.1; Carcinogen
USA PEL	0.5

Nickel and inorganic compounds, as Ni
mg/m³

ACGIH TLV	1.5, A5-inhalable particulate (metal)
	0.2, A1-inhalable particulate (insoluble compounds)
	0.1, A4-inhalable particulate (soluble compounds)
Austria	Carcinogen
Denmark TWA	0.5
Finland TWA	0.1 (skin) Carcinogen
France VME	1; C3-Carcinogen
Germany	Carcinogen
Hungary	0.005-STEEL; Carcinogen (insoluble compounds)
Japan	1; 2B-Carcinogen
Korea TLV	1.5
Netherlands	MAC-TGG 1; Carcinogen
	1 (insoluble compounds)
Norway TWA	0.05
Poland TWA	0.25
Russia	0.05-STEEL
Sweden NGV	0.5 (dust)
Switzerland MAK-W	0.5; Carcinogen
United Kingdom TWA	0.1
USA PEL	1

Additional information: No data

Additional information:**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.
Store protective clothing separately.
Use breathing protection with high concentrations.
Safety glasses
Protective work clothing.

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

Form:	Crystalline aggregates
Colour:	Black
Smell:	Odourless

Change in condition

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined

Flash point:	Not applicable
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Ignition temperature:	Not determined
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Decomposition temperature:	Not determined
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Danger of explosion:	Product is not explosive.
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Critical values for explosion:

Lower:	Not determined
Upper:	Not determined

Steam pressure:	Not determined
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Density	Not determined
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Solubility in / Miscibility with Water:	Insoluble
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10 Stability and reactivity**Thermal decomposition / conditions to be avoided:****Materials to be avoided:**

No decomposition if used and stored according to specifications.
Acids
Oxidizing agents

Dangerous reactions:

No dangerous reactions known
Arsenic oxides (As₂O_x)

Dangerous products of decomposition:(Contd. on page 3)
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Toxic metal oxide smoke

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11 Toxicological information

Acute toxicity:
Primary irritant effect:
on the skin:
on the eye:

May cause irritation
May cause irritation
Sensitization possible by skin contact.

Sensitization:
Other information (about experimental toxicology):

Tumorigenic effects have been observed on tests with laboratory animals.
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-1: Carcinogenic to humans: sufficient evidence of carcinogenicity.
NTP-1: Known to be carcinogenic: sufficient evidence from human studies.
Carcinogen as defined by OSHA.
ACGIH A1: Confirmed human carcinogen: Agent is carcinogenic to humans based on epidemiologic studies of, or convincing clinical evidence in, exposed humans.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this product.
May cause sensitisation by skin contact.

Sensitisation**12 Ecological information:**

Ecotoxic effects:
Remark:
Additional ecological information:
General notes:

Very toxic for fish

Water danger class 3 (Self-assessment): extremely hazardous for water.
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into soil.
Also poisonous for fish and plankton in water bodies.
Do not allow material to be released to the environment without proper governmental permits.
Very toxic for aquatic organisms

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.

14 Transport information**Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

ADR/RID-GGVS/E Class:
Kemler Number:
UN-Number:
Packaging group:
Label
Special marking:
Designation of goods:
Limited quantities (LQ)
Transport category
Tunnel restriction code

9 (M7) Miscellaneous dangerous substances and articles.
90
3077
III
9
Symbol (fish and tree)
3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nickel arsenide)
LQ27
3
E

Maritime transport IMDG/GGVSea:

IMDG/GGVSea Class:
UN Number:
Label
Packaging group:
EMS Number:
Marine pollutant:

9
3077
9
III
F-A, S-F
Yes (P)
Symbol (fish and tree)
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nickel arsenide)

Correct technical name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nickel arsenide)

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class:
UN/ID Number:
Label
Special marking:
Packaging group:
Correct technical name:

9
3077
9
Symbol (fish and tree)
III
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nickel arsenide)

UN "Model Regulation":

UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

15 Regulatory information**Designation according to EC guidelines:**

Code letter and hazard designation of product:

  T Toxic
N Dangerous for the environment

Risk phrases:

49 May cause cancer by inhalation.

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Safety phrases:

43 May cause sensitisation by skin contact.
 48/23 Also toxic: danger of serious damage to health by prolonged exposure through inhalation.
 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 53 Avoid exposure - obtain special instructions before use.
 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 60 This material and its container must be disposed of as hazardous waste.
 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

National regulations**Information about limitation of use:**

For use only by technically qualified individuals.
 Employment restrictions concerning young persons must be observed.
 This product contains arsenic and is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

Water hazard class:

Water danger class 3 (Self-assessment): extremely 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)
 P: Marine Pollutant
 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)

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