

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 14.07.2010

Revision: 14.07.2010

1 Identification of substance

Product details

Trade name

Nickel(II) chloride hexahydrate

Stock number:

53131

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 61 May cause harm to the unborn child.
 R 23/25 Also toxic by inhalation and if swallowed.
 R 38 Irritating to skin.
 R 42/43 May cause sensitisation by inhalation and skin contact.
 R 48/23 Also toxic: danger of serious damage to health by prolonged exposure through inhalation.
 R 68 Possible risk of irreversible effects.
 R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

GHS label elements

**Danger**

H301 - Toxic if swallowed.

H331 - Toxic if inhaled.

**Danger**

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H350i - May cause cancer by inhalation.

H360D - May damage the unborn child.

H372 - Causes damage to organs through prolonged or repeated exposure.

H341 - Suspected of causing genetic defects.

**Warning**

H400 - Very toxic to aquatic life.

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

Warning

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

P201 Obtain special instructions before use.

P273 Avoid release to the environment.

P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

Prevention:

Response:

3 Composition/information on ingredients

Chemical characterization:

Designation: (CAS#)

Nickel(II) chloride hexahydrate (CAS# 7791-20-0)

Identification number(s):

EINECS Number:

231-743-0

Index number:

028-011-00-6

4 First aid measures

General information

Instantly remove any clothing soiled by the product.

After inhalation

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

Supply fresh air and call for doctor for safety reasons.

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.

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

Use fire fighting measures that suit the environment.

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

Can be released in case of fire:

Hydrogen chloride (HCl)

Toxic metal oxide smoke

Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

Ensure adequate ventilation

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

Measures for cleaning/collecting:

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.

(Contd. on page 2)
GB

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 14.07.2010

Revision: 14.07.2010

Trade name **Nickel(II) chloride hexahydrate**

(Contd. of page 1)

Information about protection against explosions and fires:

The product is not flammable

**Storage Requirements to be met by storerooms and containers:
Information about storage in one common storage facility:**

No special requirements.

Store away from oxidizing agents.
Store away from strong bases.
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:
Nickel and inorganic compounds, as Ni
mg/m³ACGIH 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-STEL; 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-STEL

Sweden NGV 0.5 (dust)

Switzerland MAK-W 0.5; Carcinogen

United Kingdom TWA 0.1

USA PEL 1

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.
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
Colour:	Green
Smell:	Odourless

Change in condition

Melting point/Melting range:	140°C (-H ₂ O)
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:	Product is not explosive.
-----------------------------	---------------------------

Critical values for explosion:

Lower:	Not determined
Upper:	Not determined

Steam pressure:	Not determined
------------------------	----------------

Density at 20°C	1.92 g/cm ³
------------------------	------------------------

Solubility in / Miscibility with Water at 20°C:	2540 g/l
--	----------

pH-value (100 g/l) at 20°C:	4.9
------------------------------------	-----

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

Materials to be avoided:
Bases
Oxidizing agents
Dangerous reactions:

No dangerous reactions known

Dangerous products of decomposition:
Hydrogen chloride (HCl)
Toxic metal oxide smoke

11 Toxicological information

Acute toxicity:
LD/LC50 values that are relevant for classification:

Oral LD50 186 mg/kg (rat) (IUCSID datasheet)

Primary irritant effect:

on the skin:	Irritant for skin and mucous membranes.
on the eye:	Irritant effect.

(Contd. on page 3)
GB

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 14.07.2010

Revision: 14.07.2010

Trade name **Nickel(II) chloride hexahydrate**

(Contd. of page 2)

Sensitization:
Other information (about experimental toxicology):

Sensitization possible by skin contact.

Additional toxicological information:

Reproductive effects have been observed on tests with laboratory animals.
Mutagenic effects have been observed on tests with laboratory animals.
Mutagenic effects have been observed on tests with human and/or animal DNA cells.
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity.
NTP-1: Known to be carcinogenic: sufficient evidence from human studies.
ACGIH A1: Confirmed human carcinogen: Agent is carcinogenic to humans based on epidemiologic studies of, or convincing clinical evidence in, exposed humans.
May cause sensitisation by inhalation and skin contact.

Sensitisation

12 Ecological information:

Ecotoxic effects:

Remark:

Additional ecological information:

General notes:

Very toxic for fish

Do not allow product to reach ground water, water bodies or sewage system.
Water hazard class 2 (Self-assessment): hazardous for water.
Danger to drinking water if even 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

Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.

Uncleaned packagings:

Recommendation:

Recommended cleaning agent:

Disposal must be made according to official regulations.
Water, if necessary with cleaning agent.

14 Transport information

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



ADR/RID-GGVS/E Class:

6.1 (T5) Toxic substances.

Kemler Number:

60

UN-Number:

3288

Packaging group:

III

Label

6.1

Special marking:

Symbol (fish and tree)

Designation of goods:

3288 TOXIC SOLID, INORGANIC, N.O.S. (Nickel(II) chloride hexahydrate)

Limited quantities (LQ)

LQ9

Transport category

2

Tunnel restriction code

E

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class:

6.1

UN Number:

3288

Label

6.1

Packaging group:

III

Marine pollutant:

Yes (P)

Correct technical name:

Symbol (fish and tree)
TOXIC SOLID, INORGANIC, N.O.S. (Nickel(II) chloride hexahydrate)

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class:

6.1

UN/ID Number:

3288

Label

6.1

Packaging group:

III

Correct technical name:

TOXIC SOLID, INORGANIC, N.O.S. (Nickel(II) chloride hexahydrate)

UN "Model Regulation":

UN3288, TOXIC SOLID, INORGANIC, N.O.S., 6.1, III
Environmentally hazardous substance, solid; Marine Pollutant

Environmental hazards:

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.
61 May cause harm to the unborn child.
23/25 Also toxic by inhalation and if swallowed.
38 Irritating to skin.
42/43 May cause sensitisation by inhalation and skin contact.
48/23 Also toxic: danger of serious damage to health by prolonged exposure through inhalation.
68 Possible risk of irreversible effects.
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

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.

(Contd. on page 4)

GB

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

Printing date 14.07.2010

Revision: 14.07.2010

Trade name **Nickel(II) chloride hexahydrate**

(Contd. of page 3)

61 Avoid release to the environment. Refer to special instructions/safety data sheets.

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

Employment restrictions concerning young persons must be observed.
Employment restrictions concerning women of child-bearing age must be observed.
For use only by technically qualified individuals.

Water hazard class:

Water hazard class 2 (Self-assessment): 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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

GB