

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

Revision: 14.07.2010

Printing date 14.07.2010

1 Identification of substance**Product details****Trade name****Copper (II) fluoride hydroxide****Stock number:**

44082

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:**

Xn Harmful

Information pertaining to particular dangers for man and environmentNot applicable
R 22 Harmful if swallowed.
R 36/37/38 Irritating to eyes, respiratory system and skin.**GHS label elements****Warning**H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.**Prevention:****Response:****Storage:****Disposal:****3 Composition/information on ingredients****Chemical characterization:****Designation: (CAS#)**

Copper (II) fluoride hydroxide (CAS# 13867-72-6): 100%

4 First aid measures**After inhalation**

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

After skin contactSeek immediate medical advice.
Instantly wash with water and soap and rinse thoroughly.**After eye contact**

Seek immediate medical advice.

After swallowingRinse opened eye for several minutes under running water. Then consult doctor.
Seek medical treatment.**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:
Hydrogen fluoride (HF)
Metal oxide
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

Measures for cleaning/collecting:Do not allow material to be released to the environment without proper governmental permits.
Collect mechanically.**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.
No special precautions necessary if used correctly.**Information about protection against explosions and fires:**

The product is not flammable

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

Unsuitable material for container: ceramic, glass

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.**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:Fluorides (as F)
mg/m³
ACGIH TLV 2.5
Austria MAK 2.5
Belgium TWA 2.5
Finland TWA 2.5
France TWA 2.5
Germany MAK 2.5(Contd. on page 2)
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Hungary TWA 1; 2-STEL
Netherlands MAC-K 3.5
Norway TWA 0.6
Poland TWA 1; 3-STEL
Sweden NGV 2
Switzerland MAK-W 1.5; 3-KZG-W
United Kingdom TWA 2.5
Russia TWA 2
Denmark TWA 2.5
USA PEL 2.5

Copper

mg/m³
ACGIH TLV 1 (dust, mist); 0.2 (fume)
Austria MAK 1
0.1 (fume)
Belgium TWA 0.2 (fume); 1 (dust)
Denmark TWA 0.1
Finland TWA 0.2 (fume); 1 (dust)
France VME 0.2 (fume); 1 (dust)
1; 2-STEL (dust)
Germany MAK 0.1 (fume); 1 (dust)
Hungary TWA 0.2; 0.4-STEL (dust)
Netherlands MAC-TGG 1 (dust)
Norway TWA 0.05
0.1 (fume)
Poland TWA 0.1; 0.3-STEL (fume)
1; 2-STEL (dust)
Russia 1-STEL (dust)
Sweden NGV 0.2 (resp. dust): 1 (total dust)
Switzerland MAK-W 0.1; 0.2-KZG-W (fume)
1; 1-KZG-W
United Kingdom TWA 0.2 (fume)
1; 2-STEL (dusts and mists as Cu)
1; 3-STEL
USA PEL 0.1 (fume, dusts & mists)
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.

Breathing equipment:**Protection of hands:****Material of gloves**

Use breathing protection with high concentrations.
Check protective gloves prior to each use for their proper condition.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Eye protection:**Body protection:**

Safety glasses
Protective work clothing.

9 Physical and chemical properties:**General Information**

Form: Powder
Smell: Not determined

Change in condition

Melting point/Melting range: Not determined
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: Not determined

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

Dangerous reactions:

No dangerous reactions known

Dangerous products of decomposition:

Hydrogen fluoride
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:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

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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: None

Maritime transport IMDG/GGVSea: None
IMDG/GGVSea Class: None
Marine pollutant: No


Air transport ICAO-TI and IATA-DGR: None
ICAO/IATA Class: None

Transport/Additional information: Not dangerous according to the above specifications.

15 Regulatory information

Designation according to EC guidelines: Observe the normal safety regulations when handling chemicals

Code letter and hazard designation of product:

 Xn Harmful

Risk phrases: 22 Harmful if swallowed.
36/37/38 Irritating to eyes, respiratory system and skin.

Safety phrases: 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37 Wear suitable protective clothing and gloves.

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: Water hazard class 1 (Self-assessment): slightly 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)

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