

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

Mercury (II) fluoride

Stock number:

11533

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.giftnotruf.uni-mainz.de Telefon: +49(0)6131/19240

2 Hazards identification

Hazard designation:

T+ Very toxic
N Dangerous for the environment

Information pertaining to particular dangers for man and environment

R 26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.

R 33 Danger of cumulative effects.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

GHS label elements

**Danger**

H300 - Fatal if swallowed.

H310 - Fatal in contact with skin.

H330 - Fatal if inhaled.

**Warning**

H373 - May cause 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.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P320 Specific treatment is urgent (see on this label).

P361 Remove/Take off immediately all contaminated clothing.

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:

Mercury (II) fluoride (CAS# 7783-39-3), 100%

Designation: (CAS#)

Identification number(s):

231-994-6

EINECS Number:

080-002-00-6

Index number:

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.

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

Rub in Ca-gluconate solution or Ca-gluconate gel immediately.

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.

After eye contact

After swallowing

5 Fire fighting measures

Suitable extinguishing agents

CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

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

Can be released in case of fire:

Hydrogen fluoride (HF)

Toxic metal oxide smoke

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.

Ensure adequate ventilation

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.

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

Measures for environmental protection:

Measures for cleaning/collecting:

Additional information:

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.

Information about protection against explosions and fires:

No special measures required.

Storage

Requirements to be met by storerooms and containers:

Unsuitable material for container: ceramic, glass

Information about storage in one common storage facility:

Do not store together with acids.

Do not store together with alkalis (caustic solutions).

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Further information about storage conditions:

Store away from water.

Keep container tightly sealed.
 Store in cool, dry conditions in well sealed containers.
 Protect from humidity and keep away from water.
 Protect from the effects of light.
 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:

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
 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

Mercury, inorganic compounds (as Hg)

mg/m3
 ACGIH TLV 0.025 (skin)
 Not classified as a human carcinogen
 Austria MAK 0.05
 Belgium TWA 0.1 (skin)
 Denmark TWA 0.05 (skin)
 Finland TWA 0.05
 France VME 0.05 (skin)(vapor)
 Germany MAK 0.1
 Hungary TWA 0.02; 0.04-STEL
 Japan OEL 0.05
 Korea TLV 0.025 (vapor) (skin)
 Netherlands MAC-TGG 0.05; 0.5-MAC-K
 Norway TWA 0.05
 Poland TWA 0.025 (vapors); 0.2-STEL (vapors)
 Sweden NGV 0.05
 Switzerland MAK-W 0.01 (skin)
 United Kingdom TWA 0.025
 USA PEL 0.1-Ceiling
 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.
 Avoid contact with the eyes and skin.
 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: Powder
Colour: Whitish
Smell: Odourless

Change in condition

Melting point/Melting range: 645°C ((dec))
Boiling point/Boiling range: >650°C
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** 8.95 g/cm³**Solubility in / Miscibility with****Water:** Decomposes**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:****Materials to be avoided:**

No decomposition if used and stored according to specifications.
 Acids

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Dangerous reactions:
Dangerous products of decomposition:

Bases
 Water/moisture
 No dangerous reactions known
 Hydrogen fluoride
 Toxic metal oxide smoke

11 Toxicological information

Acute toxicity:
Primary irritant effect:
on the skin:
on the eye:
Sensitization:
Additional toxicological information:

Irritant for skin and mucous membranes.
 Irritant effect.
 No sensitizing effect known.
 Danger by skin resorption.
 To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
 EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available.
 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:

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: 6.1 (T5) Toxic substances.
Kemler Number: 60
UN-Number: 2025
Packaging group: II
Label: 6.1
Special marking: Symbol (fish and tree)
Designation of goods: 2025 MERCURY COMPOUND, SOLID, N.O.S. (Mercury (II) fluoride)
Limited quantities (LQ) LQ18
Transport category 2
Tunnel restriction code D/E

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class: 6.1
UN Number: 2025
Label: 6.1
Packaging group: II
Marine pollutant: No
Segregation groups Heavy metals and their salts (including their organometallic compounds), mercury and mercury compounds
Correct technical name: MERCURY COMPOUND, SOLID, N.O.S.

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 6.1
UN/ID Number: 2025
Label: 6.1
Packaging group: II
Correct technical name: MERCURY COMPOUND, SOLID, N.O.S.

UN "Model Regulation":

UN2025, MERCURY COMPOUND, SOLID, N.O.S., 6.1, II
 Environmentally hazardous substance, solid; Marine Pollutant

Environmental hazards:

15 Regulatory information

Designation according to EC guidelines:

Code letter and hazard designation of product:

T+ Very toxic
 N Dangerous for the environment

Risk phrases:

26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.
 33 Danger of cumulative effects.
 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

13 Keep away from food, drink and animal feedingstuffs.

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28 After contact with skin, wash immediately with plenty of water.
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:**

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

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)

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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