

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Chromium(III) chloride hexahydrate pure

Revision date: 14.07.2023

Product code: 20101

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Chromium(III) chloride hexahydrate pure

Substance name: Chromtrichlorid-6-hydrat
CAS No: 10060-12-5
EC No: 233-038-3

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH
Street: Stempelstraße 6
Place: D-47167 Duisburg
Telephone: 0203/5194-0
E-mail: info@analytichem.de
Contact person: Abteilung Produktsicherheit
E-mail: produktsicherheit@analytichem.de
Internet: www.analytichem.de
Responsible Department: Abteilung Produktsicherheit

Telefax: 0203/5194-290

Telephone: 0203/5194-107/117

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Met. Corr. 1; H290
Acute Tox. 4; H302
Skin Sens. 1; H317
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008****Signal word:** Warning**Pictograms:**

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Hazard statements

- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H317 May cause an allergic skin reaction.
- H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

- Sum formula: $Cl_3Cr \cdot 6H_2O$
- Molecular weight: 266,45 g/mol

Hazardous components

| CAS No | Chemical name | Quantity |
|------------|--|----------|
| | EC No | |
| | Index No | |
| | REACH No | |
| | Classification (Regulation (EC) No 1272/2008) | |
| 10060-12-5 | Chromtrichlorid-6-hydrat | 100 % |
| | 233-038-3 | |
| | Met. Corr. 1, Acute Tox. 4, Skin Sens. 1, Aquatic Chronic 2; H290 H302 H317 H411 | |

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

| CAS No | EC No | Chemical name | Quantity |
|------------|-----------|--|----------|
| | | Specific Conc. Limits, M-factors and ATE | |
| 10060-12-5 | 233-038-3 | Chromtrichlorid-6-hydrat | 100 % |
| | | dermal: LD50 = > 2000 mg/kg; oral: LD50 = 3250 mg/kg | |

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Take off immediately all contaminated clothing and wash it before reuse.

After inhalation

- Provide fresh air.
- Call a physician immediately.

After contact with skin

- Take off immediately all contaminated clothing and wash it before reuse.
- In case of skin irritation, consult a physician.

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After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.
Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water.
Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Vomiting
Irritant
Allergic reactions

4.3. Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible solids
Hazardous combustion products
In case of fire may be liberated:
Hydrogen chloride (HCl)
Metal oxide smoke, toxic

5.3. Advice for firefighters

Do not inhale explosion and combustion gases.
Avoid contact with skin, eyes and clothes.
In case of fire: Wear self-contained breathing apparatus.

Additional information

Suppress gases/vapours/mists with water spray jet.
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Move undamaged containers from immediate hazard area if it can be done safely.
Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Corrosive to metals.

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

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6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Collect in closed and suitable containers for disposal.
- Take up carefully when dry. Take up dust-free and set down dust-free.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

- Read label before use. Handle and open container with care.
- Avoid dust formation. Do not breathe dust.
- Do not breathe vapour/aerosol.
- When using do not eat, drink, smoke, sniff. Keep container tightly closed.
- Use personal protection equipment. Use extractor hood (laboratory).
- Provide adequate ventilation. Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

- Keep away from food, drink and animal feedingstuffs. Make available sufficient washing facilities
- Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.
- Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

- Draw up and observe skin protection programme.
- Wash hands and face before breaks and after work and take a shower if necessary.
- Take off immediately all contaminated clothing and wash it before reuse.
- If handled uncovered, arrangements with local exhaust ventilation have to be used.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in a well-ventilated place. Keep container tightly closed.

Further information on storage conditions

- Store in a dry place.
- Keep in a cool place.
- hygroscopic.

7.3. Specific end use(s)

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

| CAS No | Substance | Exposure route | Effect | Value |
|--------------------------|--------------------------|----------------|----------|-------------------------|
| 10060-12-5 | Chromtrichlorid-6-hydrat | | | |
| Worker DNEL, long-term | | inhalation | systemic | 2,61 mg/m ³ |
| Worker DNEL, acute | | inhalation | systemic | 2,61 mg/m ³ |
| Worker DNEL, long-term | | inhalation | local | 0,31 mg/m ³ |
| Worker DNEL, acute | | inhalation | local | 0,62 mg/m ³ |
| Worker DNEL, long-term | | dermal | systemic | 0,37 mg/kg bw/day |
| Worker DNEL, acute | | dermal | systemic | 0,37 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 0,644 mg/m ³ |
| Consumer DNEL, acute | | inhalation | systemic | 0,644 mg/m ³ |
| Consumer DNEL, long-term | | inhalation | local | 0,077 mg/m ³ |
| Consumer DNEL, acute | | inhalation | local | 0,154 mg/m ³ |
| Consumer DNEL, long-term | | dermal | systemic | 0,185 mg/kg bw/day |
| Consumer DNEL, acute | | dermal | systemic | 0,185 mg/kg bw/day |
| Consumer DNEL, long-term | | oral | systemic | 0,185 mg/kg bw/day |
| Consumer DNEL, acute | | oral | systemic | 0,185 mg/kg bw/day |

PNEC values

| CAS No | Substance | Value |
|--|--------------------------|-------------|
| 10060-12-5 | Chromtrichlorid-6-hydrat | |
| Freshwater | | 0,025 mg/l |
| Freshwater (intermittent releases) | | 0,02 mg/l |
| Marine water | | 0,008 mg/l |
| Freshwater sediment | | 0,091 mg/kg |
| Marine sediment | | 0,03 mg/kg |
| Secondary poisoning | | 3,99 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 25,6 mg/l |
| Soil | | 4,979 mg/kg |

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Avoid dust formation. Do not breathe dust.

Do not breathe vapour/aerosol.

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Individual protection measures, such as personal protective equipment

Eye/face protection

goggles
Wear eye/face protection.

Hand protection

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact
Trade name/designation: KCL 741 Dermatril® L
Suitable material: NBR (Nitrile rubber) 0,11 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact
Trade name/designation: KCL 741 Dermatril® L
Suitable material: NBR (Nitrile rubber) 0,11 mm
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>, <)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.
Take off immediately all contaminated clothing.
Wash hands before breaks and after work.

Respiratory protection

Respiratory protection necessary at: dust formation

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|-------------------|
| Physical state: | solid |
| Colour: | green |
| Odour: | odourless |
| Odour threshold: | No data available |
| Melting point/freezing point: | 80-83 °C |
| Boiling point or initial boiling point and boiling range: | No data available |
| Flammability: | No data available |
| Lower explosion limits: | No data available |
| Upper explosion limits: | No data available |
| Flash point: | No data available |
| Auto-ignition temperature: | No data available |
| Decomposition temperature: | >80 °C |
| pH-Value (at 25 °C): | 2,5 (50 g/l) |
| Viscosity / kinematic: | No data available |
| Water solubility: (at 25 °C) | 585 g/L |

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Solubility in other solvents

No data available

Dissolution rate:

No data available

Partition coefficient n-octanol/water:

No data available

Dispersion stability:

No data available

Vapour pressure:

No data available

Vapour pressure:

No data available

Density:

1,76 g/cm³

Relative density:

No data available

Bulk density:

No data available

Relative vapour density:

No data available

Particle characteristics:

No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

In case of warming: Vapours can form explosive mixtures with air.

Sustaining combustion:

No data available

Self-ignition temperature

Solid:

No data available

Gas:

No data available

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:

No data available

Solvent separation test:

No data available

Solvent content:

0

Solid content:

100%

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

No data available:

Flow time:

No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals.

10.2. Chemical stability

Protect against: Humidity
hygroscopic.

10.3. Possibility of hazardous reactions

Oxidising agent
Fluorine
Lithium

10.4. Conditions to avoid

Protect against:
Humidity
Heat

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10.5. Incompatible materials

Metal

10.6. Hazardous decomposition products

In case of fire may be liberated:

SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution

No data available

Acute toxicity

Harmful if swallowed.

| CAS No | Chemical name | | | | |
|------------|--------------------------|-------------------------|---------|---|--------------------|
| | Exposure route | Dose | Species | Source | Method |
| 10060-12-5 | Chromtrichlorid-6-hydrat | | | | |
| | oral | LD50 mg/kg 3250 | Rat | Am. Ind. Hyg. Assoc. J., 1969, 30:5, 470 | OECD Guideline 401 |
| | dermal | LD50 mg/kg > 2000 | Rat | Publication (2005) | OECD Guideline 402 |

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (Chromtrichlorid-6-hydrat)

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information

No data available

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Further information

No data available

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

| CAS No | Chemical name | | | | | |
|------------|--------------------------|---------------|-----------|---------|---------------------------|---|
| | Aquatic toxicity | Dose | [h] [d] | Species | Source | Method |
| 10060-12-5 | Chromtrichlorid-6-hydrat | | | | | |
| | Acute fish toxicity | LC50 mg/l | 11,2 | 96 h | Oncorhynchus mykiss | Prog. Fish-Cult. 39: 150, 1977 (1977) other: Committee on Methods for Toxicity |
| | Acute algae toxicity | ErC50 mg/l | 0,397 | 96 h | Scenedesmus capricornutum | referenced in EPA, Ambient water quality EPA OTS 797.1050 |
| | Acute crustacea toxicity | EC50 mg/l | 3,24 | 48 h | Daphnia sp. | Journal of Water Resource and Protection OECD Guideline 202 |
| | Fish toxicity | NOEC mg/l | 0,048 | 72 d | steelhead trout | Publication (1984) OECD Guideline 210 |
| | Crustacea toxicity | NOEC | 0,7 mg/l | 21 d | Daphnia magna | Publication (1989) OECD Guideline 211 |

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

BCF

| CAS No | Chemical name | BCF | Species | Source |
|------------|--------------------------|-----|------------------------|--------------------|
| 10060-12-5 | Chromtrichlorid-6-hydrat | 115 | AMERICAN EASTERNOYSTER | Publication (1969) |

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Send to a physico-chemical treatment facility under observation of official regulations.
Do not allow to enter into surface water or drains.

Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific

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to the industry and process.

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

| | |
|--|--|
| 14.1. UN number or ID number: | UN 3260 |
| 14.2. UN proper shipping name: | CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Chromtrichlorid-6-hydrat) |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | III |
| Hazard label: | 8 |
| Classification code: | C2 |
| Special Provisions: | 274 |
| Limited quantity: | 5 kg |
| Excepted quantity: | E1 |
| Transport category: | 3 |
| Hazard No: | 80 |
| Tunnel restriction code: | E |

Inland waterways transport (ADN)

| | |
|--|--|
| 14.1. UN number or ID number: | UN 3260 |
| 14.2. UN proper shipping name: | CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Chromtrichlorid-6-hydrat) |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | III |
| Hazard label: | 8 |
| Classification code: | C2 |
| Special Provisions: | 274 |
| Limited quantity: | 5 kg |
| Excepted quantity: | E1 |

Marine transport (IMDG)

| | |
|--|--|
| 14.1. UN number or ID number: | UN 3260 |
| 14.2. UN proper shipping name: | CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Chromtrichlorid-6-hydrat) |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | III |
| Hazard label: | 8 |
| Special Provisions: | 223, 274 |
| Limited quantity: | 5 kg |
| Excepted quantity: | E1 |
| EmS: | F-A, S-B |

Air transport (ICAO-TI/IATA-DGR)

| | |
|--|--|
| 14.1. UN number or ID number: | UN 3260 |
| 14.2. UN proper shipping name: | CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Chromtrichlorid-6-hydrat) |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | III |
| Hazard label: | 8 |
| Special Provisions: | A3 A803 |
| Limited quantity Passenger: | 5 kg |
| Passenger LQ: | Y845 |
| Excepted quantity: | E1 |
| IATA-packing instructions - Passenger: | 860 |
| IATA-max. quantity - Passenger: | 25 kg |

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IATA-packing instructions - Cargo: 864
IATA-max. quantity - Cargo: 100 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes
Danger releasing substance: Chromtrichlorid-6-hydrat

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Information according to 2012/18/EU (SEVESO III): E2 Hazardous to the Aquatic Environment

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 11,12.

Abbreviations and acronyms

Met. Corr: Substance or mixture corrosive to metals
Acute Tox: Acute toxicity
Skin Sens: Skin sensitisation
Aquatic Chronic: Chronic aquatic hazard

Relevant H and EUH statements (number and full text)

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.