

Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



44250 Viridian Green

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Revised edition: 15.12.2022

Version: 3

Printed: 17.01.2023

1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1. Product Identifier

Product Name: Viridian Green

Article No.: 44250

UFI: --

1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

Identified uses:
Colorant in cosmetics, artists colors, paints and coatings; catalyts.

Uses advised against:

1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

Company: Kremer Pigmente GmbH & Co. KG

Address: Hauptstr. 41-47, 88317 Aichstetten, Germany

Tel./Fax.: Tel +49 7565 914480, Fax +49 7565 1606

Internet: www.kremer-pigmente.com

E-Mail: info@kremer-pigmente.com

Importer: --

1.4. Emergency No.

Emergency No.: +49 7565 914480 (Mon-Fri 8:00 - 17:00)

1.4.2 Poison Center:

2. Hazards Identification

2.1. Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

This product does not require classification and labelling as hazardous according to CLP/GHS.

Possible Environmental Effects:

2.2. Label Elements

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

No classification required according to the CLP/GHS guidelines.

Hazard designation:

Not applicable.

Signal word:

Hazard designation:

Safety designation:

Hazardous components for labelling:

2.3. Other Hazards

No special hazards known.

3. Composition/Information on Ingredients

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3.1. Substance

3.2. Mixture

Chemical Characterization: Chromic oxide dihydrate. Pigment Green 18, C.I. 77289

Information on Components / Hazardous Ingredients:

Chromium hydrate; REACH Reg. No. 01-2119433951-39-0002	> 95 %	CAS-Nr: 12001-99-9 EINECS-Nr: 215-160-9 EC-Nr:
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Boron oxide (H360FD)	< 0.3 %	CAS-Nr: 1303-86-2 EINECS-Nr: 215-125-8 EC-Nr: 005-008-00-8
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Additional information:

4. First Aid Measures

4.1. Description of the First Aid Measures

General information:

Seek medical attention in case of complaints.

After inhalation:

*Supply fresh air and seek medical advice in case of complaints.
Give artificial respiration in case breathing is not regular or if it has stopped.*

After skin contact:

*Wash with soap and rinse with plenty of water.
Wash contaminated clothing before reuse.*

After eye contact:

*Rinse open eyes with plenty of water for at least 15 minutes.
Consult physician.*

After ingestion:

4.2. Most important Symptoms and Effects, both Acute and Delayed

Symptoms:

Long-term exposure may damage the lungs and respiratory tract.

Effects:

4.3. Indication of any Immediate Medical Attention and special Treatment needed

Treatment:

Treat symptomatically.

5. Fire-Fighting Measures

5.1. Extinguishing Media

Suitable extinguishing media:

Foam, carbon dioxide (CO₂), extinguishing powder, water spray, water mist.

Unsuitable extinguishing media:

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5.2. Special Hazards arising from the Substance or Mixture

Special hazards:

In case of fire: hazardous gases/vapors may be released.

5.3. Advice for Firefighters

Protective equipment:

Wear suitable protective clothing.

Wear self-contained respiratory protective device.

Further information:

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

Wear protective clothing.

6.2. Environmental Precautions

Environmental precautions:

Prevent contamination of soil, drains and surface waters.

Contact local authorities if product pollutes soil or vegetation.

6.3. Methods and Material for Containment and Cleaning Up

Methods and material:

Take up mechanically and collect in suitable containers for disposal. Avoid dust formation.

Collect powder using a special dust vacuum cleaner with particle filter and dispose in a adequate resealable container.

6.4. Reference to other Sections

Protective clothing, see Section 8.

See Section 13 for information on disposal.

7. Handling and Storage

7.1. Precautions for Safe Handling

Instructions on safe handling:

Wear adequate protective clothing (see para. 8).

Avoid contact with eyes, skin and clothing.

Provide adequate ventilation.

Hygienic measures:

Keep away from foodstuffs and drinks.

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:

Store in tightly sealed containers in a dry room.

Store locked up.

Requirements for storage areas and containers:

Store the product in the original container.

Information on fire and explosion protection:

Do not store together with ignitable sources, heat and fire.

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Storage class:

Further Information:

7.3. Specific End Use(s)

Further information:

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

Chromium hydrate (CAS 12001-99-9; as Cr III): TLW: 2 mg/m³ (inhalable fraction)

Boron oxide (CAS 1303-86-2), MAK: 15 mg/m³ (inhalable fraction); STEL 75 mg/m³ (inhalable fraction); TWA: 10 mg/m³

Parameters to be controlled:

Chromium hydrate (CAS 12001-99-9; as Cr III): TWA: 0.5 mg/m³ (BE, CZ, HU, GB, FI, CH, PO, NO, SE, IE, RO); TWA: 2 mg/m³ (FR, ES, AT, LU)

Boron oxide (CAS 1303-96-4): TWA: 10 mg/m³ (BE,FR, ES, PO); TWA: 10 mg/m³, Ceiling: 20 mg/m³ (IS); TWA: 10 mg/m³, STEL: 20 mg/m³ (GB, IE); TWA: 10 mg/m³; STEL: 15 mg/m³ (NO); TWA/STEL: 5 mg/m³ (CH); TWA: 15 mg/m³; STEL: 75 mg/m³ (A); TWA(MAK): 1.8 mg/m³ (CH)

Derived No-Effect Level (DNEL):

Chromium Hydrate (12001-99-9): 0.5 mg/m³ (inhalation)

Predicted No-Effect Concentration (PNEC):

Additional Information:

Workplace Exposure Limit (WEL): The user must take precautions to ensure that the environmental controls employed are adequate to maintain the exposure level below the WEL.

8.2. Exposure Controls

Technical protective measures:

Adequate ventilation.

Facilities storing or utilizing this material should be equipped with an eyewash facility.

Personal Protection

General protective measures:

Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.

Respiratory protection:

Required in case of insufficient ventilation (EN 143 or 149).

Hand protection:

Chemical protective gloves (EN 374 (Europe), F739 (US)).

Protective glove material:

Eye protection:

Safety glasses with protective shields (EN 166).

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Body protection:

Protective clothing should be laundered at the end of the working period.

Environmental precautions:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Chromium hydrate is not classified for environmental effects and its solubility is very low.

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

<i>Form:</i>	<i>powder</i>
<i>Color:</i>	<i>blue-green</i>
<i>Odor:</i>	<i>odorless</i>
<i>Odor threshold:</i>	<i>no information available</i>
<i>pH-Value:</i>	<i>not applicable</i>
<i>Melting temperature:</i>	<i>> 450°C</i>
<i>Boiling temperature:</i>	<i>not available</i>
<i>Flash point:</i>	<i>not applicable</i>
<i>Evaporation rate:</i>	<i>not applicable</i>
<i>Flammability (solid, gas):</i>	<i>non-combustible</i>
<i>Upper explosion limit:</i>	<i>no information available</i>
<i>Lower explosion limit:</i>	<i>no information available</i>
<i>Vapor pressure:</i>	<i>not applicable</i>
<i>Vapor density:</i>	
<i>Density:</i>	<i>3.21 g/cm³ (20°C)</i>
<i>Solubility in water:</i>	<i>insoluble</i>
<i>Coefficient of variation (n-Octanol/Water):</i>	<i>not determined</i>

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Auto-ignition temperature:

not applicable

Decomposition temperature:

not applicable

Viscosity, dynamic:

not applicable

Explosive properties:

not explosive

Oxidizing properties:

not oxidizing

Bulk density:

ca. 400 kg/m³

9.2. Further Information

Solubility in solvents:

Viscosity, kinematic:

Burning class:

Solvent content:

Solid content:

Particle size:

Other information:

No further information.

10. Stability and Reactivity

10.1. Reactivity

Stable if used according to specifications.

Boron oxide may react slowly with water to form boric acid.

10.2. Chemical Stability

Stable if used according to specifications.

10.3. Possibility of Hazardous Reactions

Unknown.

10.4. Conditions to Avoid

Conditions to avoid:

Avoid humidity.

Thermal decomposition:

10.5. Incompatible Materials

Strong oxidizing agents.

10.6. Hazardous Decomposition Products

Chromium oxides

10.7. Further Information

11. Toxicological Information

11.1. Information on Hazard Classes as defined in Regulation (EC) No. 1272/2008

Acute Toxicity

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LD50, oral:

*Chromic oxide (1308-38-9): > 5000 mg/kg (rat)
Boron oxide (impurity) (1303-86-2): 3163 mg/l (mouse); other:
1868 (mouse)*

LD50, dermal:

No information available.

LC50, inhalation:

*Chromic oxide (1308-38-9): > 5.41 mg/l (4h; rat)
High concentrations of dust may irritate throat and respiratory
system and cause coughing.*

Primary effects

Irritant effect on skin:

Non irritating

Irritant effect on eyes:

Dust may irritate eyes.

Inhalation:

Can cause irritation of the respiratory system.

Ingestion:

Not classified as harmful.

Sensitization:

No sensitizing effects known.

Mutagenicity:

No mutagenic effects known.

Reproductive toxicity:

*May damage fertility. May damage the unborn child.
A human study of occupationally exposed borate worker
population showed no adverse reproductive effects. Animal
studies indicate that boric acid reduces or inhibits sperm
production, causes testicular atrophy, and, when given to pregnant
animals during gestation, may cause developmental changes.
These feed studies were conducted under chronic exposure
conditions leading to doses well in excess of those that could
occur through inhalation of dust in the occupational setting.*

Carcinogenicity:

*This product is not considered to be a carcinogen by IARC,ACGIH,
NTP or OSHA.
Chromium ion (Cr³⁺) (CAS 16065-83-1):
IARC: 3, Not classifiable as to carcinogenicity to humans.*

Teratogenicity:

Not considered to be teratogenic.

Specific target organ toxicity (STOT):

*Single exposure: no information available.
Repeated exposure: no information available.*

Aspiration hazard

No risk of aspiration.

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11.2. Information on other Hazards

Endocrine Disrupting Properties:

This substance/mixture does not contain any components with endocrine disrupting properties in a percentage of 0.1 or greater, according to Article 57(f) of the REACH Regulation (EC) No. 1907/2006 or the Delegated Regulation (EC) 2017/2100 or the Delegated Regulation (EC) 2018/605.

12. Ecological Information

12.1. Aquatic Toxicity

Fish toxicity:

Chromium hydrate: LC0: > 10 g/l (96h, Danio rerio)

Boron oxide: LC50: 150 mg/l (24d, Oncorhynchus mykiss)

Daphnia toxicity:

Boron oxide: EC50: 370-490 mg/l (48h, Daphnia magna)

Bacteria toxicity:

Chromium hydrate: NOEC: > 6480 g/l (24h, Pseudomonas fluorescens)

Algae toxicity:

No information available.

12.2. Persistency and Degradability

No information available.

12.3. Bioaccumulation

No bioaccumulation.

12.4. Mobility

No information available.

12.5. Results of PBT- und vPvP Assessment

Not applicable.

12.6. Endocrine Disrupting Properties

This substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) No. 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1 % or higher.

12.7. Other Adverse Effects

Water hazard class:

Do not let product contaminate ground water, waterways or sewage system.

Behaviour in sewage systems:

Further ecological effects:

AOX Value:

13. Disposal Considerations

13.1. Waste Treatment Methods

Product:

Dispose of according to official national and local regulations.

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European Waste Code (EWC):

Waste codes should be assigned by the user based on the application for which the product was used.

Uncleaned packaging:

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Waste Code No.:

14. Transport Information

14.1. UN Number

ADR, IMDG, IATA

14.2. UN Proper Shipping Name

ADR/RID:

No hazardous goods according to ADR / DOT (US) (land transportation).

IMDG/IATA:

Not hazardous goods

14.3. Transport Hazard Classes

ADR Class:

not applicable

Hazard no.:

Classification code:

Tunnel restriction code:

IMDG Class (sea):

not applicable

Hazard no.:

EmS No.:

IATA Class:

not applicable

Hazard no.:

14.4. Packaging Group

ADR/RID:

not applicable

IMDG:

IATA:

14.5. Environmental Hazards

None

14.6. Special Precautions for User

Not classified as a dangerous good under transport regulations.

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14.7. Maritime Transport in Bulk according to IMO Instruments

not applicable

14.8. Further Information

15. Regulatory Information

15.1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

Water hazard class:

1, slightly hazardous for water (German Regulation)

Local regulations on chemical accidents:

Employment restrictions:

Restriction and prohibition of application:

Technical instructions on air quality:

15.2. Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

15.3. Further Information

Listed in the following inventories:

*EINECS (EU), TSCA (US), AICS (AUS), DSL (CA), PICCS (PH),
KECI (KR), ENCS (JP), NZIoC (NZ), IECSC (CN), NECI (TW)*

*Regulation (EC) 2037/2000 - Substances that Deplete the Ozone
Layer: not regulated / not applicable*

*Regulation (EC) 850/2004 - Persistent Organic Pollutants and
amending Directive 79/117/EEC: not regulated / not applicable*

*Regulation (EC) 689/2008 concerning the export and import of
dangerous chemicals: not regulated / not applicable*

16. Other Information

This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.