

Safety Data Sheet

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



48001 Iron Oxide Yellow, maize yellow

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Revised edition: 26.04.2023

Version: 3

Printed: 30.10.2023

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

1.1. Product Identifier

Product Name: Iron Oxide Yellow, maize yellow

Article No.: 48001

UFI: --

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

Identified uses:
Coloring agent (pigment and dyes), inorganic.

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

Dust may be produced when working with this material, which can cause a mechanical irritation of eyes, nose and respiratory tract.

Composition/Information on Ingredients

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3.1. Substance

3.2. Mixture

Chemical Characterization: Pigment Yellow 42, C.I. 77492, α -FeOOH

Information on Components / Hazardous Ingredients:

Iron hydroxide oxide; REACH Reg. No. 01-2119457554-33-0000	100 %	CAS-Nr: 51274-00-1 EINECS-Nr: 257-098-5 EC-Nr:
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Additional information:

*This product/this mixture contains nanoforms.
Particle size distribution: $d_{10} = 5 - 60 \text{ nm}$; $d_{50} = 10 - 100 \text{ nm}$; $d_{90} = 12 - 200 \text{ nm}$
Form: acicular (Aspect ratio $(x) = 1:(4-6)$); Goethite; No specific treatment; Specific surface area: $10 - 120 \text{ m}^2/\text{g}$*

4. First Aid Measures

4.1. Description of the First Aid Measures

General information:

After inhalation:

Supply fresh air.

After skin contact:

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

After eye contact:

Rinse open eyes with plenty of water. In case of discomfort seek medical help.

After ingestion:

*Rinse mouth with water and drink plenty of water.
No long-term effects are expected. Should large amounts of product have been swallowed, medical advice should be consulted.*

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

Symptoms:

No further information available.

Effects:

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

Treatment:

No further information available.

5. Fire-Fighting Measures

5.1. Extinguishing Media

Suitable extinguishing media:

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

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Unsuitable extinguishing media:

Water with full jet.

5.2. Special Hazards arising from the Substance or Mixture

Special hazards:

Product is not flammable.

5.3. Advice for Firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Wear suitable protective clothing.

Further information:

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

Wear protective clothing.

Floor may be slippery; use care to avoid falling.

Keep unprotected persons out of danger zone.

6.2. Environmental Precautions

Environmental precautions:

Prevent contamination of soils, drains and surface water.

6.3. Methods and Material for Containment and Cleaning Up

Methods and material:

Clean up mechanically. Avoid dust formation.

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:

Provide adequate ventilation.

Avoid formation of dust.

Hygienic measures:

Do not eat or drink during work. Do not smoke.

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:

Store in tightly sealed containers in a dry and well ventilated location.

Requirements for storage areas and containers:

Store the product in the original container.

Information on fire and explosion protection:

Storage class:

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13; Non combustible solids (TRGS 510)

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):

Iron oxide hydroxide (CAS 51274-00-1):

TRGS 900

TLV: 10 mg/m³ inhalable fraction (general dust limit)

TLV: 3 mg/m³ air-borne fraction (general dust limit)

Parameters to be controlled:

Derived No-Effect Level (DNEL):

Iron oxide hydroxide (CAS 51274-00-1):

10 mg/m³ (worker, inhalation, long-term exposure - local effects)

3 mg/m³ (worker, inhalation, long-term exposure - local effects)

Predicted No-Effect Concentration (PNEC):

Additional Information:

8.2. Exposure Controls

Technical protective measures:

Provide adequate ventilation in case of dust formation.

Personal Protection

General protective measures:

*Do not inhale dust. Do not eat, drink or smoke while working.
Wash hands before breaks and at the end of work.*

Respiratory protection:

Required in case of insufficient ventilation.

Respiratory protection (e.g. FFP 1).

Hand protection:

Protective gloves (EN 374)

Protective glove material:

Eye protection:

Safety glasses with protective shields (EN 166).

Body protection:

Protective clothing.

Environmental precautions:

Do not allow entering sewerage system.

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

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<i>Form:</i>	<i>powder</i>
<i>Color:</i>	<i>yellow</i>
<i>Odor:</i>	<i>odorless</i>
<i>Odor threshold:</i>	<i>no information available</i>
<i>pH-Value:</i>	<i>4 - 8 (100 g/l)</i>
<i>Melting temperature:</i>	<i>> 1000°C</i>
<i>Boiling temperature:</i>	<i>not applicable</i>
<i>Flash point:</i>	<i>not applicable</i>
<i>Evaporation rate:</i>	<i>not applicable</i>
<i>Flammability (solid, gas):</i>	<i>not applicable</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>4.3 g/cm³</i>
<i>Solubility in water:</i>	<i>insoluble</i>
<i>Coefficient of variation (n-Octanol/Water):</i>	<i>not determined</i>
<i>Auto-ignition temperature:</i>	<i>not applicable</i>
<i>Decomposition temperature:</i>	<i>not determined</i>
<i>Viscosity, dynamic:</i>	<i>not applicable</i>
<i>Explosive properties:</i>	<i>not applicable</i>
<i>Oxidizing properties:</i>	<i>no information available</i>
<i>Bulk density:</i>	<i>500 - 800 kg/m³</i>

9. 2. Further Information

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Solubility in solvents:

Viscosity, kinematic:

Burning class:

Solvent content:

Solid content:

Particle size:

Partikel characteristics: This substance/ mixture contains nanoforms (see Section 3).

Other information:

No further information.

10. Stability and Reactivity

10.1. Reactivity

No information available.

10.2. Chemical Stability

No decomposition if used according to specifications.

10.3. Possibility of Hazardous Reactions

Unknown.

10.4. Conditions to Avoid

Conditions to avoid:

Avoid heat.

Thermal decomposition:

> 180°C. Conversion to Fe₂O₃.

10.5. Incompatible Materials

Strong reducing agents, such as aluminium, magnesium, ethylene oxide, calcium hypochlorite

10.6. Hazardous Decomposition Products

None known.

10.7. Further Information

11. Toxicological Information

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

Acute Toxicity

Iron oxide hydroxide:

LD₅₀, oral:

> 10000 mg/kg (rat)

LD₅₀, dermal:

No information available.

LC₅₀, inhalation:

> 195 mg/m³ (rat, 2 weeks)

Primary effects

Irritant effect on skin:

No irritant effect known.

Irritant effect on eyes:

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Reversible, mechanical irritation possible.

Inhalation:

No information available.

Ingestion:

No information available

Sensitization:

Not sensitizing (guinea pig).

Mutagenicity:

No relevant data found.

Reproductive toxicity:

No information available.

Carcinogenicity:

No relevant data found.

Teratogenicity:

No information available.

Specific target organ toxicity (STOT):

No relevant data found.

Aspiration hazard:

No risk of aspiration.

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:

Iron hydroxide oxide: LC50: > 50000 mg/l (96h, Danio rerio)

Daphnia toxicity:

Iron hydroxide oxide: EC50: > 100 mg/l (48h, Daphnia magna)

Bacteria toxicity:

Iron hydroxide oxide: EC50: > 10000 mg/l (3h, Microorganisms)

Algae toxicity:

12. 2. Persistency and Degradability

No information available.

12. 3. Bioaccumulation

No information available.

12. 4. Mobility

No information available.

12. 5. Results of PBT- und vPvP Assessment

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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:

Not hazardous.

Behaviour in sewage systems:

Further ecological effects:

AOX Value:

13. Disposal Considerations

13. 1. Waste Treatment Methods

Product:

If product cannot be reused or recycled, it has to be disposed of according to current local regulations.

European Waste Code (EWC):

060316 - Wastes from the MFSU of salts and their solutions and metallic oxides other than those mentioned in 06 03 15.

Uncleaned packaging:

Contaminated packaging must be disposed like the substance.

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:

14. 3. Transport Hazard Classes

ADR Class:

not applicable

Hazard no.:

Classification code:

Tunnel restriction code:

IMDG Class (sea):

not applicable

Hazard no.:

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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.

14. 7. Maritime Transport in Bulk according to IMO Instruments

14. 8. Further Information

15. Regulatory Information

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

Water hazard class:

0, not hazardous (according to the German Regulation AwSV)

Local regulations on chemical accidents:

Seveso III: does not apply

Employment restrictions:

Restriction and prohibition of application:

EC. REACH, Section XVII, Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles: not applicable

Technical instructions on air quality:

15. 2. Chemical Safety Assessment

A Chemical Safety Assessment is not necessary for this product.

15. 3. Further Information

Regulation (EC) 1005/2009 - 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) 649/2012 concerning the export and import of dangerous chemicals: 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.