



117 Unbleached Titanium Dioxide

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Substance name : 117 Unbleached Titanium Dioxide
IUPAC name : Ilmenite (FeTiO₃), conc.
EC-No. : 308-551-1
CAS-No. : 98072-94-7
REACH registration No : 01-2119556873-27

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Pigment

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Michael Harding Art Formulas Ltd
Unit K Springvale Industrial Estate
Cwmbran
Gwent
NP44 5BE

1.4. Emergency telephone number

Emergency number : +01633 484700

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to display Extra classification(s) to display

Precautionary statements (CLP) : P261 - Avoid breathing dust.
P273 - Avoid release to the environment.
P314 - Get medical advice/attention if you feel unwell.
P391 - Collect spillage.
P402 - Store in a dry place.
P501 - Dispose of container to National regulations.

2.3. Other hazards not contributing to the classification

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Unbleached Titanium Dioxide
CAS-No. : 98072-94-7
EC-No. : 308-551-1

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| Name | Product identifier | % |
|--|---|------|
| Iron oxide (Fe ₂ O ₃) | (CAS-No.) 1309-37-1 (EC-No.) 215-168-2 (REACH-no) not available | < 5 |
| Silicon dioxide | (CAS-No.) 112926-00-8 (EC-No.) 601-214-2 (REACH-no) not available | 1.25 |

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Wash hands with water and soap.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- First-aid measures after ingestion : Rinse mouth immediately and drink plenty of water. If you feel unwell, seek medical advice.

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

- Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure. Irritating to the respiratory system, may cause throat pain and cough. may aggravate pre-existing respiratory conditions or allergies.
- Symptoms/effects after skin contact : Frequent or prolonged contact with skin may cause dermal irritation.
- Symptoms/effects after eye contact : May cause mechanical irritation on direct contact with eyes.
- Symptoms/effects after ingestion : Ingestion of used product may cause abdominal discomfort.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Non flammable. Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use water jet.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : None known.
- Explosion hazard : None known.
- Hazardous decomposition products in case of fire : None.

5.3. Advice for firefighters

- Firefighting instructions : The product is not flammable.
- Protective equipment for firefighters : In case of fire: Wear self-contained breathing apparatus. Special protective equipment for firefighters.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Wear suitable protective clothing.
- Emergency procedures : Ensure adequate ventilation. Evacuate unnecessary personnel.
- Measures in case of dust release : Avoid breathing dust. Mechanically ventilate the spillage area.

6.1.2. For emergency responders

- Protective equipment : Wear suitable protective clothing, gloves and eye/face protection. In case of fire: Wear self-contained breathing apparatus.
- Emergency procedures : Provide adequate ventilation. Evacuate area.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6.3. Methods and material for containment and cleaning up

- For containment : Ventilate affected area. Stop leak if safe to do so. Avoid creating or spreading dust. Use clean-up methods that avoid dust generation (vacuum wet).
- Methods for cleaning up : Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

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6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

| | |
|-----------------------------------|---|
| Additional hazards when processed | : Generation of airborne dust. |
| Precautions for safe handling | : Do not breathe dust. Avoid creating or spreading dust. Minimize generation of dust. Where excessive dust may result, wear approved mask. |
| Hygiene measures | : Do not eat, drink or smoke when using this product. Remove all contaminated clothing and footwear. Wash hands thoroughly after handling. Take care for general good hygiene and housekeeping. |

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area. Keep container tightly closed. Protect from sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| HITOX® STD, ULX and SF & TIOPREM® C BEIGE (98072-94-7) | | |
|--|--|--|
| Bulgaria | OEL TWA (mg/m ³) | 2 mg/m ³ |
| Estonia | OEL TWA (mg/m ³) | 2 mg/m ³ |
| Finland | HTP-arvo (8h) (mg/m ³) | 2 mg/m ³ |
| Lithuania | IPRV (mg/m ³) | 1 mg/m ³ |
| Sweden | nivågränsvärde (NVG) (mg/m ³) | 1 mg/m ³ |
| USA - ACGIH | ACGIH TWA (mg/m ³) | 1 mg/m ³ |
| Iron oxide (Fe ₂ O ₃) (1309-37-1) | | |
| Austria | MAK (mg/m ³) | 5 mg/m ³ (respirable fraction) 10 mg/m ³ (inhalable fraction) |
| Austria | MAK Short time value (mg/m ³) | 10 mg/m ³ (respirable fraction) |
| Belgium | Limit value (mg/m ³) | 5 mg/m ³ (fume) |
| Bulgaria | OEL TWA (mg/m ³) | 5 mg/m ³ |
| Croatia | GVI (granična vrijednost izloženosti) (mg/m ³) | 4 mg/m ³ (respirable dust) 5 mg/m ³ (fume) 10 mg/m ³ (total dust) |
| Croatia | KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³) | 10 mg/m ³ (fume) |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 3.5 mg/m ³ |
| Estonia | OEL TWA (mg/m ³) | 3.5 mg/m ³ (respirable dust) |
| Finland | HTP-arvo (8h) (mg/m ³) | 5 mg/m ³ (fume) |
| France | Local name | Fer (Trioxyde de di-, fumées), en Fe |
| France | VME (mg/m ³) | 5 mg/m ³ |
| France | Note (FR) | Valeurs recommandées/admises |
| Greece | OEL TWA (mg/m ³) | 10 mg/m ³ |
| Greece | OEL STEL (mg/m ³) | 10 mg/m ³ |
| Hungary | AK-érték | 6 mg/m ³ (respirable dust) |
| Ireland | OEL (8 hours ref) (mg/m ³) | 5 mg/m ³ (fume) 10 mg/m ³ (total inhalable dust) 4 mg/m ³ (respirable dust) |
| Ireland | OEL (15 min ref) (mg/m ³) | 30 mg/m ³ (calculated-total inhalable dust) 12 mg/m ³ (fume) 12 mg/m ³ (calculated-respirable dust) |
| Lithuania | IPRV (mg/m ³) | 3.5 mg/m ³ (inhalable fraction) |
| Poland | NDS (mg/m ³) | 5 mg/m ³ (respirable fraction) |
| Poland | NDSch (mg/m ³) | 10 mg/m ³ (respirable fraction) |
| Portugal | OEL TWA (mg/m ³) | 5 mg/m ³ (respirable fraction) |
| Romania | OEL TWA (mg/m ³) | 5 mg/m ³ (dust and fume) |
| Romania | OEL STEL (mg/m ³) | 10 mg/m ³ (dust and fume) |
| Slovakia | NPHV (priemerná) (mg/m ³) | 1.5 mg/m ³ |

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| Iron oxide (Fe₂O₃) (1309-37-1) | | |
|---|---|---|
| Spain | VLA-ED (mg/m ³) | 5 mg/m ³ (dust and fume) |
| Sweden | nivågränsvärde (NVG) (mg/m ³) | 3.5 mg/m ³ (respirable dust) |
| United Kingdom | Local name | Iron oxide |
| United Kingdom | WEL TWA (mg/m ³) | 5 mg/m ³ fume (as Fe) |
| United Kingdom | WEL STEL (mg/m ³) | 10 mg/m ³ fume (as Fe) |
| Norway | Grenseverdier (AN) (mg/m ³) | 3 mg/m ³ |
| Norway | Grenseverdier (Korttidsverdi) (mg/m ³) | 6 mg/m ³ (value calculated) |
| Switzerland | MAK (mg/m ³) | 3 mg/m ³ (respirable dust) |
| Australia | TWA (mg/m ³) | 5 mg/m ³ (fume) 10 mg/m ³ (containing no asbestos and <1% crystalline silica-inhalable dust) |
| Canada (Quebec) | VEMP (mg/m ³) | 5 mg/m ³ (dust and fume) 10 mg/m ³ (containing no Asbestos and <1% Crystalline silica, regulated under Rouge-total dust) |
| USA - ACGIH | Local name | Iron oxide (Fe O) |
| USA - ACGIH | ACGIH TWA (mg/m ³) | 5 mg/m ³ |
| USA - ACGIH | Remark (ACGIH) | Pneumoconiosis |
| USA - IDLH | US IDLH (mg/m ³) | 2500 mg/m ³ (dust and fume) |
| USA - NIOSH | NIOSH REL (TWA) (mg/m ³) | 5 mg/m ³ (dust and fume) |
| USA - OSHA | Local name | Iron oxide fume |
| USA - OSHA | OSHA PEL (TWA) (mg/m ³) | 10 mg/m ³ |
| Silicon dioxide (112926-00-8) | | |
| Austria | MAK (mg/m ³) | 4 mg/m ³ |
| Austria | Remark (AT) | inhalable aerosol |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 2 mg/m ³ |
| Denmark | Grænseværdie (kortvarig) (mg/m ³) | 4 mg/m ³ |
| Denmark | Anmærkninger (DK) | inhalable aerosol |
| Finland | HTP-arvo (8h) (mg/m ³) | 5 mg/m ³ |
| Germany | TRGS 900 Occupational exposure limit value (mg/m ³) | 4 mg/m ³ |
| Germany | TRGS 900 Remark | (gemessen als einatembarer Aerosolanteil) |
| Spain | VLA-ED (mg/m ³) | 10 mg/m ³ |
| Spain | Notes | respirable aerosol |
| United Kingdom | WEL TWA (mg/m ³) | 6 mg/m ³ inhalable aerosol 2.4 mg/m ³ respirable aerosol |
| Switzerland | MAK (mg/m ³) | 4 mg/m ³ |
| Switzerland | Remark (CH) | inhalable aerosol |
| Canada (Quebec) | VEMP (mg/m ³) | 6 mg/m ³ |
| USA - NIOSH | NIOSH REL (TWA) (mg/m ³) | 6 mg/m ³ |
| USA - OSHA | OSHA PEL (TWA) (mg/m ³) | 80 mg/m ³ |
| USA - OSHA | OSHA PEL (TWA) (ppm) | 20 ppm |

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment:

Safety glasses. Gloves. Protective clothing. Dust production: dust mask with filter type P3.

Materials for protective clothing:

Wear suitable protective clothing. Wear chemical resistant protective clothing (EN 14605) and protective shoes (S1P or S3)

Hand protection:

Wear suitable gloves tested to EN 374. NBR (Nitrile rubber). Thickness of glove material: > 0.35 mm. Breakthrough time : > 60 minutes. Unsuitable material: neoprene

Eye protection:

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Safety glasses with side shields. EN 166

Respiratory protection:

Dust production: dust mask with filter type P3. half-mask with filter according to EN 149.



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--|
| Physical state | : Solid |
| Appearance | : Powder. |
| Colour | : Beige. |
| Odour | : Odourless. |
| Odour threshold | : No data available |
| pH | : 6.5 - 7.5 @ 10% as an aqueous slurry |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : 1840 °C |
| Freezing point | : No data available |
| Boiling point | : 2500 - 3000 °C |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Density | : 4.1 |
| Solubility | : insoluble in water. |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : Not explosive. |
| Oxidising properties | : not oxidizing. |
| Explosive limits | : No data available |

9.2. Other information

| | |
|--------------|-------------------------------|
| Bulk density | : 400 - 450 kg/m ³ |
|--------------|-------------------------------|

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None known. hazardous polymerization.

10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

None known under normal conditions of use.

10.6. Hazardous decomposition products

None known.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

| Iron oxide (Fe ₂ O ₃) (1309-37-1) | |
|--|---------------|
| LD50 oral rat | > 10000 mg/kg |

Skin corrosion/irritation : Not classified
pH: 6.5 - 7.5 @ 10% as an aqueous slurry

Serious eye damage/irritation : Not classified
pH: 6.5 - 7.5 @ 10% as an aqueous slurry

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

| HITOX® STD, ULX and SF & TIOPREM® C BEIGE (98072-94-7) | |
|--|---------------------------|
| NOAEL (oral, rat, 90 days) | 3225 mg/kg bodyweight/day |

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not harmful to aquatic organisms.

| HITOX® STD, ULX and SF & TIOPREM® C BEIGE (98072-94-7) | |
|--|--|
| NOEC chronic fish | 0.17 mg/l <i>Salvelinus fontinalis</i> - 60 days |

12.2. Persistence and degradability

| HITOX® STD, ULX and SF & TIOPREM® C BEIGE (98072-94-7) | |
|--|--|
| Persistence and degradability | not applicable. The methods for determining the biological degradability are not applicable to inorganic substances. |

12.3. Bioaccumulative potential

| HITOX® STD, ULX and SF & TIOPREM® C BEIGE (98072-94-7) | |
|--|-----------------|
| Bioaccumulative potential | Not applicable. |

12.4. Mobility in soil

| HITOX® STD, ULX and SF & TIOPREM® C BEIGE (98072-94-7) | |
|--|-----------------|
| Ecology - soil | Not applicable. |

12.5. Results of PBT and vPvB assessment

| HITOX® STD, ULX and SF & TIOPREM® C BEIGE (98072-94-7) | |
|--|--|
| This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII | |
| This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII | |

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IMDG | IATA | ADN | RID |
|--------------------------------------|---------------|---------------|---------------|---------------|
| 14.1. UN number | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.2. UN proper shipping name | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |

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| ADR | IMDG | IATA | ADN | RID |
|---|---------------|---------------|---------------|---------------|
| | | | | |
| 14.3. Transport hazard class(es) | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.4. Packing group | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.5. Environmental hazards | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| No supplementary information available | | | | |

14.6. Special precautions for user

- Overland transport

Not regulated

- Transport by sea

Not regulated

- Air transport

Not regulated

- Inland waterway transport

Not regulated

- Rail transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

15.1.2. National regulations

Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Recommendations Danish Regulation : Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

Chemical safety assessments for substances in this preparation were not carried out

SECTION 16: Other information

Indication of changes:

REACH registration No.

Oct 2019 rev 1.2 – Changed EC number of Silicon Dioxide impurity

Abbreviations and acronyms:

| | |
|-----|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| | CAS (Chemical Abstracts Service) number |

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| | |
|------|--|
| | CLP - Classification, Labelling and Packaging |
| | CSR - Chemical Safety Report |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| PBT | Persistent Bioaccumulative Toxic |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| vPvB | Very Persistent and Very Bioaccumulative |

SDS EU (Reach Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product