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| SAFETY DATA SHEET | Page 1 of 9 |
|---|---|
| | Issued on: 12.08.2015 |
| Trade name: **ULTRAFINE TiO2 CCR 220 Mn** | Revised on: 06.02.2026 |
| | Version: 8 |

## 1. Identification of the substance / mixture and of the company / undertaking

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|---|---|---|---|
| **1.1.** | **Product identifier (Product registration number, nanoform, UFI):** | **ULTRAFINE TiO2 CCR 220 Mn (Suspension of nanostructured TiO2)**<br>UFI: VG10-707E-300D-37TX | **Identification no.:**<br>P944413, P944414 |
| **1.2.** | **Relevant identified uses of the substance/mixture and uses advised against:** | UV protection, transparent coatings, as an additive to plastics. Product is prepared as a stabilized suspension of ultrafine Titanium dioxide ($TiO_2$) in water. | |
| **1.3.** | **Details of the supplier of the safety data sheet (manufacturer, importer, only representative, downstream user or distributor):** | | |
| 1.3.1. | Supplier name: | CINKARNA CELJE, d.d. | |
| 1.3.2. | Supplier address and phone: | Kidričeva 26, 3001 CELJE, SLOVENIJA, +386 3 427 60 00 | |
| 1.3.3. | E-Mail (competent person): | grega.kos@cinkarna.si | |
| **1.4.** | **Emergency phone number:** | In case of medical emergency please contact the doctor.<br>Additional informations are available during week from 7 AM to 3 PM on the telephone number +386 (0)41 619 788. | |

## 2. Hazards identification

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| **2.1.** | **Classification of substance or mixture:** | Oversensitivity of skin 1A, H317 |
| **2.2.** | **Label elements:** |  GHS07<br>**WARNING**<br>H317 May cause an allergic skin reaction.<br>P261 Avoid breathing dust/fume/gas/mist/vapours/spray.<br>P280 Wear protective gloves/protective clothing/eye protection/face protection.<br>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.<br>P501 Dispose of contents /container to in accordance with national |

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| | | regulations. |
| **2.3.** | **Other hazards:** | Product contains no persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) components at levels 0,1 % or higher.<br>Product contains no substances included in the list established in accordance with Article 57 of REACH having endocrine-disrupting properties at concentrations ≥ 0.1 %.<br>Nanoform assessment: In accordance with REACH Regulation (EC) No. 1907/2006, this mixture contains nanoforms. |
| Reference to Chapter 16 | | |

## 3. Composition / information on ingredients

**3.2** **Mixture**

| Chemical name | CAS n.<br>EC n.<br>Index | Registration n.<br>REACH | Conc.<br>(wt/vol/ max. conc. %) | (Regulation (EC) No 1272/2008 (CLP) | SCL, M-faktor, ATE |
| --- | --- | --- | --- | --- | --- |
| Titanium dioxide | 13463-67-7<br>236-675-5 | 01-2119489379-17001 | 15 - 17 % | | |
| 2-methylisothiazol-3(2H)-one | 2682-20-4<br>220-239-6<br>613-326-00-9 | | 0,0045 - 0,0055 % | Acute Tox. 2<br>Acute Tox. 3<br>Acute Tox. 3<br>Skin Corr. 1B<br>Eye Dam. 1<br>Skin Sens. 1A<br>Aquatic Acute 1<br>Aquatic Chronic 1<br>H330, H311, H301, H314, H318, H317, H400, H410 | Skin Sens. 1A;<br>H317: C >= 0,0015%<br>M = 10<br>M (chronic) = 1 |
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| Reference to Chapter 16 | | |
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| **4. First aid measures** | | |
| **4.1.** | **Description of first aid measures:** | |
| | Inhalation: | Since the product is a suspension form, there is no potentially harmful powder form present. |
| | Skin contact: | Rinse skin with water and soap. If needed, seek medical assistance. |
| | Eyes/mycosis contact: | Rinse with water. Remove any contact lenses and continue rinsing with water for at least 15 minutes. Seek medical assistance if required. |
| | Ingestion: | Rinse mouth with water; seek medical assistance if required. |
| **4.2** | **Most important symptoms and effects, acute and delayed:** | Not known. |
| **4.3.** | **Indication of any immediate medical attention and special treatment needed:** | Not required. |
| **5. Firefighting measures** | | |
| **5.1.** | **Extinguishing media** | |
| | Appropriate media: | Product is not flammable. If the product is involved in a fire, all conventional fire extinguishing agents may be used (CO2, water mist, dry chemicals, etc.). |
| | Inappropriate media: | Not known. |
| **5.2.** | **Specific hazards arising from the substance or mixture:** | |
| **5.3.** | **Advice for firefighters:** | No additional protection is needed. Protection in compliance with other circumstances. |
| **6. Accidental release measures** | | |
| **6.1.** | **Personal precautions, protective equipment and emergency procedures** | |
| 6.1.1. | For non-emergency persons: | Use protective equipment such as goggles and gloves (see Chapters 7 and 8). |
| 6.1.2. | For emergency responders: | Use protective equipment such as goggles and gloves (see Chapters 7 and 8). |
| **6.2.** | **Environmental precautions:** | Do not allow to enter into surface water or drains. |
| **6.3.** | **Methods and material for containment and cleaning up:** | |
| 6.3.1. | Appropriate spillage retaining techniques (fencing, covering drains, retaining procedures): | Prevent outflow in canalization and surface waters. Mechanically collect into designated and appropriately marked vessels / containers. |

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| 6.3.2. | Appropriate cleaning procedures | |
| | Neutralization techniques: | Product is neutral. |
| | Decontamination techniques: | Not needed. |
| | Absorbent materials: | All inert absorbent materials. |
| | Cleaning techniques: | Mechanically collect into designated and appropriately marked vessels / containers. Use inert absorbent material. |
| | Sucking techniques: | Not known. Product is in liquid form. |
| | Required equipment for retaining /cleaning: | Use protective equipment such as goggles and gloves. |
| 6.3.3. | Inappropriate cleaning or retaining techniques: | Not known. |
| 6.4. | **Reference to other sections:** | Not needed. |

## 7. Handling and storage

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| **7.1.** | **Precautions for safe handling** | |
| 7.1.1. | Recommendations shall be specified to: | Storage in closed vessels in suspension form. |
| | Safe handling of substance or mixture: | Avoid skin and eye contact. |
| | Prevent handling incompatible substances or mixtures: | Product is inert. |
| | Operations and conditions which create new risks by altering the properties of the substance or mixture, and to appropriate countermeasure: | Product is inert. |
| | Reduce the release of the substance or mixture to the environment: | Product should not be released in canalization or surface waters. |
| 7.1.2. | General working hygiene (prohibited eating, drinking and smoking within working area; washing hands …): | Normal working hygiene. |
| **7.2.** | **Conditions for safe storage, including any incompatibilities** | |
| | Management of risk associated with: | |
| | - explosive atmospheres: | No danger. |
| | - corrosive substances: | No danger. |
| | - incompatible substances or mixtures: | No danger. |
| | - evaporation substances: | Does not evaporate. |
| | - potential ignition sources: | No danger. |
| | How to control the effects of | |

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| | - weather conditions: | No danger. |
| | - ambient pressure: | No danger. |
| | - temperature: | Do not expose it over or below recommended handling temperature 5-40 °C. |
| | - sunlight: | Do not expose it to direct sunlight. |
| | - humidity: | No danger. |
| | Securing integrity of substance or mixture by use of: | |
| | - stabilizers: | No danger. |
| | - antioxidants: | No danger. |
| | Other advice including: | |
| | - ventilation requirements; | Data not available. |
| | - specific designs for storage rooms or vessels (including retention walls and ventilation): | Not needed. |
| | - quantity limitations regarding storage conditions: | Not needed. |
| | - packaging compatibility: | Not needed. |
| **7.3.** | **Specific end use(s):** | Data not available. |

## 8. Exposure control / personal protection

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| **8.1.** | **Control parameters** | |
| 8.1.1. | - Limit values (MV):<br>- Limit values (BAT): | 1000 mg/m3.<br>Data not available. |
| | DNEL: | Data not available. |
| | PNEC: | Data not available. |
| **8.2.** | **Exposure control** | |
| 8.2.1. | Appropriate engineering controls: | Data not available. |
| 8.2.2. | Personal protective equipment: | Standard personal protection equipment. |
| | - respiratory protection: | Not needed. |
| | - skin protection: | Protective clothing - SIST EN ISO 13688; protective footwear SIST EN ISO 20345. |
| | - hand protection: | Protective gloves - SIST EN ISO 374-1 (Latex, Nitril), Thickness 0.1 - 0.4 mm for single use, 0.5 - 1 mm for multiple use, penetration time 480 min. |
| | - eye/face protection: | Protective goggles - SIST EN ISO 16321-1 (SIST EN 166). |

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| | - heat radiation protection: | No danger. |
| | Other: | Normal working hygiene. |
| 8.2.3. | Environmental exposure control: | See chapter 7.1.1. |
| Reference to Chapter 16 | | |

## 9. Physical and chemical properties

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| **9.1.** | **Information on basic physical and chemical properties:** | |
| | Physical state: | White liquid. |
| | Colour | White. |
| | Odor: | Slightly pleasant smell. |
| | pH: | 6 - 8 ; in water suspension. |
| | Melting/freezing point: | ~ 0°C |
| | Boiling point or initial boiling point and boiling range | ~ 100°C |
| | Flash point: | Data not available. |
| | Auto-ignition temperature: | Data not available. |
| | Flammability (solid, gas): | Not flammable. |
| | Lower and upper explosion limit: | No danger. |
| | Vapor pressure: | Data not available. |
| | Density and/or relative density: | ~ 1,2 kg/L (room temperature) |
| | Solubility: | Nanoform is not soluble in either polar or non-polar solvents. |
| | Partition coefficient: n-octanol-water: | Does not apply to inorganic nanomaterials. |
| | Particle properties: | Particles are suspended.<br>Crystal size (Scherrer): ~ 5 nm<br>Morphology: needles / ellipsoids |
| | Decomposition temperature: | Data not available. |
| | Kinematic viscosity: | Data not available. |
| | Relative vapour density: | Data not available. |
| **9.2.** | **Other information:** | No other data. |
| **9.2.1** | **Information on physical hazard classes** | |
| | - Explosives: | Not explosive. |
| | - Flammable gases: | Not flammable. |
| | - Aerosols: | Look 2.2. |

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| | - Oxidizing gases: | Not oxidative. |
| | - Flammable liquids: | Not flammable. |
| | - Flammable solids: | Not flammable. |
| | - Corrosive to metals: | Not corrosive. |
| **9.2.2** | **Other safety-related parameters:** | |
| **10. Stability and reactivity** | | |
| **10.1.** | **Reactivity:** | Not reactive. |
| **10.2.** | **Chemical stability:** | Stable. |
| **10.3.** | **Possible hazardous reactions:** | Data not available. |
| **10.4.** | **Conditions to avoid:** | Heating over boiling point. |
| **10.5.** | **Incompatible materials:** | No danger. |
| **10.6.** | **Hazardous decomposition products:** | No danger. |
| **11. Toxicological data** | | |
| **11.1.** | **Information on hazard classes as defined in Regulation (EC) No 1272/2008** | Product is not toxic. |
| | - Acute toxicity: | Product is not toxic. |
| | - Skin corrosion/irritation: | Product does not irritate skin. |
| | - Serious eye damage/irritation: | Product could cause eye irritation. |
| | - Respiratory or skin sensitisation: | Can cause allergic skin response. |
| | - Germ cell mutagenicity: | Data not available. |
| | - Carcinogenicity: | The Court of Justice of the European Union, by a final judgment on the 1st of August 2025 (Cases C-71/23 P and C-82/23 P), annulled the classification of TiO2 as a carcinogenic substance (Carc. 2, H351 – inhalation), as it was not based on the intrinsic properties of the substance. |
| | - Toxicity for reproduction: | Data not available. |
| | - STOT – single exposure: | Data not available. |
| | - STOT – repeated exposure: | Data not available. |
| | - Aspiration hazard: | No danger. |
| **11.2.** | **Other adversative effects** | |
| | - Endocrine disrupting properties: | This product contains no substances on the REACH Candidate List (established under Article 59) that meet the Article 57(f) criteria for endocrine-disrupting properties, at concentrations ≥ 0.1% (w/w). |

Reference to Chapter 16

## 12. Ecological information

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| **12.1.** | **Toxicity:** | Product is not toxic. |
| **12.2.** | **Persistence and degradability:** | Inert material. Not biologically degradable. |
| **12.3.** | **Bioaccumulative potential:** | Data not available. |
| **12.4.** | **Mobility in soil:** | See chapter 7.1.1 - realease |
| **12.5.** | **Results of PBT and vPvB assessment:** | Based on available data for the components of the mixture and the criteria set out in Annex XIII of REACH, the mixture does not contain substances meeting the PBT or vPvB criteria at concentrations ≥ 0.1 %. |
| **12.6.** | **Endocrine disrupting properties:** | This product contains no substances on the REACH Candidate List (established under Article 59) that meet the Article 57(f) criteria for endocrine-disrupting properties, at concentrations ≥ 0.1% (w/w). |
| **12.7.** | **Other adversative effects:** | Data not available. |

Reference to Chapter 16

## 13. Disposal considerations

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| **13.1.** | **Waste treatment methods:** | Dispose of in accordance with local, state and federal regulations. |

## 14. Transport information

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| | **ADR, RID, AND, IMDG, ICAO-TI/IATA-DGR** | |
| **14.1.** | **UN number or ID number:** | Product is not under ADR regulations. |
| **14.2.** | **UN proper shipping name:** | Product is not under ADR regulations. |
| **14.3** | **Transport hazard class(es):** | Data not available. |
| **14.4.** | **Packaging group:** | Data not available. |
| **14.5.** | **Environmental hazards:** | No danger. |
| **14.6.** | **Special precautions for user:** | Not needed. |
| **14.7.** | **Maritime transport in bulk according to IMO instruments:** | Not due. |

## 15. Regulatory information

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| **15.1.** | Safety, health and environmental regulations/legislation specific for the substance or mixture: | CLP Regulation; REACH Regulation; Chemicals Act; Occupational Safety and Health Act; Rules on personal protective equipment; Rules on the Protection of Workers from the Risks of Exposure to Chemical Substances at Work; Rules on requirements for ensuring the safety and health of workers at workplaces; List of harmonized standards, the use of which creates a presumption of conformity of a product with requirements. |

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| **15.2.** | **Chemical safety assessment:** | Data not available. |

## 16. Other information

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| | Amendments made in the revised edition: | 1.1 Added text under *Product identifier (Product registration number, nanoform, UFI)*<br>2.3 Added text under *Other hazards*<br>9.1 Added text under *Information on basic physical and chemical properties*<br>9.1 Added text under *Solubility*<br>9.1 Added text under *Partition coefficient: n-octanol-water*<br>9.1 Added text under *Particle properties*<br>11.2 Added text under *Other adversative effects*<br>12.6 Added text under *Endocrine disrupting properties* |
| | List all relevant hazard statements, safety phrases, and/or precautionary statements.<br>Write out the full text of any statements not already written out in full under Sections 2 to 15. | |

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| H301 | Toxic if swallowed. |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H330 | Fatal if inhaled. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |

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| | In the case of mixtures, indicate which of the methods for evaluating information, as referred to in Article 9 of Regulation (EC) No 1272/2008, was used for classification purposes. | Calculation Method. |
| | Training of personnel: | In compliance with regulations for safety at workplace. |
| | Key literature references and sources for data: | MSDS, REACH, CLP<br>The safety data sheet has been prepared in accordance with Regulation (EU) 2020/878, which amends Regulation (EC) No 1907/2006 (REACH) as regards the requirements for the format and content of safety data sheets. |
| | A key or legend to abbreviation and acronyms used in the safety data sheet: | |

| | |
|---|---|
| ADR | European Agreement concerning the International |
| DNEL | Derived No Effect Level |
| PBT | Persistent, Bioaccumulative, Toxic |
| PNEC | Predicted No Effect Concentration |
| STOT | Specific target organ toxicity |

| | | | |
| --- | --- | --- | --- |
| | | vPvB | Very Persistent, Very Bioaccumulative |

The data specified above are based on research and experience of the supplier at the time of compiling the present MSDS. The supplier may not assume responsibility in case the buyer/user should fail to use the product in accordance with the relevant suggestions and recommendations. No information contained in the present MSDS may release the buyer/user from liability to strictly follow any legal requirements regarding his business activities.