

Titanium Dioxide

Safety data sheet in the 16-section GHS format · CAS 13463-67-7

Velora Chemicals Private Limited
Ahmedabad, Gujarat, India
+91 99255 22674 · info@velorachemicals.com

1. Identification of the substance and of the supplier

Product name	Titanium Dioxide
Synonyms	TiO ₂ , titanium white, rutile titanium dioxide, anatase titanium dioxide, CI Pigment White 6
C.A.S. number	13463-67-7 (titanium dioxide). The crystal forms carry their own registrations - anatase 1317-70-0 (EC 215-280-1), rutile 1317-80-2 (EC 215-282-2) - but Indian commercial paperwork almost always quotes 13463-67-7 for both, so the CAS number on an invoice does not tell you which form you are getting. EC 236-675-5. Colour Index name CI Pigment White 6.
Molecular formula	TiO ₂
Grade supplied	Rutile & anatase, ISO 591-1 types
Product group	Industrial Salts & Inorganics
Identified uses	Paints, coatings and powder coatings, Plastics and masterbatch, Printing inks, Paper and board, Rubber, leather and textile coating, Ceramic and glass frit, welding and speciality uses
Supplier	Velora Chemicals Private Limited
Emergency contact	Medical, fire or spill emergency — call the emergency services first: 112 (all-India), 101 fire, 108 ambulance. Velora Chemicals Private Limited does not at present operate a 24-hour chemical emergency advice line, and this sheet does not pretend otherwise. Every consignment despatched by road carries an emergency information panel under rule 134 of the Central Motor Vehicles Rules 1989 bearing a number from which expert advice on this material can be obtained, and the producer's safety data sheet issued with the consignment carries the producer's own 24-hour number where one is operated. For product, grade and documentation queries in business hours: +91 99255 22674.

2. Hazards identification

GHS signal word	Warning
Hazard classification	Carcinogenicity Category 2 (inhalation). Velora adopts the more protective of the positions taken by the producers of this material - KMML's own KEMOX sheet and the INEOS Pigments sheet both classify it this way - notwithstanding that there is no longer an EU harmonised classification (see 'Basis and status' below). Not classified for skin corrosion, eye damage, flammability, oxidising properties or aquatic hazard.
Hazard statements	H351 (inhalation): Suspected of causing cancer by inhalation.
Precautionary statements	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust. P280 Wear protective gloves, eye protection and, where dust control is insufficient, respiratory protection. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P304+P340 IF INHALED: remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: rinse cautiously with water for several minutes; remove contact lenses if present and easy to do, then continue rinsing. P308+P313 IF exposed or concerned: get medical advice. P405 Store locked up where required by the site's own control regime. P501 Dispose of contents and container in accordance with section 13.

Basis and status of the classification

There is NO EU harmonised classification for titanium dioxide, and the classification above is therefore a supplier position rather than a legal entry. The Carcinogen Category 2 by inhalation classification introduced for powders containing 1% or more of particles of 10 µm or less aerodynamic diameter by Commission Delegated Regulation (EU) 2020/217 was annulled by the EU General Court on 23 November 2022, and the Court of Justice dismissed the appeals by France and the Commission on 1 August 2025 in joined cases C-71/23 P and C-82/23 P, making the annulment final. The Commission published a notice on 10 December 2025 (C/2025/6670) confirming that such powders are not subject to harmonised classification as Carcinogen Category 2 via inhalation; the EUH211 and EUH212 statements and Notes W and 10 fall with it. That instrument is a notice and not a regulation, so CLP Annex VI has not been amended by regulation. In practice supplier sheets have not converged - some declare the product not hazardous under GHS at all, others declare Carcinogenicity Category 2 and Reproductive Toxicity Category 2 - and IARC, unaffected by any of this, classifies titanium dioxide in Group 2B, possibly carcinogenic to humans, by inhalation (Monographs Volume 93, published 2010 from a 2006 working group). The producer's sheet for the lot supplied governs.

3. Composition / information on ingredients

Substance	Titanium Dioxide
C.A.S. number	13463-67-7 (titanium dioxide). The crystal forms carry their own registrations - anatase 1317-70-0 (EC 215-280-1), rutile 1317-80-2 (EC 215-282-2) - but Indian commercial paperwork almost always quotes 13463-67-7 for both, so the CAS number on an invoice does not tell you which form you are getting. EC 236-675-5. Colour Index name CI Pigment White 6.
Molecular weight	79.87
Composition	Single substance. Titanium dioxide, typically 80-98% by mass depending on grade and on how heavily the pigment is surface treated, with the balance made up of the alumina, silica, zirconia and organic surface treatment. See the producer's specification for the grade quoted.

4. First-aid measures

Eye contact	Do not rub the eyes - the effect of the powder is mechanical abrasion and rubbing makes it worse. Remove contact lenses if present and easy to do. Flush with running water for several minutes holding the eyelids apart, and continue rinsing. Refer for medical attention if irritation develops and persists.
Skin contact	Wash with soap and water. Titanium dioxide does not attack skin; gloves are worn to keep the powder off rather than because it is corrosive, and a single contact needs no more than washing.
Inhalation	Move the casualty to fresh air and let them rest in a position comfortable for breathing. Refer for medical attention if respiratory symptoms persist. There is no antidote and none is needed - this is nuisance-dust first aid, not corrosive or solvent first aid. The exposure that actually matters with titanium dioxide is inhaled respirable dust accumulated over years rather than any single contact, so a symptom-free acute exposure is not a reason to relax dust control.
Ingestion	Rinse the mouth and give water to drink. Refer for medical attention only if the casualty feels unwell. Titanium dioxide is poorly absorbed from the gut and a small incidental ingestion is of low concern.

5. Fire-fighting measures

Flash point	Not flammable. Titanium dioxide is inert, non-flammable and non-combustible, and producer sheets record no unusual fire or explosion hazard.
--------------------	--

Suitable extinguishing media	Titanium dioxide is not combustible and contributes no fuel. Fight the surrounding fire with whatever suits it - water fog, foam, dry chemical powder or carbon dioxide are all listed as suitable on producer sheets.
Unsuitable extinguishing media	Do not use a high-pressure water jet: it will disperse the powder, spread the fire and leave slippery wetted surfaces.
Special hazards arising from the substance	The pigment itself does not burn and has no dust-explosion classification. What burns in a titanium dioxide store is the packaging and the goods around it - a stack of multiwall paper, PP or HDPE bags on timber pallets is a substantial fire load, and gases hazardous to health may be formed from those materials. Separately, pouring powder from a plastic or lined bag builds a static charge; the powder will not ignite but the discharge is an ignition source, so tipping in an area holding solvent vapour or a combustible dust needs bonding, earthing and a safety assessment.
Advice for fire-fighters	Fire-fighters must wear self-contained breathing apparatus and full protective clothing. Keep unnecessary personnel away and upwind. Prevent firefighting run-off from entering drains, surface water or groundwater, and treat every wetted surface as slippery.

6. Accidental release measures

Keep unnecessary personnel away and upwind, and ventilate. Wear the protective equipment in section 8, including respiratory protection, before approaching. Do not touch or walk through spilled material - it causes slippery conditions, particularly when wet. Avoid raising dust and never blow a spilled powder down with compressed air. Dry-collect first: vacuum with a HEPA-filtered unit, or sweep carefully without raising dust, into labelled, closable containers for disposal under section 13. Use water only for a large spill that cannot be dry-collected; dike it, keep washings out of storm drains, and wash and dry every wetted surface before it is walked on. Do not return spilled material to the original container; overpack a damaged bag into a labelled outer rather than decanting it into an unmarked one.

7. Handling and storage

- **Titanium dioxide is not a dangerous good.** It has no UN number and no hazard class. Supplier safety data sheets state it plainly in Section 14 — “not regulated as dangerous goods” for ADR, IMDG and IATA alike — so no TREM card, no hazard placarding and no dangerous-goods driver endorsement is required for road movement in India. To be clear about how we get there: the hazardous-goods provisions of the Central Motor Vehicles Rules 1989 key off the UN class framework, and titanium dioxide has no class, so it falls outside them — that is our reading rather than a rule we can quote at you, and Section 14 of the producer’s sheet for the grade quoted governs. Treat this as information, not legal advice. Ordinary commercial carriage rules, packing, weight limits and e-way bill obligations apply as for any bagged industrial powder.
- **It is also not combustible.** Melting point is about 1,830 °C and supplier sheets describe the product as inert, non-flammable and non-combustible, with no unusual fire or explosion hazard. In a fire it does not contribute fuel; fight the surrounding fire with whatever suits it — water fog, foam, dry chemical or carbon dioxide are all listed as suitable. There is no dust-explosion classification for titanium dioxide, and anyone who tells you there is a K_{st} value for it should be asked for the source.
- **The one electrostatic caution is real and often missed.** Pouring powder from a plastic or lined bag builds static. The powder itself will not ignite, but the discharge is an ignition source, so tipping titanium dioxide in a room that also holds solvent vapour or a combustible dust needs a safety assessment, bonding and earthing. Both an international supplier sheet and KMML’s own Indian sheet carry this warning.
- **The real hazard is respirable dust, and it is a chronic one.** Titanium dioxide is a fine, low-toxicity particulate; the exposure that matters is inhaled dust over years, not a single contact. Control it as dust: enclose the tipping point, put local exhaust on it, and keep bag slitting and emptying away from the general workspace. Where enclosure and extraction cannot hold airborne levels down, an approved particulate respirator is the correct control. Supplier sheets do call for a particulate filter — an approved dust filter — but stop short of assigning a protection factor, because that depends on the measured concentration: in practice that means a particulate filter in the NIOSH N95 to P100 or EN 149 FFP2 to FFP3 range, with the class set by your own risk assessment rather than by us.
- **PPE for bag handling.** Safety glasses or goggles where dust is airborne; gloves for prolonged contact, mainly to keep the powder off skin rather than because it attacks it; overalls that are laundered rather than brushed down, because brushing re-aerosolises the dust; and the respirator described above where controls are insufficient. Nothing exotic is needed — the

discipline is dust housekeeping, not chemical protection.

- **Spill: it is a slip hazard, and that is not a throwaway line.** Supplier sheets say so in as many words — do not touch or walk through spilled material, it causes slippery conditions when wet. Dry-collect first: vacuum with a HEPA-filtered unit, or sweep carefully without raising dust, into a labelled container. Use water only for a large spill that cannot be dry-collected, dike it, and treat every wetted surface as slippery until it has been washed and dried. Keep washings out of storm drains.
- **First aid.** Eyes — do not rub, because the effect is mechanical abrasion and rubbing makes it worse; remove contact lenses if present and easy to do, flush with running water for several minutes holding the lids open, and keep rinsing. Get medical attention if irritation persists. Inhalation — move to fresh air, rest in a position comfortable for breathing, and seek advice if symptoms continue. Skin — wash with soap and water. Ingestion — rinse the mouth, give water to drink, and seek attention only if symptoms appear. There is no antidote and none is needed; this is nuisance-dust first aid, not corrosive first aid.
- **Exposure limits, honestly.** No Indian statutory occupational exposure limit for titanium dioxide has been identified. The Second Schedule to the Factories Act 1948, which listed permissible limits for around 116 substances, did not include it at all — and that Act was in any case repealed on 21 November 2025 by the Occupational Safety, Health and Working Conditions Code, 2020, which leaves permissible limits to be notified rather than fixing them in a schedule. In practice Indian plants work to international values. ACGIH currently sets a TLV-TWA of **2.5 mg/m³ respirable for fine-scale particles and 0.2 mg/m³ respirable for nanoscale particles**, with an A3 notation — confirmed animal carcinogen of unknown relevance to humans. NIOSH, in Current Intelligence Bulletin 63 (2011), recommends **2.4 mg/m³ for fine and 0.3 mg/m³ for ultrafine titanium dioxide** as time-weighted averages, and treats ultrafine material as a potential occupational carcinogen while finding the data insufficient to classify the fine grade. The US OSHA PEL, for contrast, is still 15 mg/m³ total dust. Use the figure your own EHS standard adopts and record which one.
- **Storage.** Cool, dry, well ventilated, out of direct sunlight, bags kept closed. Titanium dioxide is chemically stable and non-reactive, and no supplier sheet reviewed declares it hygroscopic or prone to caking — but every one of them tells you to exclude moisture and reseal opened bags, and the Indian standards require moisture-proof packing, so treat the material as moisture-sensitive in practice even though it is not hygroscopic on paper. Absorbed moisture shows up as high volatile matter at 105 °C and as poor dispersion, not as a chemical change.
- **Incompatibilities: none declared.** Supplier sheets list materials to avoid as “none” and no hazardous decomposition products. The only storage separation worth observing is from food and feed, which is housekeeping rather than chemistry.
- **Shelf life.** Because there is no chemical degradation pathway, shelf life is governed by packaging integrity and moisture exclusion rather than by the pigment ageing. Around 24 months in sealed original packaging is commonly quoted in the trade, but we have not found that figure on a producer datasheet or in an Indian standard, so treat it as a trade convention and confirm it against your supplier’s own documentation. What the standards do give you is an age-control mechanism: both IS 411 and IS 9788 require the month and year of manufacture to be marked on the bag.
- **Dispersion is where most complaints actually originate.** Titanium dioxide does not dissolve; it has to be wetted, separated and stabilised. Under-dispersed pigment reads as low opacity, weak tint strength, poor gloss and visible grit, and none of it is a certificate problem. If a lot behaves differently on your mill, check the treatment on the grade before you question the assay — a dense-silica exterior grade legitimately needs more energy than the alumina-only grade it replaced.

Storage: Store in closed bags in a cool, dry, well-ventilated place out of direct sunlight, and reseal opened bags. No producer sheet consulted declares titanium dioxide hygroscopic or prone to caking, but every one of them instructs that moisture be excluded and the Indian standards require moisture-proof packing, so treat the material as moisture-sensitive in practice even though it is not hygroscopic on paper: absorbed moisture shows up as high volatile matter at 105 C and as poor dispersion, not as a chemical change. Control dust at the tipping point with enclosure and local exhaust ventilation, keep bag slitting away from the general workspace, and launder rather than brush down overalls, because brushing re-aerosolises settled dust. Store away from food and feed. Because there is no chemical degradation pathway, shelf life is governed by packaging integrity rather than ageing - around 24 months sealed is a trade convention rather than a producer-stated figure, and both IS 411 and IS 9788 require the month and year of manufacture on the bag, which is the buyer’s real age-control mechanism.

8. Exposure controls / personal protection

Occupational exposure limits. No Indian statutory occupational exposure limit for titanium dioxide has been identified: the Second Schedule to the Factories Act 1948 listed permissible limits for around 116 substances and did not include it, and that Act has in any case been subsumed by the Occupational Safety, Health and Working Conditions Code, 2020, brought into force 21 November 2025, which leaves permissible limits to be notified rather than fixing them in a schedule (transitional provisions keep the earlier provisions operating where they do not conflict, pending central and state rules). International values in common use: ACGIH TLV-TWA 2.5 mg/m³ respirable for fine-scale particles and 0.2 mg/m³ respirable for

nanoscale particles, with an A3 notation (confirmed animal carcinogen of unknown relevance to humans); NIOSH REL, Current Intelligence Bulletin 63 (2011), 2.4 mg/m³ for fine and 0.3 mg/m³ for ultrafine titanium dioxide as time-weighted averages, treating ultrafine material as a potential occupational carcinogen while finding the data insufficient to classify the fine grade; US OSHA PEL 15 mg/m³ total dust. Adopt the value your own EHS standard requires and record which one.

Personal protection. Enclose and extract at the tipping point; this is a dust-control problem rather than a chemical-protection problem. Safety glasses or goggles where dust is airborne. Gloves for prolonged contact, to keep powder off the skin rather than because it attacks skin. Overalls that are laundered rather than brushed down, because brushing re-aerosolises settled dust. Where enclosure and extraction cannot hold airborne levels below the limit adopted, an approved particulate filter - in practice NIOSH N95 to P100 or EN 149 FFP2 to FFP3 - with the class set by the measured concentration and the site's risk assessment. Provide eyewash at tipping and bag-slitting positions.

Engineering controls. Enclose every transfer, tipping, bag-slitting and sampling point and fit local exhaust extraction at each, and keep airborne concentrations below the limit in force at the place of use. Provide an eyewash within reach of the working position, and a safety shower wherever the material is classified corrosive or irritant or is handled in quantity. Do not eat, drink or smoke in the handling area; wash before breaks. Where no limit is stated above, occupational exposure limits vary by jurisdiction: check the limit in force at the place of use and the producer's sheet for the grade supplied, and record which value your assessment adopted. Select eye, skin and respiratory protection on the strength of a measured or modelled exposure assessment, not on this sheet alone.

9. Physical and chemical properties

Appearance	White, odourless, tasteless fine powder. Rutile grades run a slightly creamer undertone than anatase; within rutile, a smaller mean particle size reads bluer and a larger one neutral to cream.
Physical state	Solid (fine powder)
Melting / freezing point	About 1830 (INEOS Pigments SDS; ChemicalBook gives 1840). The material is refractory and does not soften at any process temperature a pigment user will meet. Anatase converts irreversibly to rutile on heating, with no single transition temperature - reported values span 400-1200 C depending on particle size, dopants and surface treatment, and the onset for bulk anatase is usually around 600-700 C - so treat an anatase grade as unsuitable much above 600 C and confirm the figure with the producer.
Boiling point	Not available - no boiling point is reported for titanium dioxide on the producer sheets consulted; the solid is refractory and does not boil at atmospheric pressure.
Relative density	True density about 4.23 g/cm ³ for the rutile crystal and 3.78-3.97 g/cm ³ for anatase. Surface-treated pigment sits lower than the pure crystal because the coating displaces titanium dioxide - KMML publishes specific gravity 4.0 for its silica-alumina-organic treated KEMOX RC-822 and 4.1 for the alumina-only RC-800 PG, and Chemours quotes 3.6-4.3 across its range. Bulk density is far lower: KMML publishes 0.87 g/cc for both grades. A quoted 'density' for titanium dioxide is ambiguous unless you say whether it is true or bulk - use the producer's figure for silo and packaging design.
Solubility in water	Practically insoluble - reported as less than 0.1% and as 'practically insoluble' on producer sheets. Titanium dioxide does not dissolve and is not intended to; in use it is wetted, separated and stabilised as a dispersion, which is where most performance complaints actually originate.
pH	6-8 measured on an aqueous suspension, which is the window both ISO 591-1 and IS 9788 use where the parties agree to specify it. KMML publishes 7.1 for KEMOX RC-822 and 6.0 for RC-800 PG. Because the solid is practically insoluble this is a suspension pH and not a solution pH - always state the concentration, the temperature (the Indian standards specify 27 C) and that it is a slurry. Test method ISO 787-9 or ASTM D1208.
Flash point	Not flammable. Titanium dioxide is inert, non-flammable and non-combustible, and producer sheets record no unusual fire or explosion hazard.
Auto-ignition / ignition temperature	Not available

Explosive / dust-explosion properties	Not available
Vapour pressure	Not available
Vapour density	Not available
Partition coefficient (log Pow)	Not available
Particle characteristics	Not available
Molecular weight	79.87

10. Stability and reactivity

Incompatible materials None declared. Producer sheets list materials to avoid as 'none' and report no hazardous decomposition products; the substance is described as chemically stable and non-reactive. The only separation worth observing in a store is from food and feed, which is housekeeping rather than chemistry. Two process cautions that are not incompatibilities but are often confused with them: pouring powder from a plastic or lined bag builds a static charge, so tipping in an area that also holds solvent vapour or a combustible dust needs bonding, earthing and a safety assessment - the powder will not ignite but the discharge is an ignition source; and moisture must be excluded, which is a quality control rather than a hazard control.

Conditions to avoid Moisture and open bags; extreme temperature swings; dust generation during tipping, conveying and blending; static discharge where flammable vapour or combustible dust may be present. The substance is chemically stable and non-reactive, so there is no thermal or reactive instability to design against.

11. Toxicological information

The health hazards classified for this substance are listed in section 2, and the corresponding first-aid measures in section 4. Numerical toxicological endpoints are not reproduced here: refer to the producer's safety data sheet for the grade supplied, and to the ECHA and PubChem entries for the substance.

12. Ecological information

Where section 2 or section 14 classifies this substance as hazardous to the aquatic environment, prevent any release to drains, surface water or groundwater and treat aqueous effluent before discharge. Otherwise, refer to the producer's sheet.

13. Disposal considerations

Titanium dioxide pigment is not itself a scheduled hazardous waste and, uncontaminated, may normally be consigned as non-hazardous industrial waste under the conditions of the State Pollution Control Board consent in force at the site. Whether a particular waste stream is scheduled under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 depends on what the pigment has been mixed with - a paint, solvent or effluent sludge containing it may well be - so classify the stream rather than the substance before consigning it. Recover and reuse clean spilled material into the process where your quality system allows it. Do not reuse empty bags for any other purpose.

14. Transport information

UN number	None assigned
Class	Not classified - titanium dioxide is not a dangerous good
Packing group	Not applicable

Proper shipping name	Not applicable. Producer sheets record 'not regulated as dangerous goods' for ADR, IMDG and IATA alike, and no UN number is assigned. Because the Indian road-transport rules for dangerous goods operate on the same UN class framework, a bagged pigment movement is ordinary freight - no TREM card, no hazard placarding, no specialist driver endorsement. Ordinary commercial carriage rules, weight limits and e-way bill obligations apply as for any bagged industrial powder.
-----------------------------	---

15. Regulatory information

Supply in India is subject to the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 where the substance is scheduled, and to any product-specific licensing named on the product page. Classification and labelling follow the GHS as adopted in the jurisdiction of use.

Note: NOT a dangerous good, NOT combustible, and no dust-explosion classification exists for titanium dioxide - anyone quoting a Kst value for it should be asked for the source. The hazard picture is a chronic one and it is entirely about respirable dust. No Indian statutory occupational exposure limit for titanium dioxide has been identified: the Second Schedule to the Factories Act 1948 listed permissible limits for around 116 substances and did not include it, and that Act was in any case repealed on 21 November 2025 by the Occupational Safety, Health and Working Conditions Code, 2020, which leaves permissible limits to be notified rather than fixing them in a schedule. Indian plants therefore work to international values: ACGIH sets a TLV-TWA of 2.5 mg/m³ respirable for fine-scale particles and 0.2 mg/m³ respirable for nanoscale particles with an A3 notation (confirmed animal carcinogen of unknown relevance to humans), and NIOSH, in Current Intelligence Bulletin 63 (2011), recommends 2.4 mg/m³ for fine and 0.3 mg/m³ for ultrafine titanium dioxide as time-weighted averages, treating ultrafine material as a potential occupational carcinogen while finding the data insufficient to classify the fine grade. The US OSHA PEL remains 15 mg/m³ total dust. Respiratory protection is risk-assessment driven; producer sheets deliberately name no filter class. On spill, the slipping hazard is real and is set out in capitals on supplier sheets - do not walk through spilled material, it causes slippery conditions when wet; dry-collect first with a HEPA-filtered vacuum or careful sweeping into a labelled container, use water only for a large spill that cannot be dry-collected, dike it, and treat every wetted surface as slippery until washed and dried. Keep washings out of storm drains. On grades, the assay figure alone tells a buyer very little: commercial pigment is surface treated with alumina, silica, zirconia and an organic layer, every gram of coating displaces a gram of titanium dioxide, and Chemours states in its own literature that grades specified at 80-88% minimum TiO₂ can beat higher-assay grades on hiding efficiency in highly pigmented flat paints. Buy on the classification type and the treatment - ISO 591-1:2000 Type A grades A1 and A2 and Type R grades R1, R2 and R3, or an ASTM D476-15(2021) type - and write the test method next to any limit that matters commercially. Note the standards edition trap: the freely circulating Indian texts are IS 9788:1981 (rutile for paints) and IS 411:1991 (anatase for paints), but BIS has since published IS 9788:2023 and IS 411:2020 and those texts are paywalled, so put the standard number AND the edition year on the purchase order. Nano or ultrafine titanium dioxide below 100 nm is a different product with a different hazard assessment and different tariff and trade-remedy treatment, and nothing on this sheet should be read as applying to it. Finally, the food position differs by jurisdiction and this catches exporters: titanium dioxide remains a permitted food additive in India as INS 171 under the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 (item 3.2.1, minimum 99% TiO₂, with mercury 1.0, antimony 2.0, lead 2.0 and arsenic 1.0 mg/kg maxima), while the EU removed E171 from its permitted food lists by Commission Regulation (EU) 2022/63 with effect from 7 February 2022, after EFSA concluded in May 2021 that a concern for genotoxicity could not be ruled out. That EU ban is food only: titanium dioxide remains authorised as a colourant in EU medicinal products and in EU cosmetics under Regulation 1223/2009, subject to restrictions on inhalable powder forms. Velora does not offer this material for food, pharmaceutical or cosmetic use, and nothing on this sheet should be read as qualifying it for those uses. Note also the Indian standards: IS 9788:2023 covers rutile for paints with R1/R2/R3 minima of 97, 90 and 80% TiO₂, while IS 411:2020 covers anatase for paints as a single grade at 98% minimum - IS 411 has no grade designations, so there is no 'IS 411 grade A2'.

16. Other information

Version	1.0
Date of issue	07 October 2026
Supersedes	No previous version
Regulatory basis as at the date of issue	EU CLP Regulation 1272/2008 as amended, including Annex VI harmonised classifications; UN Model Regulations and the IMDG Code Amendment 42-24, mandatory from 1 January 2026; ADR 2025; and, in India, the Manufacture, Storage and Import of Hazardous Chemical Rules 1989 and the Central Motor Vehicles Rules 1989.

How this sheet was compiled and what governs. This sheet was prepared by Velora Chemicals Private Limited as the supplier, from PubChem, the ECHA CLP inventory including Annex VI harmonised classifications, ILO International Chemical Safety Cards and published producer safety data sheets. Values that could not be confirmed from those sources are shown as "Not available" rather than estimated. **The producer's safety data sheet for the specific grade and lot supplied is the governing document** and is issued with the consignment; where the two differ, the producer's sheet prevails. This sheet carries no warranty of the properties of any particular batch. Velora Chemicals Private Limited is a bulk supplier and trader, not a manufacturer.

Sources consulted: https://www.ineos.com/globalassets/ineos-group/businesses/ineos-enterprises/businesses/ineos-pigments/resource-center/sds/titanium-dioxide---rcl595-sds_us-english.pdf; <https://redox.com/wp-content/sds/1941.pdf>; https://www.kmml.com/uploads/product/technical_sheet_9.pdf; https://www.kmml.com/uploads/product/technical_sheet_10.pdf; <https://cdn.standards.iteh.ai/samples/19997/10befab12f4948579139d2fcd23a8bca/ISO-591-1-2000.pdf>; <https://law.resource.org/pub/in/bis/S02/is.9788.1981.pdf>; <https://law.resource.org/pub/in/bis/S02/is.411.1991.pdf>; <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52025XC06670>; <https://curia.europa.eu/site/upload/docs/application/pdf/2025-08/cp250099en.pdf>; <https://www.cdc.gov/niosh/docs/2011-160/pdfs/2011-160.pdf>; <https://www.acgi.org/titanium-dioxide/>; <https://publications.iarc.who.int/Book-And-Report-Series/Iarc-Monographs-On-The-Identification-Of-Carcinogenic-Hazards-To-Humans/Carbon-Black-Titanium-Dioxide-And-Talc-2010>; <https://eur-lex.europa.eu/eli/reg/2022/63/oj/eng>; [https://www.fssai.gov.in/upload/uploadfiles/files/18_%20Chapter%203%20\(Substances%20added%20to%20food\)_compressed.pdf](https://www.fssai.gov.in/upload/uploadfiles/files/18_%20Chapter%203%20(Substances%20added%20to%20food)_compressed.pdf)