



MATERIAL SAFETY DATA SHEET

according to REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC and harmonized MSDS of TDMA

Product: titanium dioxide suspension

1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

TRADE NAME: FN2[®]

APPLICATION: The product is used as a photocatalytic top coat on any common type of wall, sheetrock, paint and concrete surfaces. For exterior and interior applications. The layer is activated by the day light.

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2. HAZARDS IDENTIFICATION

The product is not classified as hazardous and/or harmful under the EC and/or Czech national regulations. It contains no substances classified as hazardous or harmful to health in concentration taken into account according to the EC directives and/or Czech national regulations. TiO₂ is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence of carcinogenicity in humans and sufficient evidence in animal studies.

3. COMPOSITION, INFORMATION ON INGREDIENTS

FN2 is a water suspension of titanium dioxide and inorganic binder

SUBSTANCE AND FORMULA

Titanium dioxide TiO₂: CAS no. 13463-67-7, EINECS no. 236-675-5 (less than 10wt%) OSHA PEL:15 MG/M3 TDUST, ACGIH TLV:10 MG/M3 TDUST

Water, H₂O: CAS no. 7732-18-5, EINECS no. 231-791-2 (more than 80wt%)

Other inorganic matters: inorganic binder (less than 3wt%)

Organic matters: None

Dangerous matters: None

4. FIRST AID MEASURES

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No hazards requiring special first aid and measures.

Inhalation: If inhaled aerosol, move to fresh atmosphere. Give symptomatic treatment if necessary.

Skin contact: Wash with water and soap

Eye contact: Wash with water or neutral eyewash solution

Ingestion: Do not induce vomiting. Give up to 200 ml water. Material is non-toxic and not retained in intestinal tract.

In case of persistent symptoms consult a doctor.

5. FIRE-FIGHTING MEASURES

The product is not flammable, explosive and gives no reason to fire risks.

No special preventive action and protection matters/techniques for fire-fighters are necessary.

6. ACCIDENTAL RELEASE MEASURES

The product is inert. No special personal or environmental precautions are required. Use any feasible mechanical means for cleaning (e.g. mop, vacuum cleaner, sweeping). If dried, avoid dusting. Prevent contamination of sewerage and ditches leading to natural waterways.

7. HANDLING AND STORAGE

Follow basic hygienic rules during manipulation.

The product shall be stored at 5 to 25°C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory protection: The use of exhaust ventilation at machinery and places where aerosol or dust can be generated is recommended. An approved dust respirator must be used if the dust concentration is likely to exceed the occupational exposure limit or when dustiness is over 10 mg/m³.

Skin protection: The product is not irritant but as fine powders it can absorb moisture and natural oils from the surface of the skin during prolonged exposure. Prolonged exposure should be avoided by wearing suitable protective gloves and clothing

Eye protection: The use of approved tightly fitting safety goggles is recommended if aerosol or dust concentrations are likely to exceed the occupational exposure limit 10 mg/m³.

Hygiene measures: No special requirements except keeping basic rules of body hygiene

9. PHYSICAL AND CHEMICAL PROPERTIES

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| Physical state (při 20°C): | Water suspension;white porous film when dry |
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|--------------------------|-------------------------|
| Color: | White |
| Odour: | Odourless |
| pH (20°C): | 6-6.5 |
| Melting point (°C): | NA |
| Boiling point (°C): | NA |
| Flash point: | NA |
| Flammability: | Non-flammable |
| Explosive properties: | Non-explosive |
| Oxidative properties: | Non-oxidative |
| Vapor tension: | NA |
| Specific density (20°C): | <1500 kg/m ³ |
| Water solubility: | Insoluble (<10g/l) |
| Fat solubility: | NA |
| Organic solvents: | 0 % |
| Non volatile content: | 100-200g/l |

10. STABILITY AND REACTIVITY

Material is stable under normal conditions and inert to most chemical reagents. May release a small amount of CO₂ if mixed with strong acids.

Materials and conditions to avoid: None

Dangerous reactions: None

Hazardous decomposition products: None

11. TOXICOLOGICAL INFORMATION

Detailed toxicology of the product has not been fully tested. No acute or chronic effects have been reported.

Acute toxicity TiO₂: Oral LD50 (rat): >10 000 mg/kg. Dermal LD50 (rabbit): >10 000 mg/kg. Inhalative LC50/4 hours (rat): >6,8 mg/l.

12. ECOLOGICAL INFORMATION

The product is inert and insoluble in water. The mobility of solid particles in environment is limited. Prevent contamination of sewerage, surface and subterranean waters – the product strongly colours and due to this it can optically worsen the quality of them.

13. DISPOSAL CONSIDERATIONS

Spilled material can be disposed as non-toxic waste in accordance with local and national regulations.

14. TRANSPORT INFORMATION

There are no specific requirements under national or international regulations for the transportation by road, rail, sea or air.



ADR/RID: Not regulated
ICAO/IATA: Not regulated
IMDG: Not regulated

15. REGULATORY INFORMATION

The UN and EC Directives and/or Czech national regulations on hazardous and dangerous substances, solvents and paints are not applicable.
S sentences: None, R sentences: None

16. FURTHER INFORMATION

The data for information contained in this Safety Data Sheet: MSDSs of material suppliers, Decree of the Government No. 258/2001 Coll., which specifies the method of assessment of hazards of chemical substances and chemical preparations, method of their classification and marking, and issues the List of hazardous chemical substances classified to date, included in the Collection of Laws of the Czech Republic, Chapter 99/2001, 221/2004 PhysProp database located at <http://esc.syrres.com/interkow>. Ecotoxicological database located at <http://plumbum.ceu.cz/ETD>, International Chemical Safety Cards database (WHO/IPCS/ILO) located at <http://www.cdc.gov/niosh/ipcs> Databases ECB ESIS : EINECS, DANTE at MPO server, ecotoxikologic database <http://www.piskac.cz/>.

NFPA Ratings:
Health: 1 Flammability: 0 Reactivity: 0

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The MSDS contains 4 pages

Last revision: 11-02-2010 by Jan Prochazka