



KRONOS

PRODUCT DATA SHEET

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KRONOS[®] 1000

Titanium Dioxide Pigment
General Purpose Anatase Grade for Paper and Rubber

Applications

Paper wet end
Paper coatings
Rubber
Ceramics
Traffic paint and adhesives

Typical Properties

TiO ₂ content	98.5%
Specific Gravity	3.9
Bulking Value	0.0308 gallons/lb.
pH	6.5-8.5
Water Absorption	20-25
Retained on 325 Mesh	0.04% maximum

Characteristics

Readily dispersed in water.
Minimal additional dispersing agent may be required with very hard water.
Provides high brightness and opacity in paper and paper coatings.
Provides for clean tones
Self cleaning in white sidewall tires

Classifications

ASTM D 476	Type I
Color Index	Pigment White 6 (77891)
DIN 55912 Part 1	Group A1
CAS No.	13463-67-7



PRODUCT STEWARDSHIP

Product : KRONOS 1000

Acts, Directives, Regulations, Standards

EC	
Council Directive 76/768/EEC * on the approximation of the laws of the Member States relating to cosmetic products	not applicable
Council Directive 78/25/EEC * on colourants for the use in pharmaceuticals	not applicable
Council Directive 2002/72/EC * on plastics materials and articles intended to come in contact with foodstuffs	in compliance
Council Directive 92/112/EEC * on procedures for harmonizing the programmes for the reduction and eventual elimination of pollution caused by waste from the titanium dioxide industry	in compliance
Council Directive 94/36/EEC * on colours for use in foodstuffs	not applicable
Council Directive 94/62/EEC * Council Directive on packaging and packaging waste	in compliance
Council Directive 95/45/EEC * Council Directive defining the specific purity criteria concerning colours for use in food additive:	not applicable
Commission Decision 96/335/EEC * establishing an inventory and a common nomenclature of ingredients employed in cosmetic products	not applicable
Commission Decision 1999/178/EEC * establishing the ecological criteria for the award of the Community eco-label to textile products	in compliance
Commission Decision 2002/178/EC * on general principles and requirements of food law	not applicable
EN 71-3 Safety for Toys (Part 3: Migration value on certain elements)	The total content of the relevant heavy metals is below the limits.
European Pharmacopeia	not applicable

*) in the current version



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EC Resolution AP (89) 1* on the use of colourants in plastic materials coming into contact with food	The total content of the relevant heavy metals is below the limits.
Resolution AP (2004) 1* on surface coatings intended to come into contact with foodstuffs	Titanium dioxide is listed in list 1 (REF 93440)
Synoptic Document Provisional list of monomers and additives notified to European Commission as substances which may be used in the manufacture of plastics intended to come into contact with foodstuffs	in compliance for plastics and coatings
USA	
FDA 21 CFR 73.575 (foodstuffs) *	not applicable
FDA 21 CFR 73.1575 (pharmaceuticals) *	not applicable
FDA 21 CFR 73.2575 (cosmetics) *	not applicable
US Pharmacopeia XXIV	not applicable
FDA 21 CFR 178.3297 (Indirect food additives) †	in compliance
In the USA our product is not considered as a hazardous substance.	
CONEG-Regulation	in compliance
Listed as certified plastic piping components (NSF Standard 14)	not listed

National European Acts

Italy

Disciplina igienica degli imballaggi, recipienti, utensili, destinati a venire in contatto con le sostanze alimentari o con sostanze d'uso personale. meets the requirements on purity of pigments
(DECRETO MINISTERO DELLA SALUTE n.123 28.03.2003)

The Netherlands

Recommendation of the "Verpakkingen en gebruiksartikelen besluit" (Warenwet) in compliance

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France

Journal Officiel de la République Française,
Brochure No. 1227 "Matériaux au contact des aliments et denrées destinés à l'alimentation humaine" in compliance

Journal Officiel de la République Française,
Bulletin Officiel de la Concurrence, Consommation, Répression des Fraudes in compliance
"Avis du Conseil supérieur d'hygiène publique de France relatif aux matériaux au contact des denrées alimentaires"

Germany

12th Federal German Air Pollution Control Decree (Seveso Directive) not listed

Occupational Exposure Level according to TRGS 900 3 mg/m³ fine dust

Occupational Exposure Level according to TRGS 905 not listed

Recommendations of the Federal Institute for Risk Assessment BfR (former BgVV)

VI Styrene copolymers and graft polymers, and mixtures of polystyrene with other polymers Titanium dioxide is permitted

IX Colourants for plastics and other polymers to be used in the manufacture of articles for the daily use meets the requirements on purity of pigments

XLVII Toys made of plastics and other polymers as well as paper and card boards meets the requirements on purity of pigments

XXXVI Paper and board for food contact Titanium dioxide is listed as filler

XXXVI/2 Paper and board for baking purposes Titanium dioxide is listed as filler

Ordinance of articles for daily use Titanium dioxide is listed as additive

Packaging Ordinance meets the requirements

Tobacco Ordinance not applicable



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Additional Information

Storage

When stored frost resistant at ambient temperature in an enclosed dry warehouse our product is stable to deterioration in quality for up to six months. In silos the time scale is three months. After storage in excess of these periods the essential product properties should be checked. Dry conveying air must be used for transport to avoid agglomeration of the product.

H.S.-No.32 06 11 00

Irradiation & Gassing

Our pigments are subject neither to irradiation nor to gassing.

Unwanted Chemicals

Following substance categories are not used in the manufacturing process and are, therefore, not to be expected:

- Abietic acid
- Aflatoxine
- Allergenic raw materials
- Aromatic amines
- Asbestos
- Azo substances
- cmr-substances
- Colophony
- Genetically modified organisms
- Halogenated organic substances
- Ingredients of animal origin
- Iodine
- Nonylphenol
- Ozone depleting substances
- PAH (polycyclic aromatic hydrocarbons)
- PBB,PBDE
- PCB
- Pesticides
- Phenols
- Phthalates
- Preservatives
- Rubber latex
- Solvents
- Tributyl tin
- Trisnonylphosphit