

#### **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<sub>2</sub> content 98.5% Specific Gravity 3.9

**Bulking Value** 0.0308 gallons/lb.

pΗ 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

Pigment White 6 (77891) Color Index

DIN 55912 Part 1 Group A1 13463-67-7 CAS No.



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# PRODUCT STEWARDSHIP



**Product: KRONOS 1000** 

Titanium dioxide CAS No. 13463-67-7 EINECS No. 236-675-5

# **Typical Product Properties**

Titanium dioxide content	> 98	%	ISO 591
Aluminium (calculated as Al <sub>2</sub> O <sub>3</sub> )	< 0,2	%	XRF analysis DIN 51418
Phosphorus (calculated as P <sub>2</sub> O <sub>5</sub> )	0,5-0,65	%	XRF analysis DIN 51418
Amorph. silica (calculated as SiO <sub>2</sub> )	< 0.2	%	XRF analysis DIN 51418
org. components (calculated as C)	< 0,1	%	IR-photometric
Potassium	n.b.	%	
Magnesia	n.b.	%	
Nitrogen (calculated as NO <sub>3</sub> )	n.b.	%	
Moisture content (105 °C) ex works	< 0,5	%	ISO 787/2
Antimony	< 40	ppm	XRF analysis DIN 51418
Arsenic	< 5	ppm	Hydrid-AAS analysis
Barium	< 40	ppm	XRF analysis DIN 51418
Lead	< 10	ppm	DRC-Arc AES analysis
Cadmium	< 0,1	ppm	Graphit tube AAS analysis

5 ppm DC-Arc AES Chromium total Chloride < 100 ppm Ion chromatography < 50 ppm XRF analysis DIN 51418 Iron < 0,1 ppm Amalgam technique AAs analysis Mercury 5 ppm DRC-Arc AES analysis Copper 5 ppm DRC-Arc AES analysis Manganese 5 ppm DRC-Arc AES analysis Nickel Sulfur < 500 ppm XRF analysis DIN 51418 < 0,1 ppm Hydrid-AAS analysis Selenium Vanadium < 10 ppm DRC-Arc AES analysis < 40 ppm XRF analysis DIN 51418 Zinc

pH value (10 % aqueous solution) 6.5 - 8.5

#### Remark:

Zirkonium (calculated as ZrO<sub>2</sub>)

The above mentioned figures are typical values of the product. These values may vary and, therefore, cannot be considered as a specification.

"n.b." = element is not determined

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n.b. ppm



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## **Inventories**

Australia (AICS)	on the inventory
Austria	on the inventory
	•
China (IECSC)	on the inventory
European Community (EINECS)	on the inventory
Japan (MITI)	1-558
Canada (DSL)	on the inventory
Korea (ECL)	on the inventory
New Zealand	on the inventory
Philippines (PICCS)	on the inventory
Switzerland	on the inventory
USA (TSCA)	in compliance

#### Remarks:

"on the inventory" means the product is listed in the respective inventory.

# **Toxicology**

oral	LD <sub>50</sub>	> 20.000 mg/kg, rat
dermal	LD <sub>50</sub>	> 10.000 mg/kg, rabbit
inhalative	LC <sub>50</sub>	> 6.82 mg/l/4h, rat

# **Ecology**

Leuciscus idus	$LC_0$	>	1.000	mg/l/48h
Daphnia magna (Crustacea)	$LC_0$	>	3	mg/l/30h
Pseudomonas fluorescens	$EC_0$	>	10.000	mg/l/24h

Water Hazardous Class nwg

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# PRODUCT STEWARDSHIP



Product: KRONOS 1000

# Acts, Directives, Regulations, Standards

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Council Directive 76/768/EEC \*

Council Directive 78/25/EEC \*

not applicable

on the approximation of the laws of the Member States relating to

cosmetic products

not applicable

on colourants for the use in pharmaceuticals

in compliance

Council Directive2002/72/EC \* on plastics materials and articles intended to come in contact with

foodstuffs

Council Directive 92/112/EEC \*

in compliance

on procedures for harmonizing the programmes for the reduction and eventual elemination of pollution caused by waste from the titanium dioxide industry

Council Directive 94/36/EEC \* not applicable

on colours for use in foodstuffs

in compliance

Council Directive 94/62/EEC \* Council Directive on packaging and packaging waste

Council Directive 95/45/EEC \* not applicable

Council Directive defining the specific purity criteria concerning colours for use in food additive:

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 \*

in compliance

establishing the ecological criteria for the award of the Community eco-

label to textile products

Commission Decision 2002/178/EC \* not applicable on general principles and requirements of food law

EN 71-3 Safety for Toys

The total content of the relevant heavy metals is

(Part 3: Migration value on certain elements)

below the limits.

not applicable European Pharmacopeia

\*) in the current version

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# PRODUCT STEWARDSHIP



Product: KRONOS 1000

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

Provisonal 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

\*) in the current versior

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#### **France**

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

Journal Officiel de la République Française, Bulletin Officiel de la Concurrence, Consommation, Répressior des Fraudes in compliance "Avis du Conseil supérieur d'hygiene publique de France relatif aux materiaux 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 XXXVI/2 Paper and board for baking purposes Titanium dioxide is listed as filler 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

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