

Technical Information

Z-COTE®

PRD 30083071

Valid since 12.07.2019
Revision 4.1

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® = registered trademark of BASF in many countries ™ = Trademark of BASF

Care Chemicals**UV Filter****INCI name(s)**

Zinc Oxide

Chemical description

Inorganic micronized pigment dry powder.

Physical form:

White powder

Molecular weight

81 g/mol

Molecular Formula

ZnO

CASR-No.	Ingredient
1314-13-2	Zinc Oxide

Application

Zinc oxide is known as skin protectant and for antimicrobial activity. All BASF zinc oxide grades provide broad-band light attenuation, which covers almost uniformly nearly the whole UV-Spectrum: from the short UVB up to the long UVA-I (380 nm). It is specifically recommended for daily skin care and the protection of sensitive skin, e.g. of children.

Z-COTE® is an uncoated micronized zinc oxide and has an amphiphilic character. It can be incorporated into the water phase or into the oil phase of a formulation.

Z-COTE® is compatible with all organic UV filters except Butyl Methoxydibenzoylmethane where it forms complexes (crystallization) and discoloration, and can be used to enhance the UVA and SPF performance of a sunscreen product.

The product quality of the Z-COTE® grades meets or exceeds the current USP requirements.

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Care Chemicals**Characteristic values**

The specifications stated in the paragraphs 'Quality control data' and 'Additional product descriptive data' finally and conclusively describe the properties of the product.

Quality control data

(Data which is used for quality release and is certified for each batch.)

Test property	Specification	Test method
Characters		
Appearance	White powder	Visual
Identification		
Identity A (ZnO)	Must conform	USP
Identity B (ZnO)	Must conform	USP
Tests		
Alkalinity	Must conform	USP
Arsenic	max. 6 ppm	USP
Lead	Must conform	USP
Lead	max. 10 ppm	ICP-OES
Cadmium	max. 10 ppm	ICP-OES
Average particle size	max. 0.2 micron	USP
Iron and other heavy metals	Must conform	USP
Assay	98.0 - 102.0 %	USP
Loss on ignition (500 °C)	max. 1.0 %	USP
Carbonate and Color of solution	Must conform	USP

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Care Chemicals**Storage information****Shelf life**

36 months

Storage temperature

Room temperature

Storage conditions

In original sealed containers and protected from moisture

Additional information

Do not store above + 40 °C.

Keep container tightly closed in a cool, well-ventilated place.

Prevent electrostatic charge - source of ignition should be kept well clear - fire extinguishers should be kept handy. Avoid dust formation.

Stabilising additives / Auxiliaries**Preservatives**

not present

Antioxidants

not present

Solvents

not present

Others

not present

General information**Raw material basis**

Inorganic

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Care Chemicals**Composition hints for finished product label****INCI Components****INCI Name (US/EU/CN)**

Zinc Oxide (nano) (EU)

Zinc Oxide (US, CN)

Content

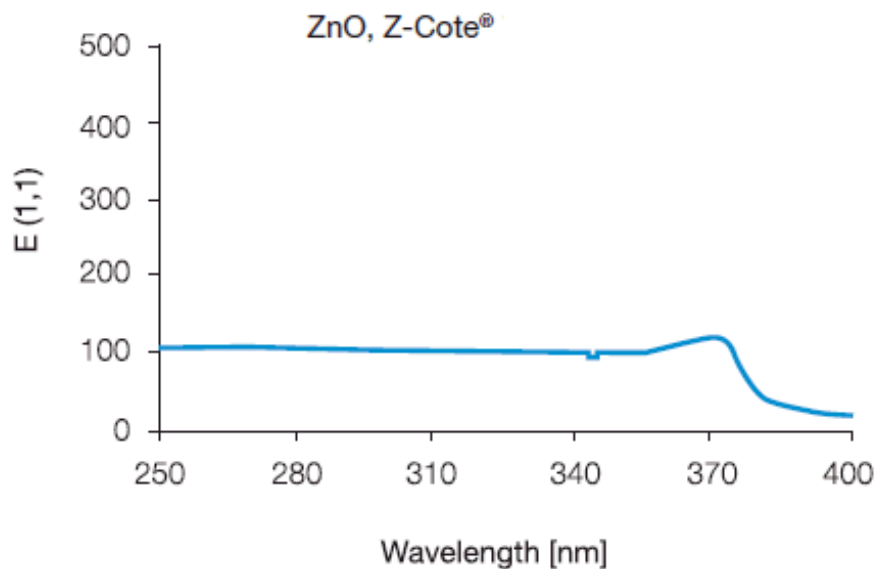
Complete *

Complete *

* Complete means conclusively describes the substance

Specific technical data

UV spectrum



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Care Chemicals**Approval status**

Region	Amount in %
EU	25
Switzerland	25
India	25
Taiwan	20
Korea	25
Japan (*)	No limit
China	25
Australia	No limit
ASEAN	25
USA	25
Canada	25
S. America	No limit
Mexico	25

(*) Japan: limit except for cosmetics coming into contact with mucous membranes

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