



We create chemistry

Technical Information

Z-COTE® HP1

PRD 30083072

Valid since 05.12.2018
Revision 3.0
WF-No. 18411
Page 1 of 5

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Care Chemicals

UV Filter

INCI name(s)

Zinc Oxide (and) Triethoxycaprylylsilane

Chemical description

Inorganic micronized pigment dry powder

Physical form:

White powder

Molecular weight

81 (for ZnO) g/mol

Molecular Formula

ZnO

CASR-No.	Ingredient
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1314-13-2	Zinc Oxide
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2943-75-1	Triethoxycaprylylsilane
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Application

Zinc oxide is known for its beneficial properties as skin protectant and its 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. children.

Z-COTE® HP1 consists of approx. 98% micronized zinc oxide and 2% of a hydrophobic coating. It should be incorporated into the oil phase of a formulation.

All Z-COTE® grades show synergistic effects with organic UV-filters, especially with Uvinul® T150, 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 *	Must conform	USP
Identity B *	Must conform	USP
Tests		
Alkalinity *	Must conform	USP
Arsenic *	max. 6 ppm	USP
Lead*	max. 10 mg/kg	USP
Cadmium *	max. 10 mg/kg	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
Residual solvent	max. 5000 mg/kg	USP
Loss on ignition (from coated product)	max. 2.0 %	PM/00840
Loss on drying 105 °C (from coated product)	max. 1.0 %	PM/00840
Average particle size (coated product)	max. 0.2 micron	PM/00806

Notes:

* Testing performed on Zinc Oxide uncoated



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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]

Triethoxycaprylylsilane

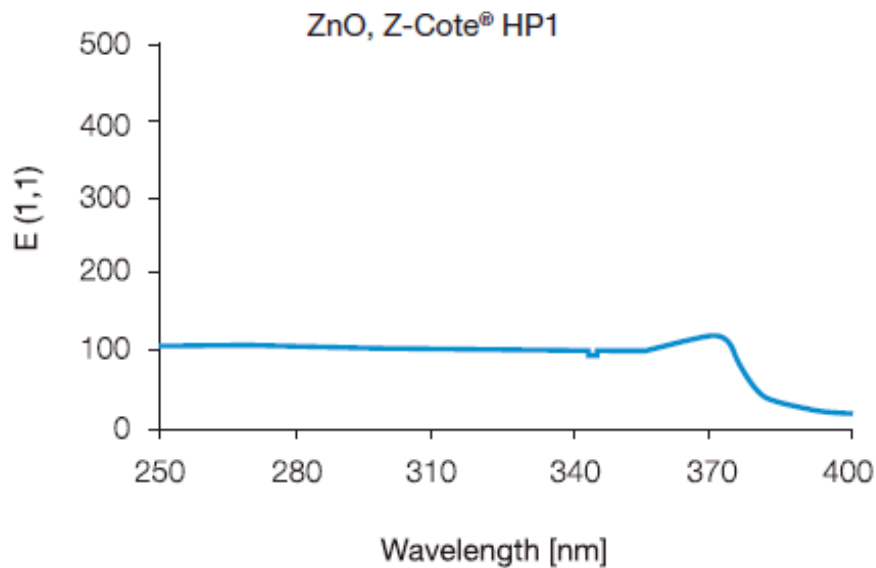
Content

96.0 - 99.0 %

1.0 - 4.0 %

Specific technical data

UV spectrum





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Approval status

Region	Amount in %
EU	- (**)
Switzerland	-
India	25
Taiwan	20
Korea	25 (***)
Japan (*)	No limit
China	25
Australia	11
ASEAN	25
USA	25
Canada	25
S. America	No limit
Mexico	25

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

(**) Germany: preliminary approval 25%

(***) Cosmetic manufacturer may require additional information on coating when make application for functional cosmetics

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