

The background of the top half of the page features a complex, multi-layered hexagonal pattern. It consists of numerous overlapping hexagons in various shades of teal and blue. Superimposed on these are white lines that form a 3D-like crystal lattice structure, with small white dots at the vertices of the hexagons. In the upper left corner, there is a white speech bubble containing the chemical formula ZnO.

ZnO

ZINC OXIDE

Pharma, Care, Specialities



Grillo Zinkoxid GmbH

ZnO

PROGRESS AS A TRADITION

With over 100 years of experience, zinc oxides in various qualities are developed and produced at the Grillo Zinkoxid GmbH site in Goslar. The versatile use of zinc oxide in various market segments requires a high degree of innovation and customer proximity. Grillo Zinkoxid GmbH sees itself as your partner for the creation of customer-oriented solutions for the use and handling of zinc oxides.



PHARMA

FDA-registered zinc oxides for use as an active ingredient or excipient in medicinal products and pharmaceutical products.



CARE

High-quality zinc oxides for global use as UV filters or for other applications in the personal care sector.



SPECIALITIES

High-purity zinc oxides for use in technical applications such as batteries, catalytic converters, paints or electronics.

ZnO

PHARMA

In terms of consumer protection, the strictest standards are applied, particularly in the production of pharmaceuticals.



PHARMA – ZINC OXIDE PHARMA 4/6/8 EXCIPIENT

High purity zinc oxide manufactured from purest SHG zinc (Special High Grade) according to EU-GMP Guideline Part II.

| Applications in pharmacy, cosmetics, dental chemistry, zinc compounds
| Supplied in paper bags of 25 kg net or FIBC of 500 - 1000 kg net

It complies at least with the valid Pharmacopoeias (Ph. Eur., BP and USP).

We are certified according to:
Kosher, Halal, ECOCERT and Cosmos

Specification Limits

Zinc Oxide Pharma Excipient		4	6	8	method
ZnO		99.0 - 100.5 %			Ph. Eur.
Pb	max.	10 ppm			ICP-OES*
Cd	max.	5 ppm			ICP-OES*
Fe	max.	200 ppm			ICP-OES*
Tl	max.	5 ppm			ICP-OES*
Spec. surface area (BET)		3.0 - 5.0m ² /g	5.1 - 7.0m ² /g	7.1 - 9.0m ² /g	DIN 66132

* cross-validated according to methods of the valid pharmacopoeia (Ph. Eur., BP, USP)

ZnO

CARE

Our high-quality zinc oxides for the personal care sector are produced exclusively from special high grade zinc (SHG zinc).



CARE – ZINC OXIDE GRILLO UV PROTEC®

High purity zinc oxide manufactured from purest SHG zinc (Special High Grade).

- | Applications in UV protection, cosmetics
- | Supplied in PE bags of 20 kg net (other forms of delivery and packaging on request)

It complies at least with the Pharmacopoeias (Ph. Eur., BP and USP).

We are registered as API manufacturer according to § 64 Abs. 3g Arzneimittelgesetz
| Reg. No.: DE_NI_01_Reg_2017_0001
| Certificate No.: DE_NI_01_GMP_2019_0001
| FDA-approved

We are certified according to: Kosher, Halal and Cosmos

Specification Limits

Zinc Oxide Grillo		UV ProTec® USP	UV ProTec® Ph. Eur.	method
ZnO		98.0 - 102.0 %	99.0 - 100.5 %	Ph. Eur.*
Pb	max.	conforms	10 ppm	ICP-OES*
Cd	max.	–	5 ppm	ICP-OES*
Fe	max.	conforms	5 ppm	ICP-OES*
As	max.	5 ppm		ICP-OES*
Spec. surface area (BET)		25.0 - 35.0 m ² /g		DIN 66132

* cross-validated according to methods of the valid pharmacopoeia (Ph. Eur., BP, USP)



CARE – ZINC OXIDE GRILLO UV 8+

High purity zinc oxide manufactured from purest SHG zinc (Special High Grade).

| Applications in UV protection, cosmetics
| Supplied in paper bags of 20 kg net

It complies at least with the Pharmacopoeias (Ph. Eur., BP and USP).

We are registered as API manufacturer according to § 64 Abs. 3g Arzneimittelgesetz
| Reg. No.: DE_NI_01_Reg_2017_0001
| Certificate No.: DE_NI_01_GMP_2019_0001
| FDA Establishment Identifier: (FEI #) 3008381554

We are certified according to:
Kosher, Halal, ECOCERT and Cosmos

Specification Limits

Zinc Oxide Grillo		Ph. Eur.	method
ZnO		99.0 - 100.5 %	Ph. Eur.
Pb	max.	10 ppm	ICP-OES*
Cd	max.	5 ppm	ICP-OES*
Fe	max.	200 ppm	ICP-OES*
Tl	max.	5 ppm	ICP-OES*
Spec. surface area (BET)		8.0 - 10.5 m ² /g	DIN 66132

* cross-validated according to methods of the valid pharmacopoeia (Ph. Eur., BP)



CARE – ZINC OXIDE COSMETICS

High purity zinc oxide manufactured from purest SHG zinc (Special High Grade).

| Applications in cosmetics
| Supplied in paper bags of 25 kg net or
FIBC 500 - 1000 kg net

We are certified according to: Kosher, Halal and COSMOS

Specification Limits

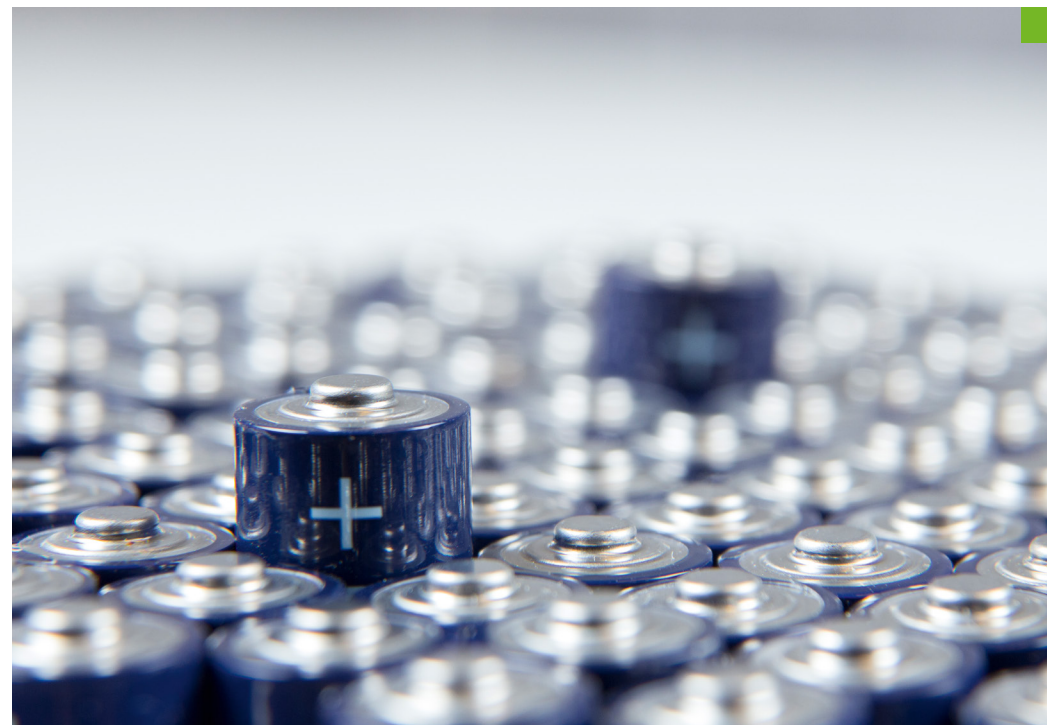
Zinc Oxide		Cosmetics	method
ZnO	min.	99.7 %	calculated
Pb	max.	10 ppm	ICP-OES*
Cu	max.	0.5 ppm	ICP-OES*
Cd	max.	10 ppm	ICP-OES*
Fe	max.	5 ppm	ICP-OES*
Mn	max.	0.1 ppm	ICP-OES*
As	max.	5 ppm	ICP-OES*
Spec. surface area (BET)**		3.0 m ² /g - 5.0 m ² /g	DIN 66132

* cross-validated according to methods of the valid pharmacopoeia (Ph. Eur., BP, USP), ** customer specific BET available on request

ZnO

SPECIALITIES

Zinc oxide is the preferred zinc source for the production of inorganic and organic zinc compounds.



SPECIALITIES – ZINC OXIDE 4/6/8 HIGH PURITY TECHNICAL APPLICATION

High purity zinc oxide manufactured from purest SHG zinc (Special High Grade).

| Applications in catalysts, batteries, paints, varnishes, varistors, zinc compounds
| Supplied in paper bags of 25 kg net or FIBC of 500 - 1.000 kg net or silo truck (only powder)

Zinc Oxide High Purity	4	6	8	method
ZnO	99.9 - 100 %			calculated
Pb	max.	20 ppm		ICP-OES
Cd	max.	5 ppm		ICP-OES
Fe	max.	5 ppm		ICP-OES
Mn	max.	0.5 ppm		ICP-OES
As	max.	5 ppm		ICP-OES
Spec. surface area (BET)	3.0 - 5.0 m ² /g	5.1 - 7.0 m ² /g	7.1 - 9.0 m ² /g	DIN 66132



SPECIALITIES – ZINC OXIDE WHITE SEAL SPECIAL

Zinc Oxide White Seal Special is a high purity zinc oxide manufactured from SHG zinc (Special High Grade) by Indirect Process (French Process).

- | Applications in rubber, adhesives, paints, glass, enamel, ceramics, porcelain, catalysts
- | Supplied as powder or granules in paper bags of 25 kg net or big bag of 500 - 1000 kg net

Specification Limits		
Zinc Oxide	White Seal Special	method
ZnO	99.8 -100 %	calculated
Pb max.	20 ppm	ICP-OES
Cd max.	5 ppm	ICP-OES
Fe max.	5 ppm	ICP-OES
As max.	5 ppm	ICP-OES
Spec. surface area (BET)	3.0 - 5.0 m ² /g	DIN 66132



SPECIALITIES – ZINC OXIDE GRILLO NANOTEC®

High purity, nano-scale zinc oxide manufactured from purest SHG zinc (Special High Grade).

- | Applications in transparent UV protection, antimicrobial coatings, paints and varnishes
- | Supplied in PE bags of 20 kg net

We are certified according to:
Kosher and Halal

Specification Limits			
Zinc Oxide Grillo		NanoTec®	method
ZnO	min.	99.9 - 100.0 %	calculated
Pb	max.	10 ppm	ICP-OES
Cd	max.	5 ppm	ICP-OES
Fe	max.	5 ppm	ICP-OES
As	max.	5 ppm	ICP-OES
Mean Particle size		30 - 50 nm	DLS

CERTIFICATES

Grillo Zinkoxid GmbH has a wide range of certificates documenting the high standard of our production facilities and manufacturing processes.

An integrated management system has been introduced for each of the business divisions of Grillo-Werke AG, aimed at continuous improvement and strengthening our competitive ability in a sustainable manner in the areas of quality, energy efficiency, plant safety, occupational health and safety, environmental protection, social responsibility and any other industry-related fields of interest, such as food and animal feed safety.



We have the following certifications in the Zinc Oxide Division:

ISO 9001	Quality management	Company certification	TÜV Nord
ISO 14001	Environmental management	Company certification	TÜV Nord
ISO 50001	Energy management	Company certification	TÜV Nord
GMP	Compliance Directive 2001/83/EC	Zinc oxide (pharmaceutical)	GAA Braunschweig
GMP	FDA Inspection 23.-27/09/2019	Zinc oxide (pharmaceutical)	FDA
CEP	Product quality in accordance to European Pharmacopoeia	Zinc oxide (pharmaceutical)	EDQM
ECOCERT COSMETICS	Product quality in accordance with ECOCERT standards	Zinc oxide (pharmaceutical)	ECOCERT Greenlife S.A.S.
COSMOS	Product quality in accordance with COSMOS standard	UV ProTec	ECOCERT Greenlife S.A.S.
Halal	Manufacture in accordance with Islamic religious dictates	Zinc oxide (animal feed, FCC, pharmaceutical, NanoTec, UV ProTec, GRILLO UV 8+, Cosmetics)	Halal Control
Kosher	Manufacture in accordance with Jewish religious dictates	Zinc oxide (animal feed, FCC, pharmaceutical)	KF Kosher



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