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# USP Grade Zinc Oxide Series

## DESCRIPTION

USP grade zinc oxides are of the highest quality and purity, specially produced to comply with the requirements of the United State Pharmacopeia (USP), the FDA, and the Board of Standards of the Toilet Goods Association. Made from high-purity zinc metal under carefully controlled conditions, USP zinc oxide grades provide a combination of high chemical purity with a range of chemical reactivity, physical properties, and optical properties. USP grades are available in the following forms:

- USP-1** High specific surface and high reactivity providing the unusual combination of highest purity, highest chemical reactivity, and lowest opacity
- USP-2** Largest particle size and lowest reactivity providing excellent physical properties – bright blue-white color, fine texture, a high degree of fluffiness, and the optimum particle size for maximum covering powder
- USP-3** Medium particle size & specific surface and medium reactivity providing excellent physical properties – bright blue-white color, fine texture, a high degree of fluffiness, and the optimum particle size for maximum covering powder

## USES

Cosmetics and Personal Care Products, Pharmaceuticals, OTC Medicines, Nutraceuticals, Food Additives (nutritional), Food Contact Plastics and Can Lacquers, Medical Devices, & Dental Cements

## TECHNICAL DATA

### Representative Physical Properties

Mean Particle Size, $\mu$	
USP-1 .....	0.12
USP-2.....	0.33
USP-3.....	0.21
Specific Surface, $m^2/g$	
USP-1 .....	9.0
USP-2.....	3.2
USP-3.....	5.0
Through 325 Mesh, %.....	99.99
Apparent Density $lb/ft^3$	
USP-1 .....	30
USP-2 .....	40
USP-3 .....	35
Oil Absorption (lbs oil/100 lbs ZnO)	
USP-2 .....	12
Specifications .....	U.S. Pharmacopeia FDA 21 CFR 73.1991

### Representative Chemical Properties

ZnO, % .....	99.9
CdO, % .....	0.001
As <sub>2</sub> O <sub>3</sub> , %.....	<0.00003
PbO, % .....	0.001
H <sub>2</sub> O Soluble Salts, %.....	0.02
Total S as SO <sub>3</sub> , %.....	0.001
Loss At 110°C, % .....	0.04
Insoluble in HCL, %.....	<0.01

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