

## Zinc Oxide, Micronized & Coated

### Specification Sheet

**Description:** USP grade zinc oxide that consists of approximately 98% micronized zinc oxide and 2% hydrophobic coating material (silicone derivative). Derived from natural zinc ore, super-finely micronized. Particle size <200 nanometer (<0.2 micrometer), mean particle size 86 nanometer. Fine white transparent powder with minimal whitening effect, faint odor. Dispersible but not soluble in oils.

**CAS:** 1314-13-2, 2943-75-1

**INCI Name:** Zinc oxide, triethoxycaprylylsilane

**Benefits:**

- Reflects sunlight (UVB rays)
- Has soothing effects and can be used for skin irritations
- Has some antimicrobial properties
- Transparent look with minimal whitening effect. Reflects sunlight (UVB rays)
- Coated zinc oxide is more compatible with acrylate-based thickeners (e.g. carbomer) than non-coated zinc oxide, because it has alkaline properties in formulations and needs therefore less or no neutralizers like TEA or NaOH

**Use:** To be dispersed into the oil phase of formulation. Usually combined with organic sunscreens, typical use level 3-6% when combined with organic sunscreens, use level when given alone 3-25%. For external use only.

**Applications:** Sun care products, makeup products. Will not give coverage to makeup due to its transparency, for coverage use regular zinc oxide or titanium dioxide.

**Country of Origin:** USA

**Raw material source:** Metallic zinc

**Manufacture:** Zinc oxide is produced from metallic zinc which is melted in a graphite crucible and vaporized at high temperatures (around 1000 °C). Zinc vapor reacts then with the oxygen in the air to give zinc oxide. The preparation of micronized (or nano-sized) zinc oxide is then carried out by the precipitation method where zinc salt solutions are reacted with alkali solutions.

**Animal Testing:** Not animal tested

**GMO:** GMO free (does not contain plant-derived components)

**Vegan:** Does not contain animal-derived components

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**Regulatory Information:** Sunscreens are registered as API (Active Pharmaceutical Ingredient) or OTC-drug with the FDA. This means that, if you want to sell products containing a sunscreen, your facility must be registered with the FDA and operate under cGMP guidelines. Further information about the FDA regulation of sunscreens can be found [here](#).