



ELUVSAFE – ZnOx™ (Zinc Oxide)

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	White to slightly yellow fine powder; granules; pellets; nanoparticles
Physical Form	Powder
Odor	Odorless
Molecular Weight (g/mol)	81.4
Density or Specific Gravity	5.6 g/cm ³
Viscosity	3cP
Refractive Index	2.0041, 2.0203
pH (if aqueous solution)	6.95-7.37
Thermal Properties	
Melting Point	1974 °C
Boiling Point	1949.9°C (estimate)
Flash Point	27°C

2. Processing Methods



Cosmetic sunscreen cream

Use antioxidants to enhance photostability and prevent oxidation in zinc oxide-based sunscreens. Avoid strong acids or chelators to maintain zinc oxide integrity and ensure long-term product stability.

Key Ingredients	Indicative Dosage (% w/w)
Water (Aqua)	50-60%
Homosalate	4.25%
Octisalate	4.75%
Zinc Oxide	6.75%
Dimethicone	10%
Glycerin	5%
Titanium Dioxide	3%
Cetearyl Alcohol	2%
Phenoxyethanol	0.8%
Carbomer	0.5%
Triethanolamine	0.3%

Paints

Add zinc oxide as an anti-corrosive pigment or mildew-resistant agent, dispersing it thoroughly using high-speed mixing. Maintain neutral to slightly alkaline pH and use dispersants to prevent agglomeration and ensure even distribution.

Key Ingredients	Indicative Dosage (% w/w)
Binder (Resin)	20-40%
Fillers/Extenders	5-20%
Additives	1-5%
Zinc Oxide	10-40%



Makeup foundation cream

When adding Zinc Oxide to foundation cream, disperse it thoroughly in the oil phase using a high-shear mixer to prevent clumping and ensure even coverage. Pre-coating with silicone or dispersing agents can improve skin feel and stability. Mix under controlled temperature to maintain emulsion stability and avoid settling.

Key Ingredients	Indicative Dosage (% w/w)
Nicotinamide	0.05%
Avobenzone	0.22%
Zinc oxide	0.13%
Titanium dioxide	0.10%
Polyglyceryl-2 triisostearate	30%
Beeswax	5.5%
Olive wax	3%
Alkene wax	4%
Castor oil	18%
Liquid paraffin	24%
Peppermint essential oil	5%
Ethylparaben	0.4%
Chrysanthemum extract	6%



Lip balm

When adding Zinc Oxide in lip balm, use a micronized or coated grade for a smooth texture and even dispersion. Incorporate it into the melted oil phase with thorough mixing (preferably high shear) to avoid clumping. Stir continuously while cooling to prevent settling and ensure a uniform, stable balm.

Key Ingredients	Indicative Dosage (% w/w)
Sunflower Oil	25-28%
Beeswax	15%
Candelilla Wax	5%
Shea Butter	10%
Coconut Oil	15%
Jojoba Oil	5%
Zinc Oxide	20%
Vitamin E Acetate	1%
Tocopherol	0.5%
Fragrance (optional)	0.5%

3. Dosing by Application

Products	Authorized dosage %
Sunscreen Lotions, Creams	5-25%
Cosmetics Skin Care Creams, Lotions	Upto 25%
Paints/Coatings	10-40%

4. Grade Comparison Summary

Parameter	Tech
Purity (%)	90-99%
Appearance	White to slightly grayish powder
UV Protection Capability	Not used for UV blocking
Water Solubility	Insoluble
Regulatory Compliance	TSCA
Typical Applications	Ceramics, rubber, glass, paints

The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of



the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.

EXPLORE ELCHEMY'S PRODUCT PORTFOLIO

[ELUVSAFE - ZnOx™ \(Zinc Oxide\)](#) | [Browse Catalog](#) | [Connect with us](#)