

Identification of the substance: Zinc oxide

Substance name	Zinc oxide
EC	215-222-5
CAS	1314-13-2
IUPAC	Zinc Oxide
Molecular formula	ZnO
Forms in the market	Dispersion in water (20%); Dispersion in ethanol (40%); Dispersion in butyl acetate (40%)

Physical and chemical properties

Shape	Spherical
Size (nm)	25

Toxicological information

Inhalation acute toxicity	LC50 = 1.79 mg/L (Very toxic)
Dermal acute toxicity	LD50 = >2000 mg/kg dw (Nontoxic)
Oral acute toxicity	LD50 = > 5000 mg/kg bw
	LD50 = > 333.33 mg/kg bw/day
	LD50 = > 5000 mg/kg bw
Genotoxicity	Negative
cytotoxicity	Negative

Ecotoxicological information

Freshwater Acute toxicity (Daphnia)	LC ₅₀ = 0.125 mg/L (Very toxic)
Freshwater Acute toxicity (Alga)	EC50 = 0.65 mg/L (Very toxic)
Freshwater Acute toxicity (Fish)	LC50 = 2 mg/L (Toxic)
	LC50 = 2.066 mg/L (Toxic)
Soil invertebrates (worms)	20 mg/L (Practically nontoxic)
BAF-Bioaccumulation	No data

Application

Industrial uses	Coatings
	Buildings and infrastructures
	Plastic
Improved properties	Long-term UV protection
Polymeric matrix	Polyvinylalcohol (PVA)
Recommendations, comments	For coatings, recommended for use in aqueous wood and furniture coatings for transparent systems