



TECHNICAL DATA SHEET

ZNO GRADE 400

Description

ZNO Grade 400 is manufactured by French (Indirect) Process with medium surface area, high assay and moderate impurities. ZNO Grade 400 meets the requirements of ASTM specification D79, 2002/95/EC Restriction of Hazardous Substances Directive (RoHS) for heavy metals as amended, 2005/717/EC, 2002/96/EC Waste Electrical and Electronic Directive (WEEE) targets for reducing toxic e-waste, European Union EEA laws 2000/53/EC End of Live Vehicles (ELV Directive), and other regulations where good quality zinc oxide is required. ZNO Grade 400 is also a USFDA GRAS (Generally Recognized As Safe) at 21cfr182.8991 meeting GMP requirements listed at 21cfr110, and is

approved by the USFDA for use as an ingredient in food contact in Rubber at 21cfr177.2600(c)(1), plastics at 21cfr17.101(a), coatings at 21cfr175.300(b)(2), etc.

ZNO Grade 400 is also available in pelleted form (ZNO Grade 400P) and with processing aid treatment additive (ZNO Grade 400T).

Uses

This grade is our most popular zinc oxide product. It is widely used in the tire and rubber, paint and coatings, and all applications including those requiring an FDA approved substance.

TYPICAL CHEMICAL PROPERTIES

| Chemical Analysis (%) | Typical Limit* | Nominal | Test Method |
|----------------------------|----------------|---------|-------------|
| ZnO (Zinc Oxide) dry basis | 99.8 min. | 99.9 | Supplier |
| Pb (Lead) | 0.1 max. | 0.03 | ASTM D4075 |
| Cd (Cadmium) | 0.01 max. | 0.008 | ASTM D4075 |
| Fe (Iron) | 0.006 max. | 0.002 | ASTM D4075 |
| Loss at 110°C (Moisture) | 0.3 max. | 0.15 | ASTM D280 |

TYPICAL PHYSICAL PROPERTIES

| | | | |
|-----------------------------------|------------|-------|------------|
| Surface Area (m ² /g) | 4.0 - 6.0 | 5.0 | ASTM D4315 |
| Fineness retained on 325 mesh (%) | 0.02 max. | 0.01 | ASTM D4315 |
| (Fineness passing 325 mesh (%)) | 99.98 min. | 99.99 | ASTM D4315 |

Standard Packaging: 50 lb. net wt. Kraft bags, 48X40 2-way wood pallets 2,500 lb net wt.

Customer specifications supersede above limits. Zinc Oxide LLC (ZNO) can produce zinc oxide to meet specific customer specifications or application requirements. *Two sigma μ (>98%) limit.

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