



3770 Embassy Parkway Akron, Ohio 44333

330-535-2100 ♦ 800-321-2260 ♦ Fax 330-535-8947

ZINC PRODUCTS
-SPECIALTY ZINC OXIDES-

ZINC OXIDE 35
-HIGH ACTIVITY-

CHEMICAL COMPOSITION:

Precipitated, high-surface-area Zinc Oxide

TYPICAL PROPERTIES:

Form.....	white to light yellow powder
Specific Gravity @ 72°F/22°C	approx. 5.6 grams/cm ³
Zinc Oxide Content.....	≥ 93%
Iron Content	0.002%
Cadmium Content.....	0.0005%
Lead Content.....	0.001%
Copper Content.....	0.0005%
Manganese Content	0.001%
Surface Area	45 m ² /grams
Ignition Loss	≤ 4.0 %
Residue on a 230 mesh screen	≤ 0.2% max

APPLICATIONS:

Zinc Oxide 35 is an effective accelerator/activator of extremely fine particle size, suitable for rubber articles based on natural and synthetic elastomers, as well as for latex applications.

The fine particle size and high activity of Zinc Oxide 35 permits a 40% reduction in the level of addition compared to regular zinc oxide grades. Moreover, it is useful in applications where only low concentrations of zinc oxide can be tolerated, e.g. transparent and translucent rubber goods. Employed at high levels, it provides good fatigue resistance and heat dissipation in dynamically stressed articles, such as buffers and rollers.

Zinc Oxide 35 is also a crosslinking agent for metal oxide curable elastomers - for example polychloroprene (CR) and carboxylated lattices.

APPLICATIONS (continued):

In adhesive applications, it provides improved resistance to sedimentation.

Even low levels of addition (0.75 - 1.0 phr) achieve a satisfactory activation of vulcanization accelerators. Increasing concentrations of Zinc Oxide 35 yield a slightly faster onset of cure with thiurams and dithiocarbamates, while with thiazoles, especially sulfenamides, a more delayed action is obtained, without extending the total curing time. In latex applications, compound stability is reduced, as with other zinc oxide grades, which can be counteracted by the addition of stabilizers.

Typical loading levels (phr) of Zinc Oxide 35 are:

Transparent Goods.....	0.75 - 1.0
Translucent Goods.....	1.0 - 3.0
General Use.....	2.0 - 4.0
Improved dimensional Stability.....	2.0 - 4.0
Improved Thermal Conductivity.....	2.0 - 4.0
Cross-linking Agent.....	5.0
Reinforcing Filler.....	20 - 50

Zinc Oxide 35 is easy to incorporate and has very good dispersion characteristics in rubber compounds. Due to its small particle size, it causes a powerful activation of the cure.

Zinc Oxide 35 raises compound viscosity and, at high levels of addition, increases thermal conductivity and has a stiffening effect, improving mechanical properties, especially tensile strength, modulus and, to some extent, hardness.

Rubber goods containing high levels of Zinc Oxide 35 have high tensile strength, rebound resilience, abrasion and tear resistance, as well as good anti-flex cracking properties.