

Zinkoxid transparent

Specialty and Standard Chemicals

Function

Zinkoxid transparent is a vulcanization activator of extremely fine particle size, particularly suited for transparent rubber goods and for rubber articles in which the heavy metal content has to be kept to a minimum.

Product description

Composition: fine particles of precipitated zinc carbonate

Appearance: white to slightly yellowish powder

Density (at 22 °C) approximately 3.37 g/cm³

Lead content approximately 3 ppm

Cadmium content approximately 2 ppm

<u>Property</u>	<u>Nominal value</u>	<u>Unit</u>	<u>Test method</u>
Content as zinc oxide	72.0 ± 2.0	%	169
Sieve residue (0.063 mm)	≤ 0.2	%	DIN ISO 787/18
Electrical conductivity	≤ 600	μS/cm	213 A

Use

Mode of action: Zinkoxid transparent is a vulcanization activator of extremely fine particle size, particularly suited for transparent rubber goods. It can be employed in natural and synthetic rubbers and also as an acid acceptor in polychloroprene adhesives where transparency is required. It is especially useful for rubber articles in which the heavy metal content has to be kept to a minimum.

Processing: Zinkoxid transparent 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. It is an activator for sulfur cures and thiuram cures.

Zinkoxid transparent raises compound viscosity and at high levels of addition increases thermal conductivity and has a stiffening effect, improving the dimensional stability of extrusions and open-cured goods.

Vulcanizate Properties: Zinkoxid transparent causes no color change in vulcanizates and does not bloom. The lead content is extremely low, hence no discoloration by black lead sulfide is encountered. Increasing levels of Zinkoxid transparent improve the mechanical properties of rubber goods; above all, modulus, tear resistance, and abrasion resistance.

As an acid acceptor in polychloroprene adhesives, it is used to achieve long open-tack times in the absence of magnesium oxide and regular zinc oxide grades. The latter two products reduce open time by reacting with terpene phenolic and phenolic resins, tackifiers typically used for polychloroprene adhesives.

Dosage: Typical levels of Zinkoxid transparent addition based on 100 parts by weight of elastomer are:

as vulcanization activator (sulfur and thiuram cure):	3.0 - 5.0
for transparent articles:	1.0 - 2.5
for translucent articles:	2.5 - 5.0
for colored articles:	3.5 - 5.0
for improving dimensional stability and thermal conductivity:	8 - 10

Packaging

20 kg paper bag on 700 kg or 1.000 kg skid or 700 kg big bag.

Storage stability

In original closed containers under cool (approximately 25 °C) and dry conditions 547 days from date of production.

Handling

For additional handling information on Zinkoxid transparent please consult current safety data sheet.

These raw material properties are typical and, unless specifically indicated otherwise, are not to be considered as delivery specification.

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