

Vulkanol® TOF

Processing Promoters

Function

Vulkanol® TOF is used in plastic and rubber polymers as non-corrosive flame retardant, due to his extreme low glass transition temperature it is also a wet and ice grip improver in silica filled passenger car tread formulations.

Product description

Composition: tris(2-ethylhexyl)phosphate (TOF)

Appearance: clear, almost colorless liquid

<u>Property</u>	<u>Nominal value</u>	<u>Unit</u>	<u>Test method</u>
Assay	≥ 98,5	%	gas chromatography
Refractive index (at 20 °C)	1.444 ± 0.001	---	DIN 51 423
Viscosity (at 20 °C)	14 ± 1	mPa.s	DIN 53 015

Use

Mode of action: As phosphorous chemical Vulkanol® TOF itself is a non-flammable substance. By replacing flammable mineral oils the resistance of articles is improved. As non-corrosive flame retardant Vulkanol® TOF can be used alone but mainly in combination with other flame retardants.

Vulkanol® TOF has an extreme low glass transition temperature. In highly filled silica tread formulations based on S-SBR the product improves mainly the wet and ice grip of the tire in combination with better the rolling resistance.

Processing: Vulkanol® TOF is readily mixed into the rubber compounds. The compound viscosity and scorch safety is not effected using Vulkanol® TOF as replacement for mineral oils. The vulcanization time of the compound is shorter.

Vulcanizate Properties: By replacing mineral oils Vulkanol® TOF has no effect on mechanical properties like hardness or modulus, the abrasion resistance can be improved, rebound elasticity is higher with positive effect on wet and ice grip as also rolling resistance.

Dosage: Typical levels of Vulkanol® TOF addition based on 100 parts by weight of elastomer are:

NBR (e.g. Perbunan®, Krynac®)	10 phr
CR (e.g. Baypren®)	10 phr
NR	20 phr
SBR (e.g. Buna® SE, Buna® VSL)	15 phr
IIR	20 phr

Packaging

195 kg metal drum on 780 kg skid or 950 kg IBC.

Storage stability

In original closed containers under cool (approximately 25 °C) and dry conditions 730 days from date of production.

Handling

For additional handling information on Vulkanol® TOF 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.

Baypren® is a Registered Trademark of Bayer AG, Germany.

Buna®, Krynac®, Perbunan® and Vulkanol® are Registered Trademarks of LANXESS Deutschland GmbH.

Our technical advice - whether verbal, in writing or by way of trials - is given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. It does not release you from the obligation to test the products supplied by us as to their suitability for the intended processes and uses. The application, use and processing of the products are beyond our control and, therefore, entirely your own responsibility. Should, in spite of this, liability be established for any damage, it will be limited to the value of the goods delivered by us and used by you. We will, of course, provide products of consistent quality within the scope of our General Conditions of Sale and Delivery.



LANXESS Deutschland GmbH

BU Rhein Chemie

Kennedyplatz 1

50569 Cologne, Germany

Phone: +49 (0)221 8885-0

E-Mail: rubber.additives@lanxess.com

<http://rch.lanxess.com>