



# Perkacit<sup>®</sup> ZBEC

**COMPOSITION:** *Zinc dibenzylthiocarbamate CAS#14726-36-4*

Perkacit ZBEC is a very fast primary or secondary (ultra) accelerator for natural and synthetic rubber. It is also a very rapid accelerator for NR and SBR latices.

## MAJOR APPLICATIONS AND PROPERTIES

- Perkacit ZBEC has been developed as a safe secondary amine dithiocarbamate.
- N-Nitrosodibenzylamine is not carcinogenic according to published literature.
- Perkacit ZBEC is used as a primary or secondary ultra-accelerator for thiazole and sulfenamide cure systems for general-purpose polymers (NR, SBR, IIR, EPDM). It can be used as a primary ultra accelerator in special applications as well as in latex.
- Within the range of zinc dithiocarbamates, Perkacit ZBEC provides the longest scorch resistance as well as excellent prevulcanization resistance in latex.
- Perkacit ZBEC is regulated for use in articles in contact with food as specified under FDA 21 CFR 175.105, 177.2600 and under BfR Recommendation XXI, Categories 1-4 and "Sonderkategorie".

## COMPOUNDING INFORMATION

The use of Perkacit ZBEC offers possibilities to obtain N-nitrosamine safe molded and extruded rubber goods.

It can be used in combination with sulfenamides or Perkacit TBzTD at the 0.5 - 1.5 phr level.

In latices the dosages are in principle the same as for Perkacit ZDEC albeit at elevated temperatures.

In inner tubes (IIR) a combination of 0.5 - 1.0 phr Perkacit ZBEC, 1.0 - 1.5 phr Perkacit TBzTD and 1.0 phr Santocure TBBS is recommended as starting point as a replacement for 1.0 phr TMTD with 0.5 phr MBTS.

## HANDLING PRECAUTIONS

For detailed information on toxicological properties and handling precautions please refer to the current Safety Data Sheet. This information sheet can be downloaded from our web site or requested from the nearest Performance Additives office and should be consulted before handling this product.

## STORAGE RECOMMENDATIONS

Store Perkacit ZBEC in single stacked pallets in a cool, dry, well-ventilated area, avoiding exposure of the packaged product to direct sunlight. Double stacking of palletized material and/or exceeding 35 °C can result in unusual compaction of product.

PRODUCT INFORMATION

<b>Perkacit ZBEC</b>	<b>pdr</b>	<b>pdr-d</b>	<b>grs-2mm</b>	
Product form	powder	dust suppressed powder	granules	
<b><u>PRODUCT SPECIFICATIONS</u></b>				<u>Test method</u>
Appearance	white to off white powder	white to off white powder	off white to gray granules	FF97.5
Zinc content (%)	10.4-11.5	10.2-11.3	10.2-11.3	FCp97.3
Assay (titration) (%)	96.5	96.0		FJo00.1
Melting point, initial (°C) min.	178	178	178	FF83.9
Melting point, final (°C)	180-190	180-190	180-190	FF83.9
Heat loss (%) max.	0.5	0.5	0.5	FGr97.7
Water solubles (%) max.	0.5	0.5	0.5	FF83.12
Additive (%)	-	1.0-2.0		FGr83.6
Residue on 150 µm sieve (%) max.	0.1	0.1		FF83.8
Residue on 63 µm sieve (%) max.	0.5	0.5		FF83.8
<b><u>TYPICAL PROPERTIES</u></b>				
Density at 20 °C (kg/m <sup>3</sup> )	1420	1420	1450	
Bulk density (kg/m <sup>3</sup> )	210-250	260-300	500-550	