

# Perkacit® ZDMC

**COMPOSITION:**                      *Zinc dimethyldithiocarbamate*                      *CAS#137-30-4*

Perkacit® ZDMC is a very fast primary or secondary (ultra) accelerator for natural and synthetic rubber. It is also a very rapid accelerator for latex.

## MAJOR APPLICATIONS AND PROPERTIES

- Perkacit® ZDMC is a secondary ultra accelerator for thiazole and sulfenamide cure systems for general-purpose polymers (NR, SBR, IIR, EPDM). It can also be used as a primary accelerator in some continuous cure applications.
- Compared to DPG or the thiurams, Perkacit® ZDMC gives faster cures, higher modulus and shorter scorch times.
- Perkacit® ZDMC is widely used in both natural and synthetic latices.
- It should be noted that in the application of Perkacit® ZDMC N-nitrosodimethylamine can be formed by the reaction of dimethylamine, a decomposition product, with nitrosating agents (nitrogen oxides).
- Perkacit® ZDMC is regulated for use in articles in contact with food as specified under FDA 21 CFR 177.2600, 178.3120 and under BfR Recommendation XXI, Categories 1-4 and "Sonderkategorie".

## COMPOUNDING INFORMATION

Perkacit® ZDMC can be used in a low set EPDM formulation. It is best applied in a blend to avoid blooming. A general starting point is Perkacit® ZDMC 1.0, Perkacit® ZDBC 1.0, TMTD 0.8, DPTT 0.8 and DTDM at 2.0 phr.

In NR and SBR Perkacit® ZDMC is generally used at the 0.1 to 0.4 phr level in combination with thiazoles and sulfenamides.

In NR latex 1.0 phr Perkacit® ZDMC together with 2.5 phr sulfur serves as a starting point when used as a primary accelerator.

In foamed applications (based on NR or SBR latex) 1.5 phr of Perkacit® ZDMC with phr ZMBT and 2.5 phr sulfur can be recommended to start with.

## 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® ZDMC in a cool, dry, well-ventilated area, avoiding exposure of the packaged product to direct sunlight.

PRODUCT INFORMATION

<b>Perkacit® ZDMC</b>	<b>pdr</b>	<b>pdr-d</b>	
Product form	powder	dust suppressed/oiled powder	
<b><u>PRODUCT SPECIFICATIONS</u></b>			<u>Test method</u>
Appearance	white to off white powder	white to off white powder	FF97.5
Zinc content (%)	20.5-22.0	20.2-21.7	FCp97.3
Melting point, initial (°C) min.	240	238	FF83.9
Melting point, final (°C)	248-257	248-257	FF83.9
Heat loss (%) max.	0.5	0.5	FGr97.7
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> )	1700	1700	
Bulk density (kg/m <sup>3</sup> )	330-370	355-395	
Compacted bulk density (kg/m <sup>3</sup> )	420-460	455-495	