

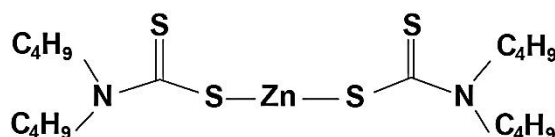
BUTYL ZIMATE®*

Rubber Accelerator and Antioxidant

Made in the U.S.A at Vanderbilt Chemicals, Murray, KY

Chemical Composition:

Zinc dibutyldithiocarbamate (CAS No. 136-23-2)



Use:

An accelerator for EPDM and natural and synthetic latexes. Functions as a non-discoloring antioxidant in non-curing applications and a stabilizer in IIR. Also used as an antioxidant in thermoplastics rubbers and hot melts.

Physical Properties (BUTYL ZIMATE):

Physical State	Powder
Color	White-Cream
Density	1.21 Mg/m ³
Fineness (<100 Mesh)	99.9% Minimum
Zinc Content	13.0-15.0%
Melting Range	104 to 112°C
Solubility	Practically insoluble in water, and dilute caustic. Slightly soluble in toluene, carbon disulfide, gasoline.

Available Forms:

Powder, Dustless Powder, SG (unground crystalline powder) and 50% Assay Slurry.

Applications:

EPDM Rubber

Rubbers with low unsaturation such as EPDM require very active accelerators. **BUTYL ZIMATE** promotes fast cures with good aging and is the least blooming of the zinc dithiocarbamates. Up to 3 phr can be used in many compounds without bloom problems.

Fast-Curing & Non-Blooming

Heat & Comp. Set Resistant

Ingredients (phr)

Zinc Oxide	5.0	5.0
Sulfur	2.0	0.5
METHYL TUADS® (TMTD)	0.6	3.0
BUTYL ZIMATE®	2.0	3.0
ALTAX® (MBTS)	1.0	--
METHYL ZIMATE	--	3.0
DTDM	--	2.0

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Adhesive For non-curing applications, **BUTYL ZIMATE** may be used alone as an antioxidant from 1 to 4 phr. Combinations of antioxidant may be more effective than either component alone. **BUTYL ZIMATE** is used in combination with Songnox® 3114 to provide enhanced protection through synergistic action. However, careful evaluations are required to determine optimum systems and concentrations. Generally a 60:40 ratio of **BUTYL ZIMATE** and secondary antioxidant is a good starting level.

Latex As an accelerator, used at level of 1 to 2 phr, **BUTYL ZIMATE**® Accelerator provides fast flat cures in NR, SBR, nitrile and Neoprene latexes. For applications, where thin films will be made, dispersions or slurries should be prepared to assure a uniform film.

Preparation for addition to Latex:

Part A	Dry	Wet
BUTYL ZIMATE ® Accelerator	50.0	50.0
DARVAN ® No.1 Spray Dried	2.0	2.0
10% Igepal CO-630	0.1	1.0
Water	---	26.6
Part B for Slurries		
15% Sodium Caseinate	3.02	20.4
	55.12	100.0
Part B for Dispersions		
VAN GEL ® B Magnesium Aluminum Silicate Water	0.5	0.5
	--	19.9
	52.6	100.0

Advantages:

- Provides fast cures with good heat aging
- Non-discoloring and non-staining
- Complies with FDA regulations:
 - 175.105 - Adhesive – No limitations
 - 175.300 - Resinous and Polymeric Coatings – Can End cements only
 - 177.1210 - Closures with Sealing Gaskets for Food Containers at levels not to exceed 0.8%
 - 177.2600 - As Accelerator, not to exceed 1.5% by weight of Rubber Product
 - 178.2010 - Antioxidant and/or Stabilizer for Polymers – Limitations for certain polymers not to exceed 0.2%