



SOVEREIGN CHEMICAL COMPANY

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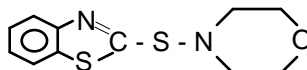
Sovchem® MBS Granule

Manufacturer: Sovereign Chemical Company

Classification: Sulfenamide Accelerator

Chemical Composition:

Chemical Structure:



Empirical Formula: C₁₁H₁₂N₂OS₂
Molecular Weight: 252
CA Nomenclature: 2-(4-Morpholinyl) mercaptobenzothiazole
Synonym Nomenclature: Morpholine, 4-(2-benzothiazolythio)
N-oxydiethylene-2-benzothiazylsulfenamide
(2-Morpholinothio) benzothiazole

Physical Data

Specification Properties	Value	Test Method
Melting Point (Initial)	78.0°C minimum	ASTM D 1519
Melting Point (Final)	90.0°C maximum	ASTM D 1519
Assay	95% minimum	ASTM D 4936 by mass
Heat Loss	0.5% maximum	ASTM D 4571 by mass
Ash	0.3% maximum	ASTM D 4574 by mass
Methanol Insolubles	0.50% maximum	ASTM D 4934

Typical Properties

Specific Gravity	1.36	Typical at 25°C
Appearance	Light cream to light tan pellets	Visual

Applications

Uses: MBS has the longest scorch delay of the delayed action thiazole and sulfenamide accelerators making it ideal for calendered compounds such as steel belt and textile skim compounds. It is particularly suited for brass coated steel belt adhesion skim compounds. MBS is excellent in compounds that are highly loaded with fine particle size carbon blacks and are difficult to process. Also used in conveyor power transmission belts, rubber goods with thick cross sections, intricately shaped rubber goods, rubber footwear, injection molded goods, cables and other miscellaneous molded and extruded rubber products.

Polymers: Natural rubber and most synthetic elastomers.

Synergism: MBS cure performance can be boosted with thiuram or guanidine accelerators.

Cure Effect: MBS is a fast delayed action accelerator. MBS provides the longest scorch delay of the thiazole and sulfenamide accelerators. It is very active above 140°C.

Crosslink Type: MBS promotes a balance of mono-, di- and poly-sulfidic crosslinks resulting in vulcanizates with a good balance between heat aging resistance and tear resistance.

Discoloration and Staining: MBS At high concentrations, MBS will give slight discoloration in light colored or white rubber articles on exposure to sunlight. It is non-staining.

FDA Regulations

Food contact surface component 21 CFR 177.2600(c) (4), 1.5% maximum weight of rubber article.

Packaging and Storage

Packaging: 25.0 kg (55.1) lb. net, paper bags.

Shelf Life: 1 year if stored as indicated below.

Storage: Store in original unopened packages in a cool dry environment. All sulfenamide accelerators should be stored below 30°C in a dry place avoiding exposure to acidic atmosphere/fumes/contamination with any other material to prevent premature degradation.

Specification Date: September 23, 2004 (supersedes: October 11, 2002)

SCC ISO Document Number:

SCCF 4.2.3-2.A