



## SOVEREIGN CHEMICAL COMPANY

1225 West Market St., Akron OH 44313

Phone: 330-869-0500, Fax: 330-869-0518

[www.sovchem.net](http://www.sovchem.net)

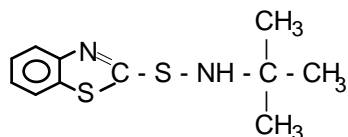
# Sovchem® TBBS Granule

**Manufacturer:** Sovereign Chemical Company

**Classification:** Sulfenamide Accelerator

**Chemical Composition:**

Chemical Structure:



Empirical Formula:  $C_{11}H_{14}S_2N_2$   
Molecular Weight: 232  
CA Nomenclature: N-t-butyl-2-benzothiazolesulfenamide

**Physical Data**

<b>Specification Properties</b>	<b>Value</b>	<b>Test Method</b>
Initial Melting Point, °C	104.0 Minimum	ASTM D1519
Final Melting Point, °C	107.0 – 113.0	ASTM D1519
Heat loss, % by mass	0.4 Maximum	ASTM D4571
Ash Content, % by mass	0.4 Maximum	ASTM D4574
Methanol Insolubles, % by mass	1.5 Maximum	ASTM D4934
Assay, % by mass	95.0 Minimum	ASTM D4936
Free Amine, %	0.4 Maximum	ASTM D4936
<b>Typical Properties</b>		
Specific Gravity	1.26 – 1.32	Typical
Physical Appearance	Off-white to cream granule	Visual

**Applications**

**Uses:** Delayed-action sulfenamide accelerator. **TBBS** has the ability to provide fast efficient mixing of difficult, highly loaded carbon black reinforced compounds without sacrificing scorch safety or physical properties. Its vulcanizates have good reversion and aging resistance.

**Polymers:** Natural rubber and most synthetic elastomers. Especially good with SBR.

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

**Cure Effect:** Promotes a fast cure rate with good scorch safety. Can use 10% less **TBBS** than CBS.

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

**FDA Regulations**

Rubber Articles Intended for Repeated Use (177.2600): Limitation 1.5% maximum.

**Packaging and Storage**

**Packaging:** 25 Kg (55.1 lb.) bag or supersack.

**Shelf Life:** 1 year if stored as indicated below.

**Storage:** Store in unopened original packaging in a cool dry place.

Specification Date: June 7, 2011 (Supersedes: April 25, 2011)