

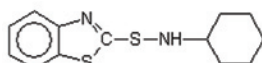
**Chemical name:** N-cyclohexyl-2-benzothiazolesulphenamide (CBS)

**CAS Registration No.:** 95-33-0

**Characteristics:** Product of creamy colour, indistinctive smell, non-hygroscopic. Soluble in acetone, benzene, ethanol, ethyl acetate.

**Empirical formula:** C<sub>13</sub>H<sub>16</sub>N<sub>2</sub>S<sub>2</sub>

**Structural formula:**



**Final form:** Mini-granulate (MG), pellets (PT), powder (P)

<b>Quality parameters:</b>	Content of active substance:	min. 95.0 %
	Melting temperature:	min. 100.0 °C
	Content of ash:	max. 0.4 %
	Density at 20°C:	1 250 – 1 300 kg.m <sup>-3</sup>

**Packaging:**

Paper bags with net weight 20 kg, placed on pallets with 600 kg total weight and fixed with PE shrinkable foil, or in big-bags with net weight of 400, 600 or 800 kg placed on pallets.

**Storage and manipulation:**

Sulfenax<sup>®</sup> CBS is stored in closed packing, in dry and ventilated storage rooms, at a temperature below 35°C. The material should be protected against direct effect of solar radiation. Prevent from a direct contact of the material with skin, eyes and respiratory organs during manipulation.

**Application:**

Sulfenax<sup>®</sup> CBS is used in rubber industry in processing of natural and synthetic rubber in rubber compounds as a fast accelerator of vulcanization with delayed action. It provides good physical and mechanical properties, high crosslinking efficiency and good modulus. Generally it is used as accelerator of vulcanization of rubber materials with unsaturated double bonds (e.g. polyisoprene, polybutadiene, polybutadienestyrene, polyethylenepropylene and polyacrylonitrile rubber, etc.) alone or in combination with secondary accelerators (mainly guanidines, thiurams, dithiocarbamates). Sulfenax<sup>®</sup> CBS is used in rubber compounds for production of tires and technical rubber. In the rubber compounds for production of tires it is used alone or in combination with a secondary accelerator (e.g. diphenylguanidine, tetramethylthiuram disulphide, and so on). Sulphur acts as a vulcanization agent. In the non-tire sector it is used for production of conveyor belts, hoses and other thick-wall products. The rubber produced with Sulfenax<sup>®</sup> CBS has good physical and mechanical properties. In order to reach an increased resistance against heat ageing, Sulfenax<sup>®</sup> CBS can be applied in semi-EV and EV vulcanization systems with a lower sulphur dosing or when using sulphur donors. As no carcinogenic nitrosamines are formed in vulcanizate when using Sulfenax<sup>®</sup> CBS, it can replace the morpholine-based sulphenamide accelerators when combined with retarders of vulcanization.

**Dosing:**

In case of a sulphur vulcanization of natural rubber, Sulfenax<sup>®</sup> CBS is used in amount of 0,5 to 1,8 phr. When using it in mixtures with polybutadienestyrene rubber, the dosing ranges from 2,0 to 5,0 phr, or even higher. In such instances, sulphur in amount of 0,3 to 1,0 phr or a sulphur donor, including their combinations, serve as vulcanization agents.

**Notice:**

Detailed information on the product is in the Sulfenax<sup>®</sup> CBS Safety Data Sheet.

The given data are only of an informative character and are not comprehensive. Further information can be obtained:

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