



Technical Data Sheet

Alkyl Phenol Disulfides : GUS M4 & GUS-37

Description: Alkyl phenol polysulfide composed primarily of para-tert butyl phenol. The GUS-37 product is blended with stearic acid to reduce Softening Point.

Physical Form: Products are available in powder (P) form or Flake (F) form, packed in 20 kilogram paper bags with polyethylene liner.

<u>Characteristic</u>	<u>GUS-M4 / P or F</u>	<u>GUS-37 / P or F</u>
• Appearance	Yellow Powder or Amber Flakes	Yellow Powder or Amber Flakes
• Softening Point, °C	95 - 100	80 - 85
• Specific Gravity	1.15	1.10
• Sulfur Content, %	29.5 -30.5	26.4 – 28 .4
• Odor	mild phenolic	mild phenolic
• Stearic acid content, %	0	10
• Solubility at 25C in:		
Water	insoluble	insoluble
Toluene	very soluble	very soluble
Acetone	soluble	soluble
Ethanol	fairly soluble	fairly soluble

Primary Uses

- Auxiliary cross-linking agent for halobutyl rubber
- Co-vulcanizes halobutyl rubber with highly unsaturated rubbers
- Auxiliary cross-linking agent in natural rubber and SBR adhesives
- Co-vulcanizing agent in neoprene/phenolic resin adhesive systems
- Cross-linking agent for open steam vulcanizing of chlorobutyl/natural rubber blends
- Antioxidant in tire sidewall formulations
- Sulfur Donor without morpholino groups--- absence of nitrosamines in cure cycle.
- Preferred accelerator/ sulfur donor in hot air vulcanization.



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Chemical Sales and Distribution

Benefits

- Eliminates reversion. Moderates the stiffening effect and extends product life.
- Exerts a smoothing effect during mixing; aids in the dispersion of pigments.
- Disperses more readily than free sulfur.
- Donates sulfur to co-vulcanize halobutyl rubbers with highly unsaturated rubbers.
- Is non-blooming
- Has excellent heat aging
- Acts as a radical-free terminator (inhibits peroxide formation and destroys hydroperoxides).

Use Level Recommendations.

Use at 1% of rubber polymer as starting point in evaluation.