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**RUBBER CHEMICALS**  
**-ACCELERATORS-**  
**GUANIDINES**

**ACCELERATOR DOTG**  
**(Di-ortho-tolylguanidine)**

**PRODUCT DESCRIPTION:**

Accelerator DOTG provides strong activation for thiazole (MBTS, MBT, ZMBT) accelerated curing systems in NR, SBR, and NBR. It is also effective in CR with thiuram/sulfur cures. DOTG exhibits better processing safety than DPG (diphenyl guanidine). The high efficiency of DOTG allows the use of 20% less DOTG than DPG to achieve the same degree of vulcanization.

DOTG requires the use of zinc oxide to develop a good cure. Fatty acids are not required; in fact, excess fatty acids (>1phr) may cause a reduction in physical properties. Vulcanizates cured with DOTG result in high states of cure. Compounds using DOTG as a secondary accelerator can be vulcanized by all methods (press, steam, hot air). Antioxidants are always recommended for maximum aging protection.

Although DOTG is acceptable under CFR 21, section 177.2600 "Rubber Articles Intended for Repeated Food Contact," its pronounced odor and bitter taste imparted to a rubber article may preclude its use in food-handling applications. DOTG will also cause white compounds to discolor when they are exposed to light (less so than DPG, however).

**TYPICAL PROPERTIES:**

|                        |   |
|------------------------|---|
| Appearance .....       | off-white powder  |
| Melt Point, °F .....   | 338 - 354   |
| Solubility.....        | acetone, ethyl alcohol, ethyl acetate<br>and methyl chloride.<br>Insoluble in gasoline and water. |
| Storage Stability..... | Good; 24 months shelf-life when stored<br>in closed, original containers.                         |
| Packaging.....         | 44 pound net weight bags  |

**CHEMICAL DISPERSIONS:**

Accelerator DOTG is also available as Akroform<sup>®</sup> DOTG-75/EPR/P. This polymeric masterbatch contains 75% Accelerator DOTG and has a specific gravity of 1.09.

Polymer bound or encapsulated dispersions are a proven means of upgrading plant safety, efficiency, quality & raw material control.

Akrochem polymer bound or encapsulated chemical dispersions eliminate any irritating dust, as well as other potential hazards in handling powders in the plant. The physical form is easy to handle and weigh accurately. With a dispersion, better, uniform mixing, at lower processing temperatures is possible.

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