



255 Fountain Street Akron, Ohio 44304-1991
330-535-2100 ♦ 800-321-2260 ♦ Fax 330-535-8947

MINERAL FILLERS -SILICAS-

MANSIL[®] - 190 (spray-dried)

DESCRIPTION:

Mansil 190 is an ultra-white, spray-dried, precipitated silica. It is a medium high surface area, reinforcing filler for use in synthetic and natural rubber compounding. The spray-dried silicas have a larger particle size than the milled type silicas. Advantages are faster incorporation time and less viscosity buildup while maintaining excellent dispersion.

TYPICAL PROPERTIES:

	<u>Mansil- 190</u>
Appearance	white sprayed dried powder
Moisture Loss- 105°C (%) (2 hrs in oven)	6 % max
pH (5% slurry)	6.0-7.0
Surface Area (m ² /g), BET	190-210
SiO ₂ , anhydrous bone dry basis, (%)	98.5 min
Oil Absorption, (DBP cc/100g)	240 min

APPLICATION:

Precipitated silica increases hardness, tensile strength, abrasion and tear resistance. For mechanical rubber goods, Mansil-190 can be used as the primary filler or in combination with carbon black. In tire applications, these silicas improve rolling resistance, flex fatigue and enhance traction. In adhesives compounding, silica provides an additional method of promoting improved adhesion, as well as providing reinforcement. Silicas are universally applied to provide increased abrasion resistance, green strength and translucence in the formulating of shoe sole compounds.

DOSAGE:

Lightly loaded compounds are prepared using 5 - 20 phr while highly loaded, oil extended compounds can use 75 - 100 phr. PEG-3350 is the most often used activator to improve cure rate and state of cure. Akrosorb 29471, which is dry liquid dispersion of 72% DEG, functions like PEG-3350 with the added advantage of further reduction of compound viscosity.

wol - 7/09
t-mansil-190 spray-dried

Included with its product literature and upon the request of its customers, Akrochem provides product specifications and evaluations, suggested formulations and recommendations and other technical assistance, both orally and in writing (collectively the "Technical Information"). Although Akrochem believes all Technical Information to be true and correct, it makes no warranty, either express or implied, as to the accuracy, completeness, or fitness of the Technical Information for any intended use, or the results which may be obtained by any person using the Technical Information. Akrochem will not be liable for any cost, loss or damage, in tort, contract or otherwise, arising from customer's use of Akrochem products or Technical Information. It is the customer's sole responsibility to test the products and any Technical Information provided to determine whether they are suitable for the customer's needs. Before working with any product, the

customer must read and become familiar with available information concerning its hazards, proper use, storage and handling, including all health, safety, and hygiene precautions recommended by the manufacturer. Nothing in the Technical Information is intended to be a recommendation to use any product, method, or process in violation of any intellectual property rights governing such product, method, or process. No license is implied or granted by Akrochem as to any such product, method, or process. AKROCHEM CORPORATION DISCLAIMS ANY AND ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE, RELATED TO ANY PRODUCTS OR TECHNICAL INFORMATION PROVIDED BY AKROCHEM.