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## MINERAL FILLERS -SILICAS-

### MANSIL<sup>®</sup> - 135S (spray-dried)

#### PRODUCT DESCRIPTION:

Mansil 135S is a white, spray-dried, precipitated silica. It is a 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:

##### Mansil- 135S

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 <sup>2</sup> /g), BET	130-140
Average Particle Size, μ	13-16
SiO <sub>2</sub> , anhydrous bone dry basis, (%)	98.5 min
Oil Absorption, (DBP cc/100g)	230 min

#### APPLICATION:

Precipitated silica increases hardness, tensile strength, abrasion and tear resistance. For mechanical rubber goods, Mansil-135S 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.

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