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Rubber SILICONE RUBBER



Precipitated Silica for Silicone Rubber Applications

In the 1930s, PPG became one of the first companies to manufacture precipitated silica for use in base silicone rubber compounds and has remained a leading industry supplier ever since.

Available in a variety of formulations, the quality, purity and proven performance of PPG's precipitated silica products enables them to function as premium, value-focused alternatives to fumed silica in black, non-black, colored, and translucent silicone rubber compounds by incorporating the following mechanical properties:

- Excellent tensile-strength, tear-strength and flex-fatigue resistance
- Cost-effective reinforcing strength
- Reduced crepe hardening
- Outstanding compression-set resistance
- Exceptional resistance to heat-aging

Together, these properties have the potential to reduce costs and process inefficiencies for silicone rubber compounders by providing:

- More flexible inventory management through reduced shelf hardening
- Faster, more efficient mixing and re-milling of elastomers
- Less fly-loss-related product waste

Through its flagship HI-SIL[®] silica product line, PPG offers a complete selection of specialized synthetic amorphous precipitated silica formulations that integrate physical properties such as particle size, surface area and pH levels according to the demands of both the compounder and the ultimate end-user.

Recommended Products and Typical Properties for Silicone Rubber Applications

Silica Product	N ₂ (BET-5) Surface Area (m ² /g)	pH	Residual Salt Type	Physical Form	Reinforcement
Hi-Sil 532EP	55	8	Na ₂ SO ₄	Powder	Semi-Reinforcing

Hi-Sil 900	135	7	Na ₂ SO ₄	Powder	Reinforcing
Hi-Sil 233-D	151	7	Na ₂ SO ₄	Powder	Reinforcing
Hi-Sil 135	150	7	Na ₂ SO ₄	Powder	Reinforcing
Hi-Sil 132	180	7	Na ₂ SO ₄	Powder	Reinforcing
Hi-Sil 915	195	7	Na ₂ SO ₄	Powder	High

Hi-Sil is a registered trademark of PPG Industries Ohio, Inc.

Typical Applications

Insulating wire covers
.....

Heat-resistant belts and hoses
.....

Flexible and elastic gaskets, seals and o-rings
.....

Touchpads and computer keypads

Related Resources

[Hi-Sil Reinforcing Fillers for Silicone Rubber](#)

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