



# Hi-Sil™ 532EP

## Semi Reinforcing Silica for Rubber

Hi-Sil™ 532EP is a synthetic, white, amorphous silicon dioxide powder used in black and non-black rubber compounds as a semi-reinforcing filler and /or extender.

### Hi-Sil™ 532EP Typical Properties

Specific Surface Area, BET-1	Surface Area, BET-5	pH	Na <sub>2</sub> SO <sub>4</sub>	Apparent Tamped Density	Physical Form
60 m <sup>2</sup> /g	55 m <sup>2</sup> /g	8	2% Max	210 g/L	Powder

### Registration Number

CAS No. 112926-00-8	synthetic precipitated amorphous silica
CAS No. 7631-86-9	TSCA Chemical Substance Inventory (SiO <sub>2</sub> )
231-545-4	European EINECS

### Mechanical Rubber Goods

The benefits of using Hi-Sil™ 532EP in colored hose cover, wire insulation, sporting goods, and cable jacketing applications are fast extrusion and calendaring, firmness of uncured stocks, smooth surfaces, flexibility, and resilience.

- **Fast, smooth extrusions, excellent flow**  
Because of it's lower surface area, Hi-Sil™ 532EP does not exhibit an increase in stiffness and processing viscosity normally encountered with higher surface area silica products.
- **Faster curing**  
Rubber compounds using Hi-Sil™ 532EP exhibit cure rates much faster than those compounds using higher surface area silica products. Lower surface area silica is typically less reactive. This lower activity is less reactive to amines and zinc oxide that can reduce accelerator and activator effectiveness.
- **Improved dynamic properties**  
Hi-Sil™ 532EP has a unique structure that gives rubber products a high dynamic modulus with low stiffness, high resilience, low compression set, and low heat build up.

### Rubber Processing Recommendations

For powder product forms, it is recommended that the silica be added as early as possible in the mixing schedule ideally with the polymer addition and before the process oil. This allows time for silica incorporation into the polymer.

For high powder loading split additions are recommended, first addition with the polymer/s, and the second with the process oil.

Split oil additions are recommended to keep viscosity high. Viscosity aids in silica dispersion.

*Note: Silica incorporation time and degree of dispersion in rubber will vary based on internal mixer type and rotor design.*

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 DISTRIBUTION CORPORATION**  
 60 S. Seiberling Street • Akron, Ohio 44305

HI-SIL™ 532EP

## Packaging

Hi-Sil™ 532EP is packaged in 44 pound multi-wall kraft paper bags. The bags are palletized and stretch wrapped in clear plastic film. Shipments can be made in truckloads or railcars. Bulk shipments are also available in flexible intermediate bulk containers (FIBC).

## Storage

To ensure product integrity PPG recommends that our silica products be stored under dry, clean conditions and protected against exposure to other substances. Since silica may pick up moisture we also recommend that products that are stored more than one year, from date of manufacture, be re-tested for moisture content. There is no shelf life limit when stretch-wrapped palletized units or bags are kept under the above stated conditions.

## Safety and Health Effects



PPG Industries Inc. is committed to safe handling of chemicals at every step of the process, from manufacturing and distribution through education of the end user. Our participation in the American Chemistry Council's *Responsible Care*® Program is evidence of our commitment to the health, safety and welfare of our employees and the industry. PPG Industries Inc. recommends thoroughly reading and understanding the product labels, Material Safety Data Sheets, and other safety information about the product prior to use or handling. Product health and safety information should be made available to your employees and customers.

## Samples and Service

PPG's Technical Service Specialists are available for consulting on the use, handling and storage of Hi-Sil™ 532EP. Gallon containers and bag-size samples are available upon request from Technical Service.



PPG Industries, Inc.  
Silica Products  
440 College Park Dr.  
Monroeville, PA 15146

Customer Service: 1-800-243-6745  
Technical Service: 1-800-764-7369



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Statements and methods presented in this publication are based upon the best available information and practices known to PPG Industries at present, but are not representations or warranties of performance, result or comprehensiveness, nor do they imply any recommendations to infringe any patent or an offer of license under any patent.

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Revised 8/1/2008

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