



Pyrogenic Silica RS-50

Technical Data

Description

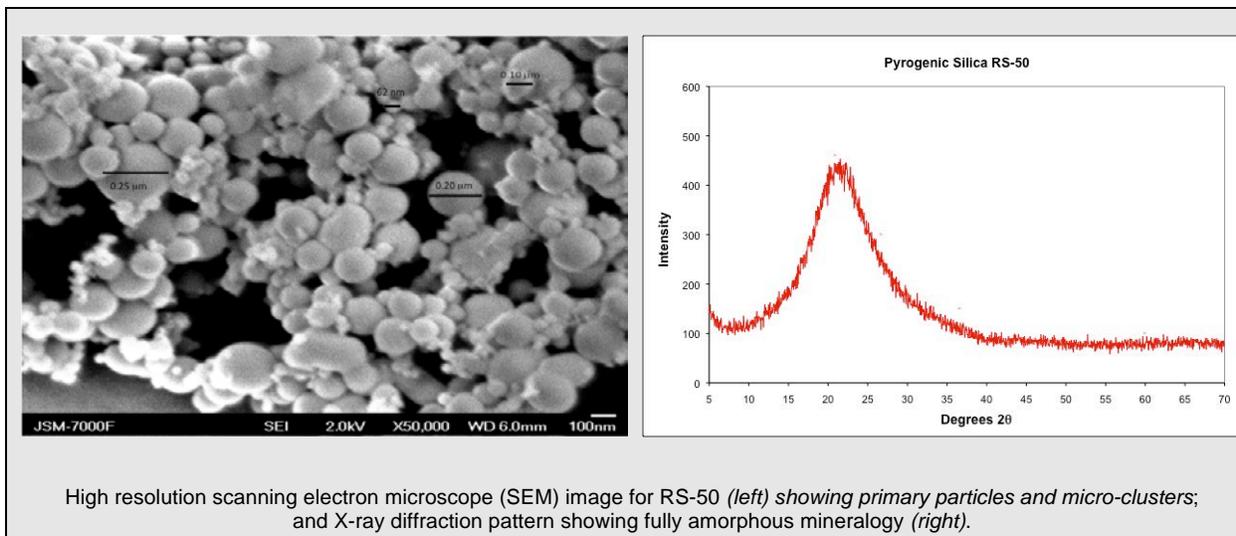
Vitro Minerals' *Pyrogenic Silica RS-50* is a 100% recycled synthetic, hydrophilic, fully X-ray amorphous silica, produced via flame hydrolysis. It is a white, submicron-sized powder of high purity and a surface area of 20-50 m²/g. The primary particles, sized between 60 and 300 nm (0.06-0.3 μm), are spherical and form loosely agglomerated micro-clusters up to about 3 μm.

RS-50 is effective as a thickening and thixotropic rheology control agent in many polymer systems, such as adhesives, coatings, sealants, printing inks, unsaturated polyesters, cosmetics, etc. It can be used as an active reinforcing filler in elastomers and silicone-elastomers. RS-50 is also effective as a flow aid additive in the production of industrial mineral powders.

Typical Chemical and Physical Properties

NOT FOR SPECIFICATION PURPOSES

Parameter	RS 50	Test Method
<i>Chemical:</i>		
SiO ₂ content, %	>99.7	ASTM C114
Mineral form	Amorphous	XRD CuKα
Free moisture, 110°C, %	<1.0	ASTM C566
Loss on ignition, 1000°C, %	<0.8	ASTM D7348
pH, 4% dispersion in water	6.0	AFS 113-87S
C content, %	0.04	ASTM D6316
Cl content, %	<0.07	ASTM C1152
<i>Physical:</i>		
Appearance of powder	Fluffy white	
Specific surface area (BET), m ² /g	20-50	ASTM C1069
Primary particle size range, nm	60-300	SEM
Avg. agglomerate size, μm	2-3	SEM
325 mesh (45 μm) retained, %	<0.05	Micron Air Jet
Specific gravity	2.2	ASTM C153
Bulk density, vibrated, lb/ft ³	23-25	ASTM C110
Oil absorption, g/100g	65	ASTM D281
Refractive index	1.46	Phase contrast microscopy
Mohs Hardness	5.5-6.5	Mohs scale
Softening temperature, °C	~1600	



Applications

- Unsaturated polyester resins
- Paints & coatings
- Adhesives and sealants
- Silicone rubber
- Wire & cable
- Printing inks
- Plastisols
- Powder coatings
- Screen printing
- Protective coatings
- Epoxy compounds
- Rubber compounds

Product Information/Customer Service

Phone: 678-729-9333; Fax: 678-750-0105
 Email: technicalsales@vitrominerals.com

Standard Packages: 20-Kg bags, 800 Kg/pallet, 43 x 48 pallet, shrinkwrapped; or 600-Kg supersacks, 42 x 42 pallet.

FOB Greenville, SC.

Disclaimer: The statements in this bulletin are based on data which is believed to be reliable, and is offered in good faith to be applied accordingly to the user's best judgment. Since operating conditions at customer's sites are beyond our control, Vitro Minerals will not assume responsibility for the accuracy of this data, or liability which may result from the use of its products. Likewise, no patent liability is assumed for use of Vitro Mineral products in any manner which could or would infringe on patent rights of others.

Health Hazard Warning: Prolonged inhalation of dust associated with the materials described in this data sheet can cause delayed lung injury. Avoid creating dust when handling, using or storing. Follow OSHA Safety and Health Standards for fugitive dust. Current Material Safety Data Sheet containing safety information is available and should be consulted before usage.

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