

Flo-Gard™ AB

Flow Conditioning Silica

Carrier and Food

Flo-Gard™ AB silica is a synthetic silicon dioxide with distinct, superior characteristics over other conventional free-flow additives for powdered food ingredients. *Flo-Gard* AB silica absorbs high levels of oils or fats, and produces a fine, free-flowing powder. Uniform shape and size promote easy blending and thorough dispersion. Higher bulk density reduces blending time, and increases batch size for improved cost performance.

Properties and Characteristics

Custom designed as a carrier of hard-to-handle liquids, (including viscous and sticky materials), *Flo-Gard* AB silica is manufactured by a controlled process yielding silicon dioxide particles with a median particle size of 35 microns by Laser Diffraction. It is amorphous in structure and highly porous, with a typical DBP oil absorption of 305 ml/100 g. *Flo-Gard* AB silica is an ultra-fine powder that is pure white in color is odorless and tasteless, and has a neutral pH.

Certifications and Approvals

- **Food and Drug Administration (FDA), Title 21 Food and Drugs, Code of Federal Regulations (CFR):**
 - As an anticaking agent under **172.480**, but the amount cannot exceed 2% by weight of the food product.
 - Under **133.146** (Grated Cheese) and **172.230** (Flavoring Substances) but the amount cannot exceed 2% by weight of the food.
 - Under **160.105** and **160.180** (Dried Eggs and Dried Egg Yolks) but the amount cannot exceed 1% maximum of the finished food weight.
- Food Chemicals **CODEX** for silicon dioxide for use in food applications.
- **Kosher** approved for Passover and year-round use.
- European customers may use **EU Food Additive Number E551**, provided they conform to EU directive 89/107/EEC.



Applications

Treated grain
Batter mixes
Bread conditioners
Dried egg yolks
Dehydrated soup mixes
Milk substitutes
Cheese powders
Artificial sweeteners
Pepper and spices

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Typical Properties

	Flo-Gard AB
DBP Oil absorption, mL/100g	305
Moisture, as packaged, Wt%	5.0
pH	7.0
Residual salt (as Na ₂ SO ₄), Wt%	1.2
SiO ₂ Hydrate, %	87.0 minimum

Efficient Blending

Flo-Gard AB silica does not agglomerate, making processing easier. The controlled manufacturing process gives *Flo-Gard* AB silica a uniform particle size. This characteristic provides easier blending for the user, eliminating the need for preblending or pretreatment. The unique flow characteristics allow *Flo-Gard* AB silica powder to be metered directly into the process stream, mixer, or spray dryer.

Samples

Samples are available upon request from Customer Service.

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 for more than one year from the 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. Pallets should not be double-stacked.

Safety and Health Effects

PPG Industries recommends that, before use, anyone using or handling this product thoroughly read and understand the information and precautions on the label, as well as in other product safety publications such as the Material Safety Data Sheet. Any health hazard and safety information contained herein should be passed on to your customers or employees, as the case may be. The products mentioned herein can be hazardous if not used properly. Like all potentially hazardous materials, this product must be kept out of the reach of children.

High Absorption

Flo-Gard AB silica particles have a large surface area with a highly porous, uniform structure for maximum absorption. Hard-to-handle liquids (including viscous and sticky) can be easily converted to free-flowing powders. *Flo-Gard* AB conditioner also blends homogeneously, allowing the natural color of the food to be retained not diminished.

Packaging

Standard packaging as follows:

Product	Net weight		Bag Construction
	lb	kg	
<i>Flo-Gard</i> AB	35	15.9	Multi-Wall Paper
<i>Flo-Gard</i> AB	500	227	FIBC

Please consult with Silica Customer Service or your Silica Sales Representative regarding additional packaging options, including custom package sizes and bulk shipments in Flexible Intermediate Bulk Container (FIBC), truckload, or railcar units.

Visit www.ppgsilica.com for MSDS and product specifications.



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