Vitro Minerals

www.glassfillers.com

LA Glass Powders Technical Data

Description

LA Glass powders are functional fillers and extenders produced from clean, post-industrial, glass feedstocks. X-ray diffraction and scanning electron microscopy confirms that the LA Glass calcium aluminosilicate powders are fully amorphous and contain no crystalline silica. The glass chemistry results in relative chemical inertness, making LA Glass resistant to blooming, blistering, or chemical degradation in harsh environments. LA Glass powders enhance a wide range of paints, coatings, plastics, and adhesives. High consistent brightness, tint retention and stain/scrub resistance can be achieved in most paint and coating systems. LA Glass powders have low oil absorption and can be easily dispersed in water- or solvent-based systems. The feedstocks are certified post-industrial and are free from contaminants associated with post-consumer curbside glass.

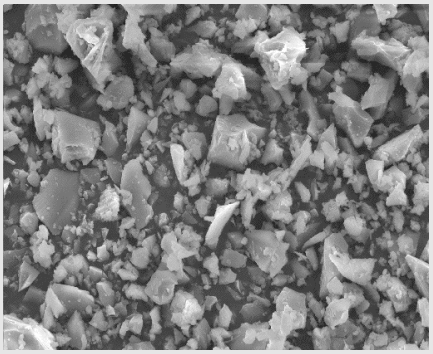
Vitro Minerals' unique processing system and true particle size classification provides consistent product quality for 7 grades (LA-300, LA-350, LA-400, LA-500, LA-600, LA-700, LA-800) with finenesses and brightness covering a range of potential applications. Under a microscope, LA Glass powder particles are transparent, angular-shaped particles with similar dimensions in the x, y and z axis.

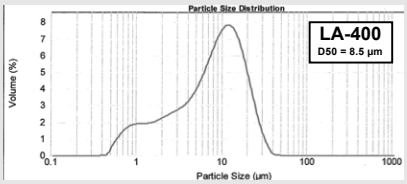
Typical Chemical Analysis

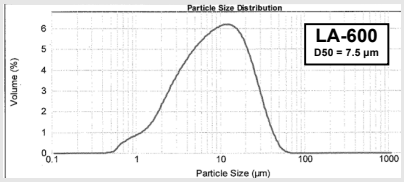
NOT FOR SPECIFICATION PURPOSES

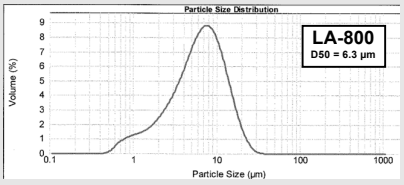
Chemical Composition: SiO_2 50-55%; Al_2O_3 14-20%; Fe_2O_3 <1%; CaO 20-25%; B_2O_3 0-6%; Na_2O+K_2O 8-14%; MgO 0-5%; TiO_2 <1%; LOI <0.5%.

LA Glass Powders have oxides that are combined in an amorphous state in a calcium aluminosilicate glass.









Scanning electron microscope (SEM) image of LA-400 *(above)*; and typical Mastersizer laser particle size analysis curves for LA-400, LA-600 and LA-800 *(right)*.

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For more information on our Green Additives go to www.glassfillers.com

LA Glass Powders Technical Data

Typical Physical Properties

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	LA-300	LA-350[1]	LA-400	LA-500[1]	LA-600[1]	LA-700[1]	LA-800[1]	Test Procedure
Specific Gravity	2.45	2.45	2.45	2.5	2.5	2.5	2.5	ASTM D-153
Bulk Density, lb/ft^3	50	50	45	45	43	40	35	ASTM C-110
% passing #325	99	99	99.9	99.9	>99.9	>99.9	>99.9	ASTM C-25
d_{98} top size, µm	60	60	45	45	40	30	20	Laser interferometer
d_{50} median size, µm	10-12	10-12	8-10	9-10	8-9	7-8	6-7	Laser interferometer
Oil absorption	22	23	24	25	27	28	29	ASTM D-281
pH[2]	10.5	10.5	10.5	10.5	10.5	10.5	10.5	AFS 113-87-S
Hardness	5.5	5.5	5.5	5.5	5.5	5.5	5.5	Moh's Scale
Refractive Index	1.47-1.51	1.47-1.51	1.47-1.51	1.51	1.51	1.51	1.51	ASTM D-801
Free moisture, %	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ASTM C-566
Brightness, Y Value	83-84	92-93	84-85	92-93	92-93	92-93	92-93	PhotoVolt 577PC
Specific Resistance, ohm-cm	3500	3500	3500	3500	3500	3500	3500	ASTM D-2448

Notes:

[1] High brightness grades;

[2] LA-Glass Powders can be provided buffered to pH 6-4 to 7.5;

[3] All LA-Glass powders can be provided with silane coatings from amino, epoxy, or vinyl silanes.

Product Information/Customer Service

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

Standard Package: 50-lb. bags, 2,800 lbs./pallet, 40 x 48 pallet, shrinkwrapped. Product also available in supersacks in weight ranges 2,000 – 3,000 lbs.

FOB plant in Tennessee

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.