LA Glass Powders Technical Data

Description

LA Glass powders are functional fillers and extenders produced from post-industrial low alkali 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 low alkali glass chemistry results in 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 has very low oil absorption, and can be easily dispersed in water or solvent based systems.

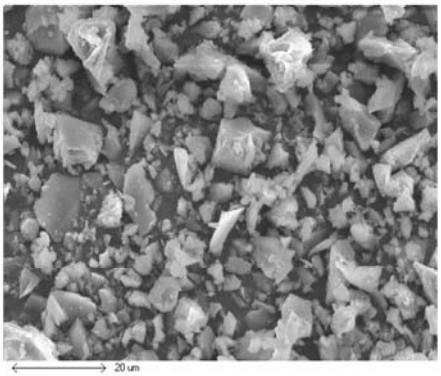
The LA Glass products are minus 325 mesh powders with clean topsizes and a low content of particles smaller than 2 microns. Under a microscope, LA Glass particles are transparent, angular shaped particles with similar dimensions in the x, y and z axis.

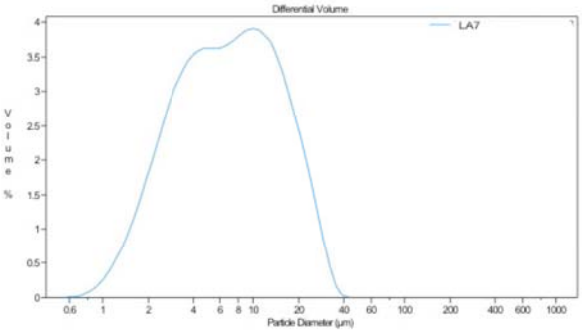
Typical Chemical Analysis

LA Glass Powders are amorphous (non-crystalline) and have total alkali content (Na_2O + K_2O) less than 1.5%. The feedstock is certified post-industrial, and is free from contaminants associated with post-consumer curbside glass.

SiO_2	50-55%	Na_2O	0.5-1.2%
Al_2O_3	14-20%	K_2O	0.1-0.2%
Fe_2O_3	<1%	MgO	<1%
CaO	20-25%	TiO_2	<1%
B_2O_3	0-6%	LOI	<0.5%

These oxides are combined in amorphous state in a calcium aluminosilicate glass.





Scanning electron microscope image *(left)* and laser particle size analysis curve *(right)* for LA-7.

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Vitro Minerals

CheMarCo, Inc

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Typical Physical Properties*

	Grade LA300	Grade LA400	Grade LA-7	Test Procedure
Specific Gravity	2.6	2.6	2.6	
Bulk Density, lb/ft^3	50	45	45	
% passing 325 mesh	99	99.9	99.9	
Hegman value	2	4	4	ASTM D-1210-79
Surface area, m^2/g	1.2	2.1	2.1	Nitrogen BET
Oil absorption	22	22	23	ASTM D-281
pH	9.4	9.4	9.4	AFS 113-87-S
Hardness – Mohs	5.5	5.5	5.5	Moh's Scale
Refractive Index	1.56	1.56	1.56	ASTM D-801
Free moisture, %	0.2	0.3	0.3	ASTM C-566
Brightness	80	81	86	Tappi
L	90.5	91.5	94.3	
A	-0.23	-0.13	-0.22	
b	1.5	1.3	2.2	
Specific Resistance	3500 ohm-cm	3500 ohm-cm	3500 ohm-cm	ASTM D-2448

* Not for specification purposes

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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.

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.