

VANSIL® Wollastonite

High Aspect Ratio Grades for Paint & Coatings

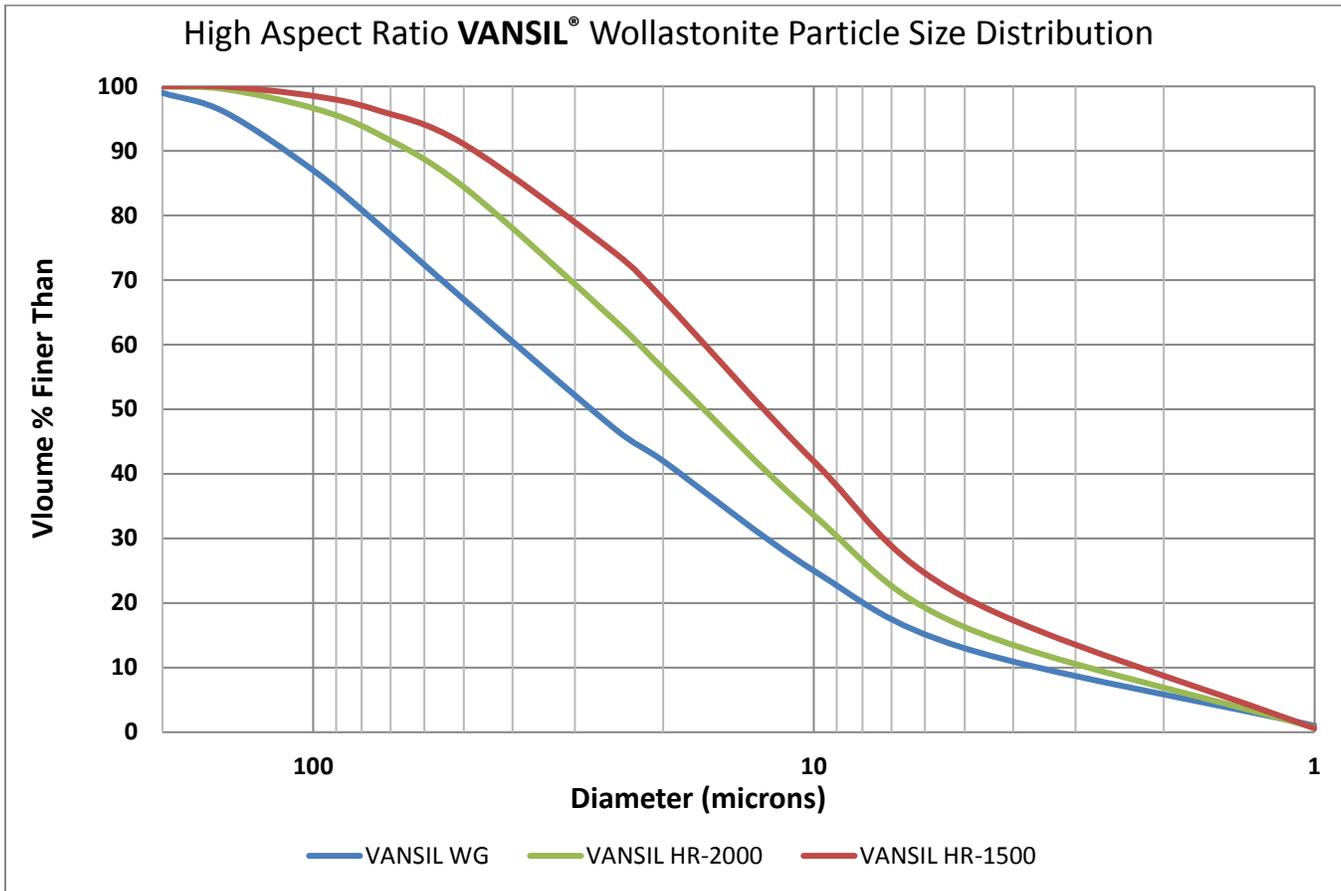
VANSIL WG is a high aspect ratio, long needle grade of wollastonite. It is used principally as a reinforcing agent to enhance mechanical strength properties in coatings. In high film build coatings, **VANSIL WG** improves mud crack resistance. In texture coatings, **VANSIL WG** also improves peak retention. The naturally high pH of wollastonite helps to buffer latex paints and coatings which contributes to improved corrosion resistance. Other applications include cementitious board and block fillers. High aspect ratio wollastonite is also used to reinforce epoxy and other resin based adhesives.

VANSIL HR-1500 and **VANSIL HR-2000** are shorter needle, high aspect ratio grades that exhibit properties similar to **VANSIL WG** for use in applications where a shorter needle is required. **VANSIL HR-2000** is slightly coarser than **VANSIL HR-1500**.

It is recommended that high aspect ratio grades of wollastonite be added late in process to avoid possible damage to the needle structure from high shear mixing.

Typical Properties:

	VANSIL® WG	VANSIL HR-2000	VANSIL HR-1500
Density	24.2 lbs/gal 2.9 g/cc	24.2 lbs/gal 2.9 g/cc	24.2 lbs/gal 2.9 g/cc
pH, 10% slurry (ASTM D 1208)	10-11	10-11	10-11
G. E. Brightness (TAPPI T-646)	86-88	90-93	90-93
Hegman Fineness (3lbs/gal)	n/a	0-1	3 ½
Bulk Density, loose	31 lbs/ft ³	25 lbs/ft ³	24 lbs/ft ³
Bulk Density, tapped	45 lbs/ft ³	39 lbs/ft ³	37 lbs/ft ³
Average Aspect Ratio	15:1	12:1	14:1
Average Needle Length	90 µm	65 µm	60 µm
Average Needle Width	9 µm	7 µm	5 µm
Particle Size (Horiba LA-300)			
D10	4 µm	4 µm	3 µm
D50	28 µm	17 µm	13 µm
D90	117 µm	65 µm	50 µm
D95	146 µm	88 µm	68 µm
Wet Screen Analysis			
Plus 100 mesh	<2%	0.1%	<0.1%
Plus 200 mesh	15-20%	<3%	<1%
Plus 325 mesh	30-35%	<20%	<10%



Typical Chemical Analysis (calculated as oxides):

Calcium Oxide (CaO)	44.9%
Silicon Dioxide (SiO ₂)	51.3%
Aluminum Oxide (Al ₂ O ₃)	0.9%
Magnesium Oxide (MgO)	1.6%
Iron Oxide (Fe ₂ O ₃)	<0.2%
Sodium Oxide (Na ₂ O)	<0.1%
Manganese Oxide (MnO)	<0.1%
Ignition Loss (1000°C)	1.1%

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Rev10/15/2018

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