Construction

Omyabond® 160

Ultrafine calcium carbonate for high modulus, sustainable adhesives and sealants

THINKING OF TOMORROW

The rheology modifier for sustainable production

Omyabond 160 is a treated calcium carbonate with ultra fine particle size designed as a reinforcing filler for high modulus adhesives and sealants.

With its extremely low carbon footprint, it provides a sustainable route to produce low impact hybrid and silicone adhesives with a clear competitive advantage in terms of modulus and tensile strength when compared with conventional rheological modifiers like fumed silica.

It also proves excellent shear thinning, anti-slump behavior, good yield control and provides substantial low shear viscosity.

Specific Product Data

	Omyabond 160
Fineness [1)]	• Median particle size (d50 %, Omya GLS 041) 2): 0.3 µm • Specific surface area BET (Omya GLS 067): 14 m^2/g • Residue on a 45 µm sieve (ISO 787-7): 25 ppm
Properties:	• CIE* (ISO 11664-4): 95 • Moisture ex works (ISO 787-2): 0.3 % • Bulk density, loose (ISO 787-11): 0.4 g/ml

[1)] measured on untreated material

[2)] Sedigraph

Omyabond 160 enhances mechanical properties, improves adhesion, modulus and tensile strength, while it provides good storage stability coupled with a very low product carbon footprint.

Replace your fumed silica solution with a sustainable choice.

When compared, formulations using either fumed silica and a standard filler, and formulations using Omyabond 160 show similar rheology, elongation and storage stability. Omyabond 160 however provides superior adhesion, tensile strength and higher modulus.

Omyabond 160 also provides a clear advantage in adhesion and with a lower product carbon footprint.

Formulation	Fumed silica [parts]	Omyabond 160 [parts]
High Modulus SMP Polymer	**30.0**	**30.0**
Plasticizer	14.0	14.0
Adhesion Promoter	0.6	0.6
VTMO	1.0	1.0
Catalyst	0.4	0.4
Fumed Silica	4.0	-
GCC - 1 µm D50 %	50.0	-
Omyabond 160	-	54.0
Rheology 1 day, RT, measured at 23 °C		
Viscosity at 0.1 s-1 [Pa.s]	2820	3180
Viscosity at 10 s-1 [Pa.s]	75	95
Mechanical Properties ISO 37		
Modulus at 100% [MPa]	1.3	1.7
Tensile Strength [MPa]	2.8	3.5
Elongation [%]	510	455

As green as you can get

Notably, Omyabond 160 has extremely low product carbon footprint (PCF) for an ultrafine grade. It has been assessed by external bodies to require just 214 kg CO_2e per dry metric ton to produce.

Key Benefits

- Significantly lower product carbon footprint
  than other ultrafine solutions
- Enhanced dispersion, leading to process optimization
- Excellent adhesion to a broad range of substrates
- Mechanical properties tailored for high modulus adhesives and sealants
- Superior rheological performance bringing excellent slump and sagging behaviors.

Why choose Omyabond 160?

In line with the society's and market needs, it contributes to a greener construction sector thanks to its remarkably low product carbon footprint.

Omyabond 160 in a nutshell:

- Low carbon footprint
- Enabling cost effective and reliable adhesive and sealant production
- High batch to batch consistency
- Excellent mechanical & rheological performance
- Low moisture

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