



REINFORCING THE FUTURE WITH NORDKALK W-SERIES

W-SERIES — WOLLASTONITE CaSiO_3

Wollastonite is a white, needle-shaped and naturally occurring calcium silicate mineral with the molecular formula CaSiO_3 . As a versatile mineral, wollastonite is a desirable raw material in the application areas of plastics, paints & coatings, ceramics, metallurgy and friction materials.

Nordkalk W-Series wollastonite products are characterized by different particle sizes and low, medium or high aspect ratio (L/D). In addition, wollastonite products are available surface treated, e.g. in plastics to enhance dispersion in polymer resin. Due to its unique chemical composition, particle structure and high brightness, wollastonite offers many advantages for glazing and body formulations in ceramic applications. Wollastonite is used as a functional filler in paint & coating applications, where technical requirements are high.

W-SERIES — REINFORCEMENT IN PLASTIC COMPOUNDS

Most of the wollastonite-filled compounds are used by the automotive, household appliance and electric industries. Typical applications include automotive interior, exterior & underhood components, tableware, sanitaryware ceramics and electrical ceramics.

Wollastonite is used as a reinforcing filler in various thermoplastic and thermoset compounds, e.g. in polyamide, polypropylene, polycarbonate, polyurethane and epoxy compounds. As a result of acicular particle structure, wollastonite increases heat deflection temperature (HDT) and flexural modulus and lowers thermal expansion and shrinkage. Moreover, its fine particle size offers excellent impact resistance. The relatively high hardness of wollastonite promotes effective scratch and mar resistance in the end product. Proper surface treatment both facilitates processing and enhances the mechanical properties of the plastic compound.

W-SERIES – FUNCTIONALITY IN PAINTS & COATINGS

Wollastonite brings multifunctionality to paints and coatings – applications that are typically subject to high technical requirements, for example industrial anti-corrosives, road markings, and marine, architectural and powder coatings.

The unique structure of wollastonite improves film strength and gloss control, increases crack and chip resistance and enhances

adhesion. Its alkaline pH improves resistance to corrosion and weather by preventing pH-downdrift; its hardness increases scrub resistance and washability and provides high abrasion and scratch resistance. The whiteness of wollastonite improves colour/tint retention and decreases the need for pigments. With surface treatment, the mechanical and performance properties of wollastonite in binder system can be further advanced.

NORDKALK W-SERIES

LOW ASPECT RATIO GRADES

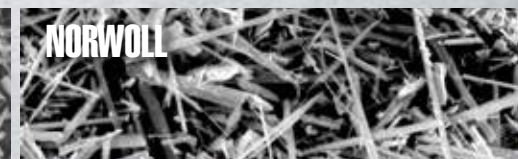
Product	Median particle size d_{50} (µm)	Brightness Ry (%)	Bulk density (g/cm ³)	Oil absorption (g/100g)	Specific Surface Area (m ² /g)	Typical applications
Nordkalk W200	17	86	0.90	19	1.10	Ceramics, metallurgical powders, paints & coatings, thermoplastics and thermosets, gaskets & sealants, elastomers
Nordkalk W325	12.5	88	0.80	20	1.35	Ceramics, paints & coatings, thermoplastics and thermosets, gaskets & sealants
Nordkalk W400	9	89	0.74	23	1.60	Paints & coatings, thermoplastics and thermosets, gaskets & sealants
Nordkalk W635	3.5	90	0.47	25	3.25	Paints & coatings, thermoplastics and thermosets

MEDIUM ASPECT RATIO GRADES

Nordkalk Wicroll 10	4.5	90	0.35	35	1.95	Thermoplastics and thermosets
Nordkalk Wicroll 40	12	87	0.50	29	1.00	Thermoplastics & thermosets, powder coatings

HIGH ASPECT RATIO GRADES

Nordkalk NorWoll 5	4.5	88	0.26	45	2.00	Thermoplastics and thermosets
Nordkalk NorWoll 7	8.0	88	0.30	40	1.70	Thermoplastics and thermosets



The information presented above is based on long term average values, but should not be interpreted as binding specifications and is given for guidance only. All Nordkalk wollastonite products are available with a variety of surface treatments to optimize performance in different applications.