kwark®

Starting formulation for insulating render

Kwark® is a high performance silica aerogel material developed and produced by Enersens. This innovative filler is ideal for those seeking high thermal performances and high-value-added products, such as sustainable, lightweight, breathable and fire resistant products. Kwark®'s exceptional properties enable to formulate high performance insulating renders.

Kwark® – Internal high performance insulating plaster

EASY TO USE, EASY APPLICATION

Increases the surface temperature of walls improving the thermal comfort
Prevent thermal bridges

Kwark® – External high performance insulating plaster

READY TO USE, SPRAYABLE RENDER

High thickness insulating plaster
Continuous insulating envelope
High breathability
Sprayable with standard mixing machine

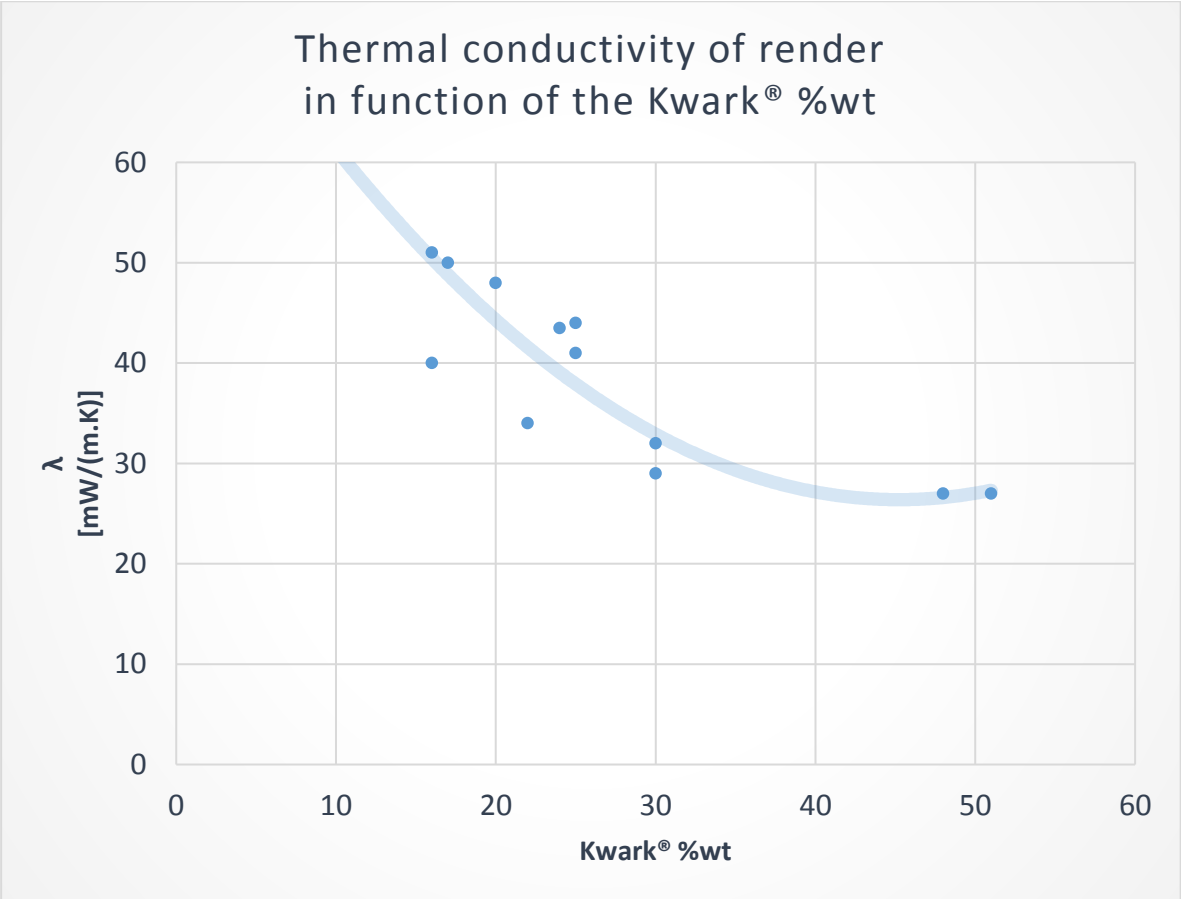
High performance insulating plaster

Formula		Raw Material	Supplier
No.	**Dosage [%]**		
1	**35.51**	Ciment	various suppliers
2	**35.14**	Hydrated Lime	various suppliers
3	**26.06**	**Kwark® GL**	**ENERSENS**
4	**0.20**	Rheology modifier **Culminal C8352**	AHSLAND LLC.
5	**0.02**	Thickening agent **Aqualon ST 2700**	AHSLAND LLC.
6	**0.02**	Air Entraining Agent **Silipon RN 6068**	AHSLAND LLC.
7	**0.10**	Dispersing and wetting **Vinapor WA3918F**	BASF Construction Solutions GmbH
8	**2.96**	Dispersible polymer powder **Vinnapas 5010N**	WACKER AG.
TOTAL	**100.00**		
9	**128.62**	WATER	

Performance Characteritics

Thermal conductivity (W/(m.K))	0.040
Density (kg/m3)	277
Application per layer (manually)	5 – 10 mm
Application per layer (spraying)	20 – 35 mm
Fire behaviour	Up to A1
Water vapour permeability (μ)	3

Proportion of Kwark®



The introduction of Kwark® technology provides high insulating properties to the renders, mortars and plasters. By example, a standard render have has a thermal conductivity of approx. 250 mW/(m.K). That previous graph allows to highlights the new render resulting thermal conductivity upon the quantity of Kwark® added in the formulation.

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