

Product data sheet

RenoScreed® Energy-Saving refurbishment system

Description	Unit	
Product		RenoScreed® Energy-Saving refurbishment system
Description		A high-strength, low-shrinkage cementitious screed with special properties.
Field of operations		Particularly suitable for heated screeds as well as for use in old buildings on wooden joist ceilings, due to its low area load and high flexural tensile strength.
Classification		Special construction, following the example of DIN 18 560.
Deflection at 400 N load and 35 mm thickness		≥ 0.150 mm (0.164 mm approx., depending upon the mixture).
Utilization in permanently wet area		The screed must be protected against dampness (e.g., with an surface damp-proof membrane) so that the steel fibres do not rust, (expand) and cause spalling.
Mineral aggregate		Grain-size distribution curve A/B according to DIN 1045, grain size 0-8 mm. It has a good effect on the strength of the screed, when roughly 20% of the mineral aggregate is replaced by grit of the grain size 2-5 mm (on a mortar batch with 200l – 25 l of grit)
Screed's minimum thicknesses in the thinnest point at 2 kN/m ² area load	cm cm cm cm	≥ 2.0 for bonded screeds (without steel fibres). ≥ 2.5 for screeds laid on a separating layer, ≥ 3.0 for floating screeds ≥ 4.0 in the case of heated screeds laid on a separating layer and with a nominal cover of ≥ 25 mm over the pipes. ≥ 4.5 in the case of heated floating screeds and with a nominal cover of ≥ 25 mm over the pipes.
Screed's nominal thicknesses for the dimensioning at 2 kN/m ² area load	cm cm cm cm	≥ 2.5 for bonded screeds (without steel fibres). ≥ 3.0 for screeds laid on a separating layer, ≥ 3.5 for floating screeds ≥ 4.5 in the case of heated screeds laid on a separating layer and with a nominal cover of ≥ 30 mm over the pipes. ≥ 5.0 in the case of heated floating screeds and with a nominal cover of ≥ 30 mm over the pipes.
Screed's nominal thicknesses for the dimensioning at 2 kN point load and 3 kN/m ² area load	cm cm cm cm	≥ 2.5 for bonded screeds (without steel fibres). ≥ 3.5 for screeds laid on a separating layer, ≥ 4.0 for floating screeds ≥ 5.0 in the case of heated screeds laid on a separating layer and with a nominal cover of ≥ 35 mm over the pipes. ≥ 5.5 in the case of heated floating screeds and with a nominal cover of ≥ 35 mm over the pipes.
Screed's nominal thicknesses for the dimensioning at 3 kN point load and 4 kN/m ² area load	cm cm cm cm	≥ 2.5 for bonded screeds (without steel fibres). ≥ 4.0 for screeds laid on a separating layer, ≥ 4.5 for floating screeds ≥ 5.5 in the case of heated screeds laid on a separating layer and with a nominal cover of ≥ 40 mm over the pipes. ≥ 6.0 in the case of heated floating screeds and with a nominal cover of ≥ 40 mm over the pipes.

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Screed's nominal thicknesses for the dimensioning at 4 kN point load and 5 kN/m ² area load	cm cm cm cm	>= 2.5 for bonded screeds (without steel fibres). >= 4.5 for screeds laid on a separating layer, >= 5.0 for floating screeds >= 6.0 in the case of heated screeds laid on a separating layer and with a nominal cover of >= 45 mm over the pipes. >= 6.5 in the case of heated floating screeds and with a nominal cover of >= 45 mm over the pipes.
Screed's nominal thicknesses for the dimensioning at 5 kN point load and 7.5 kN/m ² area load	cm cm cm cm	>= 2.5 for bonded screeds (without steel fibres). >= 5.0 for screeds laid on a separating layer, >= 6.0 for floating screeds >= 7.0 in the case of heated screeds laid on a separating layer and with a nominal cover of >= 55 mm over the pipes. >= 7.5 in the case of heated floating screeds and with a nominal cover of >= 55 mm over the pipes;
Screed's nominal thicknesses for the dimensioning at 7.0 kN point load and 10.0 kN/m ² area load	cm cm cm cm	>= 2.5 for bonded screeds (without steel fibres). >= 6.5 for screeds laid on a separating layer, >= 7.5 for floating screeds >= 8.5 in the case of heated screeds laid on a separating layer and with a nominal cover of >= 70 mm over the pipes. >= 9.0 in the case of heated floating screeds and with a nominal cover of >= 70 mm over the pipes.
Maximum compressibility of the insulating layer (c) at <= 1 kN point load and <= 2 kN/m ² area load	mm	<= 5 mm if the thickness of RenoScreed (mentioned in this data sheet) is increased by 5 mm
Maximum compressibility of the insulating layer (c) at ≤ 4 kN point load and ≤ 5 kN/m ² area load	mm	≤ 3 mm
Maximum compressibility of the insulating layer (c) at > 4 kN point load and > 5 kN/m ² area load	mm	≤ 2 mm
Compressive strength	N/mm ²	≥ 35 as the average FPC-value (Factory Production Control)
Flexural tensile strength	N/mm ²	≥ 6 as the average FPC-value (Factory Production Control)
Modulus of elasticity (E modulus)	MN/m ²	32,000 approx.

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Apparent density and weight	kg/m ³	2,000 approx.
Trafficability	hour	24 hours after ending the trowelling operation (pedestrian traffic).
Drying time		<p>≤ 2 CM - % (standard CM-moisture test), usually reached in 7 days after laying the screed in the case that it is < 50 mm thick (without floor heating), at an ambient temperature of 18° to 20°C, at relative air humidity of ≤ 65 % and with correct ventilation.</p> <p>≤ 1.8 CM - % (standard CM-moisture test), in the case of floor heating of Building Type A, usually reached in 14 days after laying the screed in the case that it is < 70 mm thick, at an ambient temperature of 18°C to 20°C, at relative air humidity of ≤ 65 % and with correct ventilation, as well as by complying with the following heating record.</p>
Floor coverings		Suitable for all standard floor coverings as well as for stone coverings and ceramic coverings with tiles up to 40 cm long max. Please consult our applications engineering advisors at cd@glass.ag in the case of special floor coverings as well as stone coverings and ceramic coverings with tiles > 40 cm long.
Heatable		After 72 hours; 10 days of heating and cooling operation (instead of functional heating). >>> Download the heating instruction as a PDF data file at www.renoscreed.com/download/aufheizprotokoll.pdf
Reinforcement		By means of steel fibres (RenoScreed® Steel Fibres) that conform to the system.
Water vapour diffusion coefficient	μ	15/35 approx.
Thermal conductivity		2.73 W/mxK approx. (volumetrically calculated value: this can differ according to the mixture; heat conductivity of the steel fibre = 50 [W/mxK]; heat conductivity of the cementitious screed = 1.4 [W/mxK]. A batch with 194.41 litre of cementitious mortar combined with 5.5 litres of steel fibres can achieve a calculated thermal conductivity of 2.73).
Admixture		RenoScreed® AdMixture
Fire behavior according to DIN EN 13 501-1		Fire rating according to DIN 18 560: incombustible; (when the content of organic constituents is less than 1%), with a fire resistance certificate and F 90 rating appraisal.
Shrinkage coefficient	mm/m	-0.40 approx. after 70 days
Surface tensile strength	N/mm ²	1.2 approx.
Intellectual property right		The intellectual property right is registered with the German Patent and Trademark Office.
Trademark protection		The trademark no. 30634512 is protected by a certificate.
Sales, marketing and distribution		Glass AG, of Feldkirch. Germany.