

The Structerm Insulated Render Systems are an effective method of creating a smart, modern, thermally efficient external facade for refurbishment and newbuild projects.

Installed by approved installation contractors, the system is based on a sequence of layers built up to form a thermally insulated, weatherproof and attractive envelope suitable for a wide variety of building types. The layers consist of a CFC and HFC free insulants overlaid in turn with reinforcing mesh, basecoat render and a surface finish.



Benefits:

- Improved thermal efficiency, reduces fuel consumption and environmental pollution
- BBA Certificate No. 96/3243 indicates that the system may be used without restriction of height or exposure, and has an assessed life of at least 30 years
- Impact resistance of 6N/m has been attained for most of the systems
- Provides a high level of air tightness
- The low weight of the rigid insulation boards makes them easily handled by one person, and readily cut or shaped on site to suit complicated configurations
- The system is classified Class 0 as defined in the Building Regulations
- Transmission of external airborne noise through the external wall is much reduced using the system
- Six standard insulants are available giving a range of thermal performance figures to suit any application
- The external face offers a high level of weather protection and is virtually maintenance free.
- In addition to their water resistant properties, renders are also vapour permeable to allow natural drying of existing walls
- Reduced risk of condensation because dew point occurs on the outside of the system
- A range of standard profiles and fixings for finishing corners and edges complements the system components, offering complete continuity of the system across the building facade
- In refurbishment projects, occupants do not have to vacate their homes due to all works being external



Structerm insulated render



Systems overview

- NSC 1: A flexible insulated render system ideal for newbuild applications; available in a wide range of Italian finishes
- NSC 2A & B: An all-round insulated render system ideal for refurbishment solutions and also newbuild; available in both Italian and dash finishes.
- NSC 3, 4 & 5: An extra durable insulated render system available in a wide range of finishes including Italian, textured and dash.
- NSC 6A & B: A masonry effect insulated render system, available in Ashlar and brick effect finishes.
- NSC 7: A drained cavity rail system for newbuild applications, available in the Italian finishes range.

Code	Insulation	Mesh	Render thickness	Finish	Impact resistance	Movement joints
NSC 1	Any in range	P	3-4mm	Italian	*	No
NSC 2A NSC 2B	Any in range	P	6mm	a) Italian b) Dash	**	Yes
NSC 3 NSC 4 NSC 5	Any in range	GS SS	16mm	a) Dash b) Textured c) Italian	**	Yes
NSC 6A NSC 6B	Any in range	GS SS	21mm	a) Brick effect b) Ashlar effect	***	Yes
NSC 7	Any in range	P	3-4mm	Italian	*	No

Mesh range:

P = polypropylene
GS = galvanised steel
SS = stainless steel

Insulation range:

EPS = expanded polystyrene
EX = extruded polystyrene
PH = phenolic foam
PL = platinum
R = mineral fibre
PR = PUR/PIR

All insulants are available as rigid boards in standard sizes of 1200mm x 600mm and in a standard range of thicknesses from 30mm to 200mm. Other thicknesses are available to suit varying thermal insulation requirements.

Italian finishes:

Available in silicate, acrylic and siloxane. Available in 120 standard colours, with an unlimited colour matching service. Self-cleaning option available.

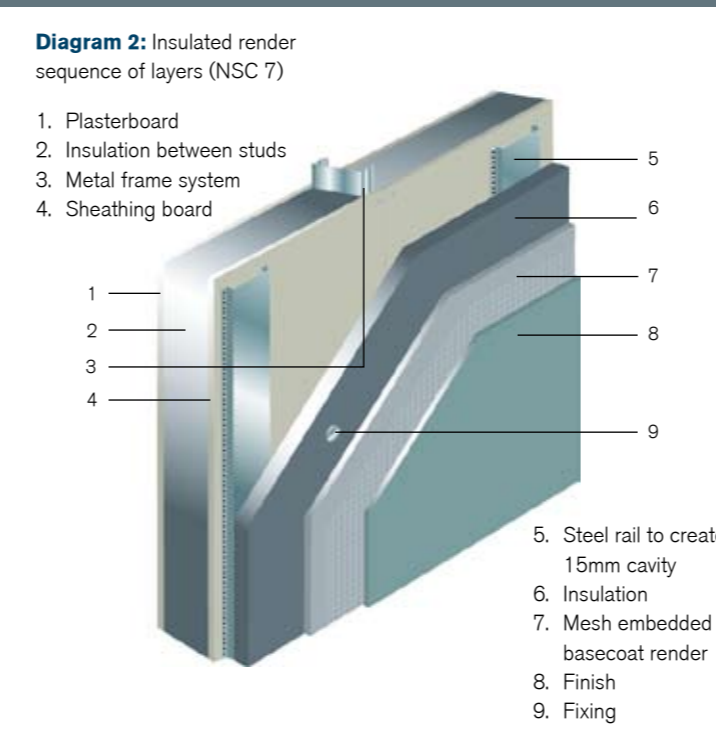
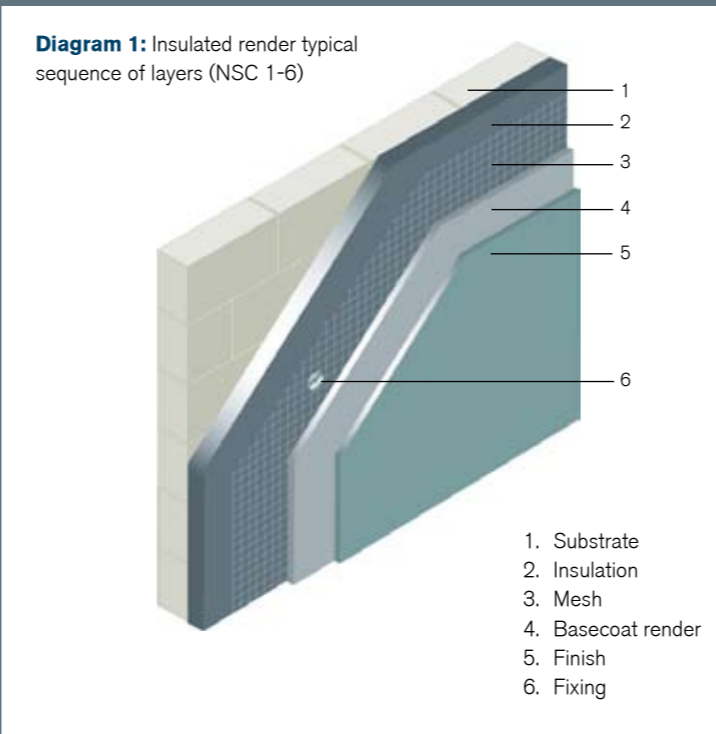
Impact resistance:

* = Normal
** = Extra strong
*** = Heavy duty

Flexible choice

The Structerm Insulated Render Systems are all based on the same layered sequence of insulant, mesh, basecoat render and surface finish. The variable aspect of each option is the insulation type and thickness, mesh type, basecoat render thickness, surface finish types, and the fixing method to be used. It is the careful combination of these variable aspects that allows each system to be used for a specific application.

The systems offer a huge range of finishes and colours, from dash to brick effect renders, and high quality Italian finishes. For more information on the renders and finishes please refer to the Renders and Finishes brochure.



Thermal performance

The advanced thermal performance of the Structerm Insulated Render System cuts fuel bills and reduces condensation. The range of high performance insulants is continually reviewed and upgraded to ensure that it more than meets current building regulations. The tables indicate the range of thermal improvements achieved with different insulants when each are applied to a small selection of typical constructions of both refurbishment and newbuild. Any of the options, NSC1 to 7, may be chosen.

U-values (W/m²k) obtained for refurbishment projects:

Construction Type	Insulation thickness (mm)	215mm brickwork	Traditional cavity wall	250mm no-fines
Existing U Value	0	2.49	1.70	2.06
Expanded polystyrene K = 0.038 W/mK Density = 15 kg/m3	100	0.33	0.31	0.32
	150	0.23	0.22	0.23
	200	0.18	0.17	0.17
Platinum polystyrene K = 0.030 W/mK Density = 15 kg/m3	100	0.27	0.25	0.26
	150	0.18	0.18	0.18
	200	0.14	0.14	0.14
Mineral Fibre K = 0.036 W/mK Density = 100 kg/m3	100	0.31	0.30	0.31
	150	0.22	0.21	0.22
	200	0.17	0.16	0.17
Phenolic Foam K = 0.022W/mK Density = 35 kg/m3	100	0.20	0.20	0.20
	150	0.14	0.13	0.14
	200	0.11	0.10	0.11

U-values (W/m²k) obtained for newbuild projects using Structerm Fastbuild™:

Insulation Type	Insulation thickness (mm)	U Value (W/m²k)	Overall wall thickness (mm)
Platinum polystyrene K = 0.030 W/mK Density = 15 kg/m3	80	0.33	215
	110	0.26	245
	190	0.14	325
Phenolic Foam K = 0.022W/mK Density = 35 kg/m3	60	0.32	195
	100	0.19	235

Structerm Insulated Renders can also be used with Hanson Thermalite blockwork. I.E. 140mm thick Turbo blockwork plastered internally and with Structerm NSC1 system (consisting of 100mm platinum expanded polystyrene and 3mm render) would give an overall wall thickness 260mm and a U Value of 0.22 W/m2K.