

Isocrete K-Screed For thermal insulation

DESCRIPTION

Standard K-Screed can be combined with suitable insulation boards to provide thermal insulation and/or reduced weight.

USES

Wherever thermal insulation is required in a floor construction. Isocrete K-Screed provides a quick drying, strong screed that can be laid on insulation boards at reduced thickness compared with a traditional cement:sand screed. A permanent floor finish is required (vinyl, carpet, timber etc.).

BENEFITS

- ☺ Provides thermal insulation.
- ☺ Reduced weight.
- ☺ Reduced thickness.
- ☺ Early installation of sensitive finishes.
- ☺ Used with underfloor heating systems.
- ☺ Laid only by approved Licensees.
- ☺ Approved by British Board of Agrément.

PROJECT REFERENCES

Marks & Spencer nationwide, Gatwick Airport,
Check Lap Kok Airport, John Lewis, Littlewoods.

REINFORCEMENT

The screed is to be continuously reinforced, including through construction joints, with steel fabric to BS4483 Ref.D49 or reinforced throughout with Isocrete PP Fibres plus a strip of D49 across day joints. The D49 reinforcement should be placed approximately in the centre of the screed, and have minimum 150mm laps.

JOINTS

The screed is to be separated from all walls and columns by a strip of compressible foam.

THICKNESS

Induced joints should be formed, by means of a vertical trowel cut, in all screeds across door openings and in similar locations where normal shrinkage is likely to form a crack.

CURING & HARDENING

The screed is to be cured under polythene sheet for 7 days. Light foot traffic may be permitted after 36-48 hours. Full site traffic should be kept off the screed until completion of the curing period.

DRYING TIMES

For laying of floor finishes, approx. 7 days per 25mm thickness at 20°C in well ventilated conditions. Excessive moisture in the building structure, or high air humidity, may delay the drying. The drying times shown apply from removal of the curing polythene sheet. The flooring contractor must check the moisture content of the screed before commencing to lay the floor finish. Very thick screeds will take longer to dry out than the rates indicated. Wetting of completed screeds will considerably extend the drying times.

INSULATION BOARD

A suitable rigid flooring grade insulation board should be chosen, with a compressive strength appropriate to the envisaged duties, as recommended by the insulation manufacturer.

MODEL SPECIFICATIONS FOR ISOCRETE K SCREED ON THERMAL INSULATION

.....mm Isocrete Standard K-Screed reinforced throughout with steel fabric to BS4483 Ref D49 or Isocrete PP Fibres plus a strip of D49 across day joints laid on and includingmm insulation board to be supplied and laid on a suitable, prepared base in accordance with the instructions of Isocrete Floor Screeds by one of their approved Licensees.

Note: The required type and thickness of the insulation should be stated, together with the thickness of the K-Screed, and be inserted above.

REFERENCES

- BS8203: 2001 Installation of resilient floor coverings.
- BS8204 -1:1999 Screeds to receive in situ floorings.

Minimum Thickness of Isocrete K-Screed			
Overall mm	K-Screed (min) mm	Insulation mm	Weight kg/m ²
65	45	20	84
75	50	25	94
85	55	30	104
95	60	35	114
105	65	40	123
115	65	50	125
150	75	75	147

For insulation greater than 75mm, a minimum 75mm screed is required. The screed thicknesses quoted are minima. Structural tolerance (normally ± 15 mm) must be added to obtain the average thickness and the additional weight taken into consideration.

THERMAL INSULATION

Calculations to obtain the U-Values in the table below assume an accessible undercroft below ground floors.

The thermal Resistance of the structure used in calculations for the table below is:

Sum of Surface Resistance	0.14
60mm K-Screed	0.06
150mm structural concrete	0.107
Total	0.307m²K/W

Lambda values used are: W/mK	
Standard K-Screed	0.99
HD expanded polystyrene	0.034
Extruded polystyrene	0.025
Low λ value insulation	0.020
Structural concrete	1.40

PREPARATION & GROUTING

The base should be swept clean and should be flat enough to fully support the insulation boards without them rocking or spanning between high spots. Where necessary, the boards should be laid into a wet grout or screed to ensure they are fully supported.

A Polymer 70 cement slurry grout is laid on the insulation boards and the K-Screed laid into the wet grout.

PROTECTION

In areas where damage and abrasion may result from construction traffic, completed screeds must be adequately protected with temporary covering. This protection should be the responsibility of the Main Contractor and an item be included in the Bill of Quantities for this provision.

It is recommended that the screeds should not be left exposed for an undue length of time after they have dried sufficiently for floor laying to proceed. As these will be floating screeds, there is a small risk of minor cracking or opening of construction joints. This risk will be minimised by the inclusion of the reinforcement and if necessary simple remedial treatment can be taken before the laying of the floor finish.

HEALTH & SAFETY

Some of the components of this product may be hazardous during application. Please consult relevant Health and Safety Data sheets, available from Isocrete on request and sent with each delivery.

IMPORTANT NOTE

Isocrete's products are guaranteed against defective materials and manufacture and are sold subject to its standard Terms and Conditions of

Sale, copies of which may be obtained on request.

FURTHER INFORMATION

Where other products are to be used in conjunction with this material, the relevant technical data sheets should be consulted to determine total requirements. Isocrete have a wealth of technical and practical experience built up over many years in our pursuit of excellence in flooring technology. Clients are welcome to call our Technical Desk, or visit our Flooring Technology Centre in Sandbach, Cheshire.

TECHNICAL HELP DESK

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Or visit our Web site at www.isocrete.com to register your interest in specifying one of the most durable floors on the market.

KscreedTI 13-12-01 JC

Thermal Insulation	Target U value (W/m ² K)			
	0.6	0.5	0.45	0.35
Expanded polystyrene mm	50	60		
K-Screed minimum thickness mm	65	75		
Typical U-Value W/m ² K	0.56	0.47		
Extruded polystyrene mm	35	45	50	60
K-Screed minimum thickness mm	65	65	65	75
Typical U-Value W/m ² K	0.57	0.47	0.43	0.36
Low λ value insulation	30	35	40	50
K-Screed minimum thickness mm	60	65	65	65
Typical U-Value W/m ² K	0.54	0.48	0.43	0.35

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