

ROADSTONE

FLOWPLUS

CEMENT LIQUID SCREED



 **roadstone**
A CRH COMPANY

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FLOWPLUS

Roadstone FlowPlus is the next generation self-levelling cementitious screed developed using the latest technology from KNOPP CHEMIE, part of the ARDEX Group.

This collaboration by the market leaders in cement technology offers a fast track system and quality assurance, from the initial screed installation through to the final floor finishes. This unique product is extensively supported by the Ardex / Roadstone technical teams both in terms of moisture testing, specification and product support.

Roadstone FlowPlus is an all-in-one admixture based on highest quality raw materials. This multi-component admixture inherits state of the art technology that permits exceptional screeds of outstanding performance due to significantly reduced shrinkage properties and best stability resulting from highest rheology to realise a perfect surface.

Roadstone FlowPlus screeds are suitable for all residential and commercial floors carrying internal pedestrian traffic to IS.EN.13813, and installed to BS8204 Codes of Practice

These screeds can be installed in all kinds of buildings, ranging from old to new, in apartment buildings, schools, sports halls, shopping centres and industrial buildings. Knopp screeds fulfil the German DGNB criteria and achieve A+ for sustainability and low voc's.

Domestic and Commercial use

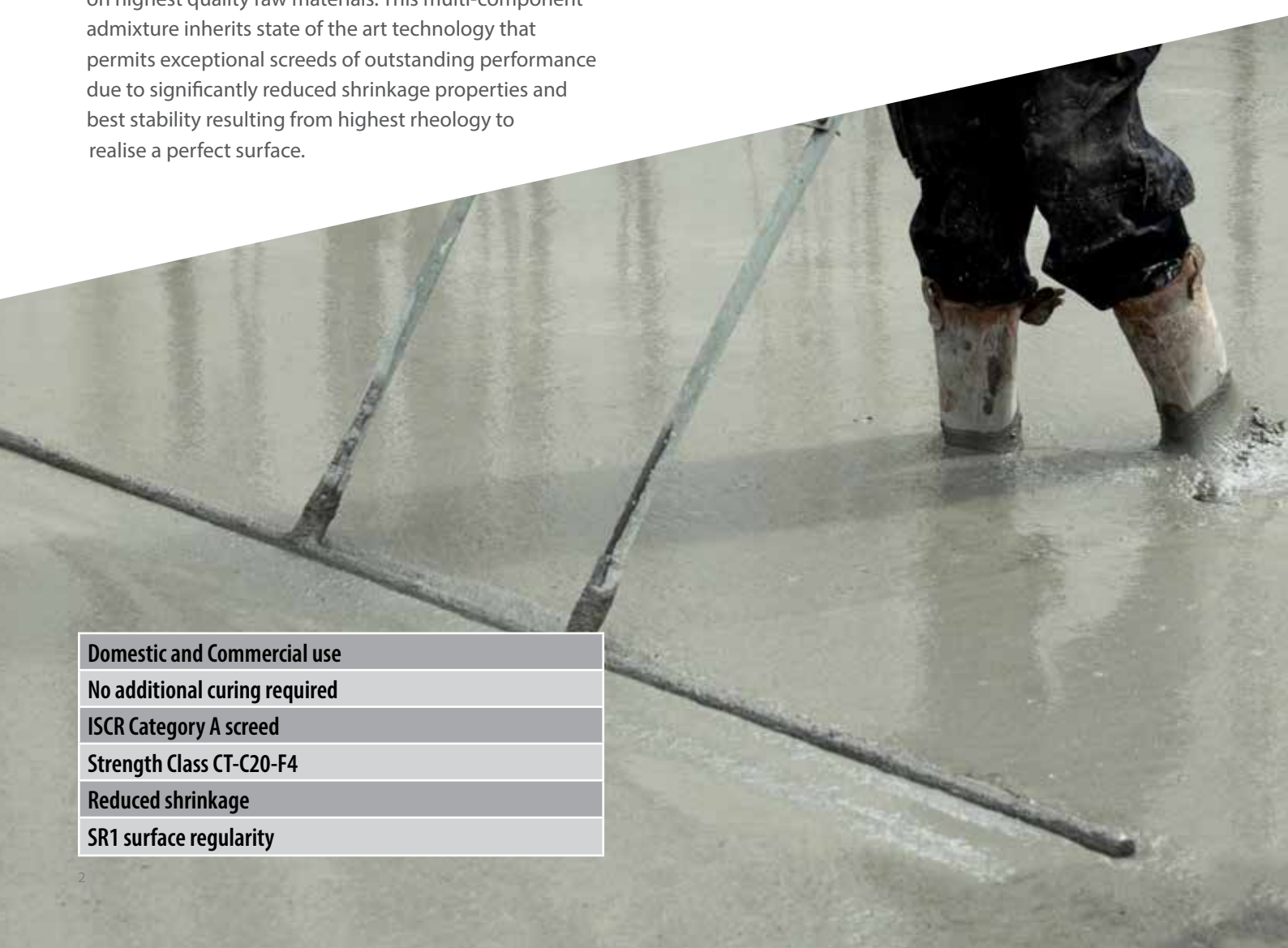
No additional curing required

ISCR Category A screed

Strength Class CT-C20-F4

Reduced shrinkage

SR1 surface regularity

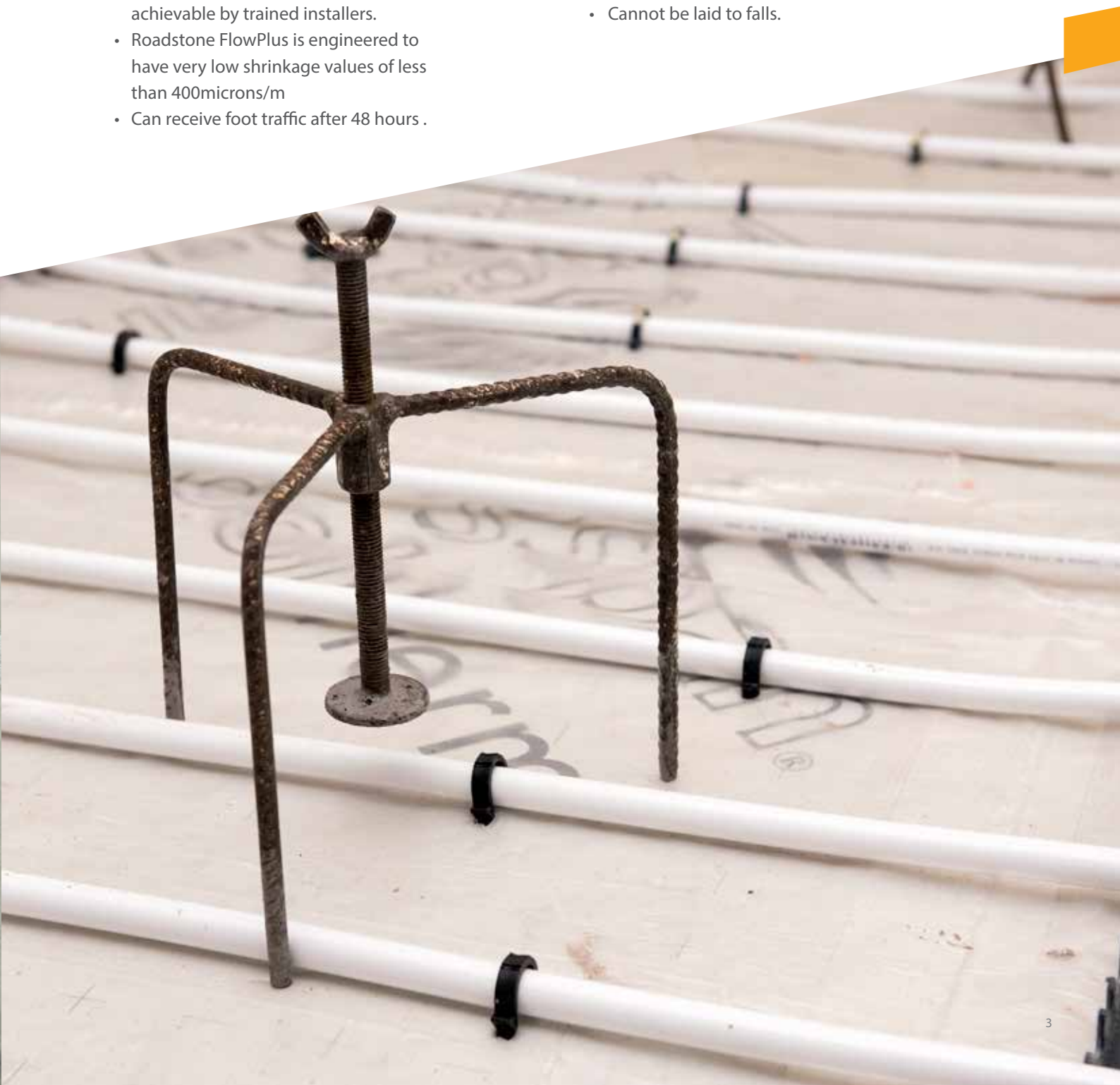


ROADSTONE FLOWPLUS BENEFITS:

- Roadstone Flowplus fully encapsulates heating pipes and provides more conductivity and thermal mass for the transfer of heat.
- It can be laid thinner (25mm over heating pipes) than traditional screeds. (domestic locations).
- It can be laid as a floating screed over most types of rigid insulation or acoustic matting at a minimum thickness of 50mm.
- It offers significant programme benefits as areas of up to 2000m² per day are achievable by trained installers.
- Roadstone FlowPlus is engineered to have very low shrinkage values of less than 400microns/m
- Can receive foot traffic after 48 hours .

CONSIDERATIONS IN USE:

- The building should be weather proof before screeding commences. Where applicable, especially on ground floor, there must be a damp proof membrane below the screed or sub-base.
- The screed should only be laid when the internal air temperature is between 5^oDegC and 2^oDegC
- Roadstone FlowPlus is a non-structural and nonwearing surface, but will provide a smooth flat surface for the application of floor finishes.
- FlowPlus screeds with under-floor heating must be thermally cycled before application of floor finishes in accordance with Codes of Practice.
- Cannot be laid to falls.



DESIGN DATA

TECHNICAL DATA

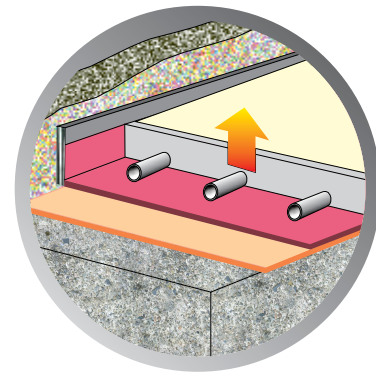
Roadstone FlowPlus Appearance / Colour: Dark Grey Fluid
 Dry density approx. 2,100kg/m³
 Wet density approx. 2,200kg/m³

Description	Compressive strength class	Flexural strength class
FlowPlus	C20	F4

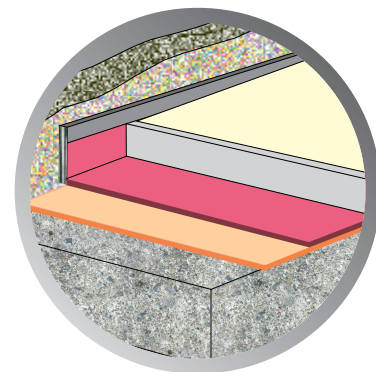
Roadstone FlowPlus screeds are suitable for all residential and commercial floors carrying internal pedestrian traffic to IS.EN.13813, and installed to BS 8204 Codes of Practice

SPECIFICATION

Workability after batching - 2 hours
 Flow range = 220- 260mm
 Maintenance of fluidity = max 1 hour after placing subject to environmental conditions
 Drying shrinkage at 28 days typically approx.200 – 500 µm/m
 Thermal conductivity = 0.18W/mK
 Fire Rating - Class A1 – Non-combustible, Based on Commission Decision 200/605 EC amending 96/603 EC



SCREED WITH UFH



UNBONDED /FLOATING

FLOOR FLATNESS

Easily achieves SR1 under BS8204

MAXIMUM THICKNESS

Recommended to be no more than 80mm.
 Depths over this may impact drying times.

PARTITION WALLS

Mounting of light-weight partition walls up to maximum mass of 50 kg/m² is permitted on floating screed, as long as there are no noise protection requirements for the rooms

INSTALLATION

Minimum Depth		
Floating	Domestic	45mm
	Commercial	60mm
Unbonded		60mm on slip membrane- No embedded services
Underfloor heating	Domestic	50mm depth. Min 25mm coverage over pipes

Bay Size (m ²)		
Floating	Domestic	80m ²
	Commercial	80m ²
Unbonded		80m ²
Underfloor heating		40m ²

EDGE DETAILING

In common with all screeds, Roadstone FlowPlus Screed should be isolated at all edges and columns. This is to ensure adequate allowance is given to the screed to undergo the maximum positive movement under the application or removal of loadings.

EDGE STRIP DETAILS:

Maximum bay sizes of <80m² for unheated screeds and <40m² for heated screeds must be observed. These are to be laid separately from each other and separated by movement joints. The maximum lengths of the screed field may not exceed 8m.

Use edge strips between the screed and all vertical construction structures e.g. walls, columns etc. Additional joints must also be placed between independently controlled heating circuits and heated and unheated screed and areas of high thermal gain.

Bay joints should be formed using rigid joint formers where possible which can be placed during the preparation phase and will remain in place during operation. Ideally the joint former should be 5mm lower than the finished floor screed depth to allow for a smooth transition in height between bays. As with all screeds joints must also reflect any structural joints in the substrate



POST INSTALLATION

Immediately after installation, it is important to keep all windows and doors closed to protect the surface of the new screed from frost, direct sunlight, wind, rain and water ingress for the first 7 days.

In cold weather conditions the air temperature above the newly installed FlowPlus screed must be kept above 5DegC.

After 7 Days, windows and doors can be opened intermittently to remove surplus moisture by means of draught free ventilation. Failure to do this will prevent the screed from drying effectively.

Avoid tunnelling of airflow through the building

CURING TIMES

Curing and drying of screeds is dependent on ambient temperature and humidity. Typically the screed is ready to receive foot traffic after 24-48 hours.

Drying of the screed approximately takes 1 day per mm for the first 40mm of screed thickness and a further 2 days per mm thereafter.

The moisture level in screed should be determined prior to the application of floor coverings. For moisture sensitive flooring such as wood or vinyl, the moisture level should be less than 75%RH approx 2% carbide method.

UNDERFLOOR HEATING

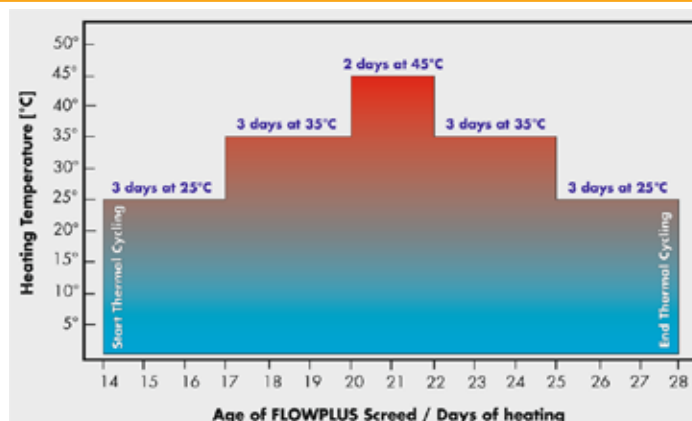
The underfloor heating can be commissioned 14 days after the screed has been installed.

The water temperature flowing around the pipes must be carefully controlled during a thermal heat cycle.

The UFH water circuit temperature must not exceed 45Deg°C Installation of floor finishes can not take place until screed has undergone this thermal cycle and is completely dry.



COMMISSIONING UNDERFLOOR HEATING



Commissioning of the underfloor heating must not take place until the screed has undergone a minimum of 14 days curing time under normal drying conditions. Floors to receive moisture sensitive floor coverings must be checked for humidity and be below 75%RH approx.<2% Carbide Method. It is the responsibility of the floor covering installer to determine the moisture level in the screed and ensure correct selection of adhesives and flooring preparation products.

FLOOR FINISHES

Roadstone FlowPlus is compatible with all floor coverings including tiles, wood, vinyl etc. The flooring contractor is responsible for measuring the residual humidity prior to the final floor finish.

Roadstone FlowPlus may require further preparation prior to receiving floor coverings. It is recommended to lightly abrade the surface of the screed to clean and remove any residue / site contamination, laitance etc, prior to the application of floor coverings.



coverings, it is possible to use a suitable liquid DPM. Refer to manufacturer instructions and guidelines.

HEALTH AND SAFETY

Some of the component part of this product may be hazardous during mixing and application.

Please consult relevant Health and Safety Data Sheets Available from Roadstone on request.

ENVIRONMENTAL/MATERIAL DATA

- Roadstone SDS for concrete
- Cement I.S.EN197 Cement
- Aggregates & Filler I.S.EN12620 Aggregates for Concrete & SR16
- Admixtures I.S.EN934 Admixtures for concrete, mortar and grout
- I.S.EN16001 Energy Management System
- I.S.ENISO9001 Quality Management System
- I.S.ENISO14001 Environmental Management
- Re - Contractor Flooring Association Guide To Contractor Flooring



