



UNICLASS L6412:P21	CAW M10
CI/SfB	(43) Yq2

Technical data sheet

July 2017

ScreedPro Cement Mix

A fast setting and very rapid drying cement replacement product for bonded, unbonded and floating screeds. Suitable for use in domestic and commercial installations.



Features

- bonded screeds from 15 – 50mm depth
- unbonded screeds from 40 mm depth
- floating screeds from 65mm
- Dries and is walkable in 3 hours
- Excellent workability
- Low odour
- Fix ceramics 3 hours at 20°C
- Resilient floor coverings/LVT from 24 hours at 20°C
- after just one day, achieves the acceptable minimum compressive and tensile strengths attained by an ordinary cement screed after 28 days
- 20kg



3 hour
foot traffic



protein
free



Interior



Exterior



under-floor
heating



working time
20 - 30mins



lifetime
guarantee

The compound shall be ScreedPro Cement Mix as manufactured by N&C Building Products Limited, 41-51 Freshwater Road, Chadwell Heath, Romford, Essex, RM8 1SP, England. Tel: 020 8586 4600 and shall be applied strictly in accordance with the manufacturer's current data sheets and instructions.





British Standard Guidelines

All aspects of the installation must be in accordance with the requirements of BS 8204, BS 8203 (Installation of Resilient Floor coverings), BS 5385 (Tiling) or BS 5325 (Installation of Textile Floor coverings). Complies with EN standards and supplementary specifications.

Description

ScreedPro Cement Mix is a rapid setting and ultra rapid drying cement replacement product for use with internal and external screeds prior to the installation of floor coverings. It is used to produce screeds where early foot traffic is required and where rapid drying is vital to allow floor finishes to be applied much sooner than would be the case for conventional cement:sand screed regardless of the thickness of screed placed.

It can also be used in domestic type installations in conjunction with additional graded aggregate to form a screed using much less binder than would be the case with Ordinary Portland Cement and as a result yield cost savings and a reduction in our carbon footprint and environmental impact.

ScreedPro Cement Mix may be used to form bonded (minimum 15mm) screeds, unbonded screeds (minimum 40mm) with a minimum design thickness of 50mm and floating screeds (minimum 65mm domestic and 75mm commercial) and may be used in conjunction with under floor heating.

ScreedPro Cement Mix can be used in domestic and commercial areas. It is ideal for use in factories, garages, shops, schools, care homes, biological areas etc and may be used in both internal and external situations including swimming pools thus cutting down the time dramatically before tiling may commence.

After only one day the compressive and flexural strength of a screed containing Nicobond ScreedPro Cement Mix exceeds the acceptable minimum obtained by a screed based on Ordinary Portland cement after 28 days. In addition the screed containing Nicobond ScreedPro Cement Mix can receive tiling after only 3 hours and will be dry to receive resilient flooring after 1 day, regardless of the thickness of screed that has been placed.

Substrate Preparation

A new concrete base must be at least 6 weeks old (only if a bonded screed is to be applied) thus allowing for the initial drying shrinkage to occur prior to the application of the intermediate screed. The concrete surface must be prepared using suitable mechanical equipment to expose the coarse aggregate and be free from all barriers to adhesion.

Note: certain waterproofing additives such as "caltite" are very non porous will require the use of an epoxy resin slurry bonding coat prior to the application of a bonded screed. If in doubt contact your Nicobond branch beforehand for advice.

For unbonded and floating screeds a suitable sheet membrane must be used. Where there is an existing concrete base laid direct to ground i.e. without an effective damp proof membrane then a suitable surface applied product may be used following the manufacturers recommendations.

Mixing

Nicobond ScreedPro Cement Mix is mixed and applied in the same way as mortar based on normal cement and sand except that the working time is reduced to approximately 45 minutes, which can be walked on and may receive ceramic tiled finishes after 3 hours and is dry enough after 24 hours to receive other floor coverings or a levelling screed prior to the installation of vinyl sheet.

Reference should be made to current BS EN standards regarding the suitability of sands for screeding. Where the screeding sand supplied is generally of good quality but does not contain the required amount of coarse fraction a nominal 6mm aggregate can be mixed with the sand. The ratio of screeding sand to aggregate will depend on the relative grading of each, the resultant workability of the mix and the water demand e.g. 20kg of Nicobond ScreedPro Cement Mix, 30kg of nominal 6mm aggregate with 50kg of nominal 0 – 4mm sand for 1:4 mix and up to 50kg of nominal 6mm aggregate and 90kg of nominal 0 – 4mm sand for 1:7 mix. Mix to a normal semi dry screed mortar consistency such that when a sample of mortar is squeezed in the hand the sample should retain its shape and not crumble and the hand should be left slightly moist. When the screed is placed and tamped to achieve compaction no film of water should form on the surface. The mixer must be capable of mixing a semi-dry screed such as a pan, trough or suitable forced action type. Normal "free fall" mixers are not suitable for mixing semi-dry screed mortars. Ensure that equipment is clean and do not use other cements, lime or any screed additives in the mix as this could affect the physical and technical characteristics of the screed. Pre-blend the Nicobond ScreedPro Cement Mix and selected aggregate before adding sufficient water to obtain a workable mix. With an evenly graded, fairly dry sand, the water requirement will normally be 7 – 9L per 20kg bag of ScreedPro Cement Mix. In order to achieve rapid drying and rapid strength development it is important that no more than 9L of water is added.

Note: Adding an excess of water, and in particular if the aggregate is very wet, may reduce strength development and nullify the rapid drying characteristic of the product.

The working time of the mortar is approximately 45 minutes at 20°C, therefore application of a slurry coat (if required), mixing, application, compaction and trowelling off must proceed without delay. The amount of mortar mixed and the area to be screeded should be limited so that trowelling off and finishing can be completed within this time.

Where a new bay is laid against a set and hardened screed it is recommended that the day work joints are vertical and treated with a slurry bonded coat as previously described with the new screed placed whilst the slurry bond coat is still wet.

How much material? (1:4 Mix)

Applied Thickness	Approximate Coverage Per Bag	Consumption Per 100m ² Area	Aggregate
15mm	3.33m ²	30 bags	2400kg
40mm	1.25m ²	80 bags	6400kg
75mm	0.66m ²	152 bags	12160kg



Application

ScreedPro Cement Mix is suitable for direct application to concrete bases which are insufficiently dry (above 75% RH), direct to ground or ground supported without an effective damp proof membrane as well as areas which are subject to rising damp. It is however recommended for projects installing resilient flooring i.e. Carpet, vinyl, rubber and timber that the use of a damp proof membrane is incorporated as follows to protect the finish from moisture in the underlying substrate. For unbonded and floating screeds install a proprietary damp proof slip membrane as recommended by BS 8204-1:2003 +A1:2009 and BS 5385 before placing the screed. It is recommended that screeding is followed by the application of Nicobond DPM after 3 hours.

Unbonded Screeds - from 40mm (minimum design thickness 50mm)

The concrete should be swept and vacuumed to ensure removal of any sharp matter that could puncture the damp proof/slip membrane. If the floor is uneven or has sharp protrusions or hollows it should be pre-smoothed and in this case if new it must be at least 6 weeks old and have an effective base damp proof membrane. Before the application of a levelling screed the concrete must be free from all contamination that may impair adhesion and the residual moisture content must be within acceptable limits i.e. less than 80% R.H. or maximum 2% residual moisture. Level the floor using Nicobond ScreedPro Eco Level 30 and allow a minimum of 12 hours drying. Apply a suitable separating membrane and place the mixed screed incorporating Nicobond ScreedPro Cement Mix (to the required mix design) making sure that it is thoroughly compacted and finish with a wood float.

Floating Screeds – from 55mm/65mm (minimum design thickness 65mm domestic, 75mm other)

In addition to the details in Unbonded Screeds, above, the insulation must be of a suitable compressive strength, as detailed by the manufacturer. Cover with a suitable separating membrane and place the mixed screed incorporating Nicobond ScreedPro Cement Mix (to the required mix design) making sure that it is thoroughly compacted.

Bonded Screeds – from 10mm to 50mm (minimum design thickness 15mm)

The concrete base must be free from all contaminants that would impair adhesion such as laitance, mould release products, flaking paint etc.

A slurry bonding coat comprising Nicobond ScreedPro Cement Mix:Nicobond Primer:clean cold water in the ratio 2:1:1 should be mixed and brush applied to the clean, dry and contaminant free concrete. Whilst the slurry coat is still wet place the mixed screed incorporating Nicobond ScreedPro Cement Mix (to the required mix design) making sure that it is thoroughly compacted. See Specification Data for coverage.

Under-floor Heating

Screeds incorporating piped under floor heating systems

Screeds where pipes that are to carry hot water are placed must be protected from draughts and allowed to set and dry for at least 48 hours. There must be a minimum of 20mm of screed above the pipes. The heating system should then be switched on and a pressure test be carried out followed by commissioning by heating the floor slowly (maximum 5°C/day) until the service temperature is reached (maximum 27°C - water temperature 55°C). The temperature should be maintained for 3 days before turning down the under floor heating so that the floor cools down to room temperature circa 15°C before the application of floor coverings.

Specification	ScreedPro Cement Mix		
BS EN 13813 Classification	CT-C50-F10		
Mix ratio by weight	1: 4	1:5.5	1:7
ScreedPro Cement Mix	0.4kg/m ² /mm	0.31kg	0.25kg
Sand 0 - 8mm	1.6kg/m ² /mm	1.69kg	1.75kg
Mixing Time	4 – 6 mins	5 – 7 mins	6 – 9mins
Working time	20 – 30mins	25 – 35mins	30 – 45mins
Compressive Strength	50N/mm ²	38N/mm ²	25N/mm ²
Flexural Strength	11N/mm ²	8.5N/mm ²	6N/mm ²
Walk on Time	2 – 3 hours	2 – 3 hours	3 – 4 hours
Ready for Floor Covering	From 3 hours	From 3 hours	From 4 hours
Installation Temperature	Minimum 5°C		
Packaging	20kg bag		
Coverage Slurry Bond Coat	ScreedPro Cement Mix Nicobond Primer	0.8kg/ m ² 5m ² /Litre	

Cleaning

Wash tools thoroughly with water immediately after use.

Shelf Life

12 months in unopened bags from the date of packing.

Storage

This product must be stored clear of the ground, under dry conditions, out of direct sunlight. Protect from frost. If allowed to freeze N&C Building Products cannot guarantee the performance of the product.

Disposal

Dispose of empty bags and/or surplus product in accordance with local authority regulations Set and hardened product may be disposed of as builders waste as mortars containing Nicobond ScreedPro Cement Mix is considered non-hazardous in normal use. The product will form an alkaline mortar which may cause some irritation if prolonged contact with the skin takes place.

Health & Safety Advice

ScreedPro Cement Mix is classified under the Chemicals (Hazard Information and Packaging for Supply) Regulations.

The relevant Material Safety Data Sheet can be obtained from the website or directly from N&C Building Products Ltd at the address below.

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