SCREEDPRO

1300 GET PUMPED ▲ SCREEDPRO.COM

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

SCREEDPRO

1300 GET PUMPED ▲ SCREEDPRO.COM

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

Overview

Description

The ScreedMax Pro™ range of traditional and engineered screeds are a range of high-performance, commercial grade, cementitious based engineered floor screeds supplied by the ScreedPro group of companies.

Screeds in the ScreedMax Pro™ range comprise high strength sands and aggregates with hydraulic binders and optional ScreedMax Fibre™ and other additives.

ScreedMax Pro™ screeds are mixed and pumped using the ScreedPro volumetric pump truck system to ensure careful and consistent proportions and delivers superior performance compared to traditional mortar screeds.

ScreedMax Pro™ screeds are suitable for internal and external installation and range of floor coverings and are backed by the ScreedPro warranty.

Advantages

- Higher compressive strength than traditional mortar screeds
- Excellent working time followed by rapid drying
- Eliminate silica dust generation from manual mixing or 20kg pre-mixed screeds
- Eliminate manual handling and mixing of sand and cement and wheelbarrowing of screed
- Eliminate on-site storage of sand and cement
- Eliminate hoist and crane use for moving sand and cement
- Computer controlled proportioning for high quality, consistent screed
- Fast and easy supply and installation
- Daily certification

SCREEDPRO

1300 GET PUMPED ▲ SCREEDPRO.COM

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

ScreedMax Pro™ range of screeds – Table 1

	ScreedMax Commercial	ScreedMax Pro S20	ScreedMax Pro S30	ScreedMax Pro K45	ScreedMax Air
Type	Traditional sand cement screed	Engineered Screed	Engineered Screed	Engineered Screed	Engineered Screed
Design 28 day compressive strength (lab conditions only)*	>15MPa	>18MPa	>25MPa	>40MPa	Various
Typical 28 day compressive strength (lab conditions only)*	15-20MPa	20-25MPa	25-30MPa	>45MPa	Various
In-situ target performance category per BS 8204-1:2003*	Category C light usage	Category C - B light to medium usage	Category B - A medium to heavy usage	Category A heavy usage	Category C light usage
Traffic usage description per BS8204-1:2003*	Foot traffic and light trolleys	Light to heavy foot traffic and/or medium weight trolleys	Heavy to very heavy foot traffic and/or heavy trolleys	Very heavy foot traffic and/or heavy trolleys	Foot traffic and light trolleys
Typical projects description	Light office use, consulting rooms, residential	Public areas, corridors, main lift and lobby areas, restaurants, schools and offices	Hospitals, aged care, public areas, resilient flooring, train stations	Hospital operating theaters and critical areas	Light office use, consulting rooms, residential
Suitable for tile & stone	✓	✓	✓	✓	✓
Suitable for resilient flooring	✗	✗	✓	✓	\
Suitable for underfloor heating	✗	✗	✓	✓	✗
Bonded installation parameters	15-40mm	12-80mm	10-100mm	10-80mm	20-100mm
Unbonded installation parameters	>40mm	>40mm	>35mm	35-80mm	>50mm

SCREEDPRO

1300 GET PUMPED ▲ SCREEDPRO.COM

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

	ScreedMax Commercial	ScreedMax Pro S20	ScreedMax Pro S30	ScreedMax Pro K45	ScreedMax Air
Floating installation over thermal insulation	✗	✗	✓	✓	\
Compatible with hydronic water heating systems	✗	✗	✓	✓	\
Fibre Reinforced	Optional	Optional	Optional	Optional	Optional
EffBlock damp/efflorescence proofing	Optional	Optional	Optional	Optional	Optional
Typical working time	60-90 mins	60-90 mins	60-90 mins	60-90 mins	60 mins
Ready for light foot traffic	24 hours	12 hours	12 hours	12 hours	12 hours
Ready for tile installation	3-5 days	24 hours	24 hours	24 hours	24 hours
Ready for stone installation	5 days	48 hours	48 hours	48 hours	48 hours
Ready for resilient coverings and wood	✗	✗	4 days	5 days	\
Warranty	10 years	10 years	20 years	10 years	20 years
Installation	Interior/Exterior	Interior/exterior	Interior/exterior	Interior/exterior	Interior/exterior
Installed density (if correctly compacted)	2,100 kg/m3	2,100 kg/m3	2,100 kg/m3	2,100 kg/m3	Various

* refer to Performance, Standards and Testing section

SCREEDPRO

1300 GET PUMPED ▲ SCREEDPRO.COM

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

Installation and Technical Guidance

All information and guidance regarding installation matters in generic and must also be read with reference to the parameters in Table 1 for specific products.

Any deviation from the guidance contained herein much be confirmed by ScreedPro in writing.

Types of Installation

Bonded Screed

Bonded screeds should not be installed thinner than the recommended thickness in Table 1. Additional care with installation should be taken for screeds less than 15mm due to the increased risk of cracking for thin screeds.

Adhesive Slurry

For Bonded Screeds a high-performance, polymer or latex based adhesive slurry should first be applied onto an appropriately prepared substrate. Contact your representative for recommendations concerning adhesive slurries.

A cement powder and water slurry or product such as Bondcrete or Planicrete is not sufficient and is never recommended. The installer is solely responsible for determining an appropriate adhesive slurry for their substrate.

We recommend that any adhesive slurry has a tensile adhesion in excess of 2 N/mm^2

Substrate Preparation

The substrate should well cured and dry, dimensionally stable and free of contaminants, dust, laitance, waxy or oil films, cracks or residual curing compounds, bond breakers or water resisting or hydrophobic products such as anti-graffiti sprays.

The surface should not be polished or smooth and must have a sufficiently “open” matrix such that a strong bond can be made to the substrate having regard to the type of adhesive used. The substrate may need to be ground back or scabbled to achieve an optimal substrate preparation.

ScreedPro does not take any responsibility for substrate suitability assessment or preparation nor any liability for delamination from or failure to bond to the substrate.

Unbonded Screed

Unbonded screeds should not be installed at thicknesses less than the recommendations in Table 1 and should be installed over isolating plastic. Refer to Isolating Plastic for more details.

Particular care should be taken to ensure that thick unbonded screeds are compacted uniformly throughout. Refer to Compaction for more details.

For screeds in excess or 60mm, it is recommended that unbonded screeds are reinforced either with ScreedMax Fibre™ or Steel Mesh.

Floating Screed

Floating screeds over substrates such as industrial grade foam insulation boards are recommended to be installed at thickness not less than 55mm.

Steel mesh is recommended to reduce the risk of cracking caused by flexing or movement in the substrate. ScreedMax Fibre™ can also be used to provide crack reduction.

Heated Screed

If water heating pipes are incorporated in the screed, such pipes should be covered by a minimum of 25mm of screed.

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

If the screeds are both floating and heated, the thickness recommendations for both floating and heated screeds should be complied with.

Particular care should be taken to ensure that screed is well compacted around the heating pipes without air voids or thin coverage sections. Steel mesh is recommended over the top of heating pipes to add protection to the pipes from point loading and also to aid in crack reduction, especially if the screed is floating as well as heated. ScreedMax Fibre™ can also be used to provide crack reduction.

ScreedMax Fibre™ Reinforcement

ScreedMax Pro™ screeds can be reinforced with ScreedMax Fibre™ using the ScreedPro Pump Truck automatic dosing system. Refer to the ScreedMax Fibre™ TDS for more information on recommended dosage rates.

Steel Mesh Reinforcement

If mesh is incorporated, it is recommended that a layer of screed is first laid and compacted, then the mesh is laid over the top and additional screed is immediately added around and over the mesh so that the mesh is incorporated in the middle of the screed and the screed is compacted uniformly above, below and between the mesh. Care must to be taken to ensure that a cold joint does not form between the screed above and below the mesh. ScreedPro accepts no liability for the formation of cold joints in between layers of screed and/or mesh.

Welded wire mesh should comply with AS/NZS 4671. It should have a mesh size between 25 x 25 mm and 75 x 50 mm and should be fabricated with wire of between 1.2 mm and 2.0 mm diameter and should be galvanized in accordance with AS/NZS 4534. Fixings should be austenitic stainless steel.

'Chicken wire' should not be used in place of reinforcement.

Efflorescence Admix

ScreedMax Pro™ screeds are suitable for use with commercial grade efflorescence protection admixes such as ScreedMax EffBlock. Consult with ScreedPro prior to dosing to confirm the application parameters.

Installation Advice

Structural Base

The structural base should be concrete which is structurally sound, stable and rigid.

Substrate deflection under all live, dead and impact actions including concentrated loads must not exceed L/360 for thin bed ceramic installations or L/480 for the bed stone installation, where L = span length.

Adhesives

Refer to the Adhesive Slurry section for details.

Compacting the Screed

A firm, even compaction is essential to achieving an optimal screed outcome. Screed should be compacted firmly and evenly using a steel trowel or mechanical compactor through the entirety of the screed, not just the top surface. A traditional screed float has too large a surface area and often does not provide a strong compaction and is not recommended.

It is not sufficient to simply walk on the screed and then finish the screed with a float or screeding bar, all screed should be firmly compacted for the full thickness of the screed (not just the upper surface of the screed) during the installation process.

Particular care should be taken to compacting around any pipework, mesh, foam construction joints and the edges or borders of the screed.

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

Failure to adequately compact a screed can result in the screed not binding optimally and result in issues such as lower compressive strength, crumbly texture, delamination from the substrate, delamination within the screed (where air voids or low compaction areas exist within the screed), air voids and/or delamination around pipework or mesh, reduced surface strength and lower quality surface finish and increased risk of cracking due to reduced strength of the matrix within in the screed.

Care should be taken if screed is being installed in multiple layers for a wet-on-wet bond. This is different from completely separate layers when a cold joint is formed. In the wet-on-wet application, care must be taken if screed is first being spread over the adhesive layer on the substrate (to cover the adhesive) and then subsequently a second layer of screed is spread on top for a wet-on-wet bond. The bottom layer must be well compacted and the top layer must also be well compacted to mesh the two layers together. Failure to do this can result in a weak lateral zone in the interior of the screed layer and can result in internal horizontal delamination between the layers. The bottom layer should also not be left exposed such that it starts to cure or it will not be possible to bond the two layers sufficiently. Furthermore, the bottom layer should not be rehydrated with a watering can before applying the top layer as this washes the cement particles out of the screed leaving a sandy middle layer. If the bottom layer starts to cure before it can be covered in a wet-on-wet bond, any affected screed should be removed and fresh adhesive applied as the layers treated as separate bonded by adhesive.

Finishing the Screed

We always recommend that the screed be well compacted and finished with a steel trowel instead of a float. A float finish will leave a more open surface matrix which will dry faster with a coarser finish. This will also result in poorer wearing surface and make the screed more susceptible to scuffing or dusting up. A steel trowel will result in a more closed surface matrix leaving a more resilient screed and finer finish.

Low patches on the surface or patches of screeds that are finished less well or are less well compacted or closed off in the final trowel can result in localised “dusting up”.

Surface imperfections

Any minor surface imperfections should be repaired either with skim coat, a rolled-on dilute tile adhesive product a penetrating densifier such as Mapei Prosfas or Kerakoll EP21 or self-level having regard to the final surface requirements and subsequent products. Surface imperfections or damage, especially if left exposed to the element and traffic will degrade the screed.

Consideration should also be given to the surface requirements of the adhesive or other product to be installed upon the finished screed.

Working time

ScreedMax Pro™ screeds typically have working times as detailed in Table 1 however this depends significantly on the environmental conditions. Any screed that has started to cure prior to installation should be discarded and not installed.

Drying Time

The drying time depends significantly on the environmental conditions and the thickness of the screed and the condition of the substrate.

ScreedMax Pro™ S30 and K45 have rapid drying characteristics and under normal conditions (21°C & 50% relative humidity), and should achieve less than 5% moisture content within 48 hours and less than 2% moisture content after 4 days.

Typically, a minimum of 24-48 hours should be allowed for the screed to dry before tiling, 1-4 days for stone and 4 days for resilient and timber products depending on the moisture level specifications for the products being applied above the screed. Refer also to Table 1.

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

Consideration should be given to the requirements of the overlay or underlay adhesives and if in doubt a moisture meter should be used to confirm the screed is sufficiently cured to accept the adhesive and tiles.

Particular care should be taken to ensure that moisture in the entire screed is assessed, not just the surface moisture as trapped moisture at the base of the screed will continue to rise if the screed is not fully dry prior to subsequent waterproofing or floorcovering installation. It is the installers obligation to ensure that the screed is sufficiently dry before progressing with further works.

Isolating Plastic

Where isolating plastic is used, our recommendation is 200 µm (or +500 grade) thick polyethylene (black plastic). Overlap by roughly 200 mm and tape together.

If the flooring is moisture sensitive and the slab is a new construction, 2 layers of plastic perpendicular to each other is advised.

Control Joints

Control joints should be installed in accordance with Australian Standards every 20-25sqm ideally in 4 x 5 or 5 x 5 meter bays. In external areas bay sizes are recommended to be 16sqm ideally in 4 x 4 meter bays and should ideally match the position of control joints in the substrate or otherwise as advised by an engineer.

Ideally, control joints should be cut while the screed is still wet as soon as it is consistent enough to be cut. Installing the construction joints at this time helps prevent uncontrolled cracking during the early drying process. If control joints are installed even 1 or 2 days later, by this point the screed has already significantly dried and started curing as has the adhesive which is why the early installation of control joints is always advisable.

Any construction joints in the slab should be mirrored in the screed.

Cold Joints

If bonding two sections of screed together using either a vertical or horizontal cold joint, care should be taken to ensure an appropriate adhesive is used. Steel dowel rods can also be incorporated to increase the strength of the meshing together of the two sections.

Perimeter Joints

If perimeter joints are installed using compressible material such as polystyrene, particular care should be taken when compacting the screed as polystyrene does not provide a “hard edge” to screed against and if care is not taken can result in less well compacted screed against the polystyrene border.

Hot and Cold Weather Conditions

It is not recommended to the install the screed in conditions above 35 degrees or below 5 degrees Celsius.

Precautions

Cracking

The risk of uncontrolled cracking during the drying process can be significantly reduced by the correct use of Control Joints, ScreedMax Fibre™ or Steel Mesh.

The use of a good quality latex adhesive can reduce the risk of cracks leading to delamination on either side of the cracks.

Furthermore, the protection of the screed from rapid drying during hot and/or windy conditions such as by covering in plastic during the drying process can also reduce the risk of unwanted cracking.

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

Any cracks should be filled with an appropriate grout or repair product and be stable prior to the installation of the flooring product.

It should be noted that a crack(s) in the screed do not mean that the screed is not fit for purpose. Cracks from the drying process should simply be repaired to achieve an appropriate finish prior to subsequent works.

Thick Screeds

Thick screeds should be evenly compacted throughout and should ideally incorporate ScreedMax Fibre™ or Steel Mesh to reduce the risk of cracking and delamination. Thick screeds should ideally be installed Unbonded or in bonded layers of up to 100mm. Thicker bonded application is possible but carries with it an increased risk of cracking and delamination.

Thick screeds carry an increased installation risk of uneven compaction all the way through the screed, especially at the bottom and middle sections of the screed. This can result in voids in the middle of the screed (resulting in horizontal cracks or internal delamination), poor bonding to the substrate if the lower sections have not been compacted well (evidenced by delamination from the substrate) or vertical cracks in the screed as well as cracking caused by the differential drying time of thick screeds.

If unbonded screeds are to be installed at greater than 150mm thick, consideration should be given to installing the screed in layers or incorporating ScreedMax Fibre™ or Steel Mesh, reducing the size of the bays and ensuring construction joints are installed to control movement and cracking during the curing phase and steps to ensure an even compaction throughout such as the use of a plate compactor or other mechanical means to aid compaction in large thick screeds.

Waterproofing application

If waterproofing membrane is being applied over the top of the screed, it is the responsibility of the installer to ensure that the screed has sufficiently dried (including any additional moisture from rain or other sources) prior to the application of any primer or waterproofing membrane to the screed.

Any moisture retained in the screed (regardless of whether it is moisture from the original mix or other sources after the screed was installed) will be absorbed by the screed (as it is porous) and will evaporate out of the screed as it dries.

ScreedPro accepts no liability for waterproofing membrane installation issues such as delamination, bubbling, outgassing, emulsification or similar caused by primer or membrane being applied over the top of screed still containing moisture.

Furthermore, installers should be aware that different waterproofing membranes require different surface finishes of screed in order to prime to and this can affect the selection of an appropriate primer. It is the sole responsibility of the installer to ensure that the appropriate surface profile finish to the screed is achieved as required by the primer/membrane system (which could require a steel trowel finish instead of a float finish or some other surface profile requirement).

ScreedPro accepts no responsibility for installation decisions such as the finishing surface profile of the screed, the appropriateness of the surface profile for the primer, the selection of the appropriate primer have regard to factors such as the surface profile and/or moisture content in the screed and the general porosity of the screed, which either the primer or membrane may need to take into account.

Installation over polyurethane and similar substrates

If the screed is to be installed over the top of a polyurethane, waterproofed or similarly coated substrate, it is the responsibility of the installer to either install an unbonded screed or take sufficent steps to ensure that the screed can adhere to the substrate.

SCREEDMAX Pro™ Screed Range

Such steps may include a high-performance adhesive designed to adhere to the substrate, sand-seeding of the substrate surface to provide a mechanical key or other steps.

It should be noted that it is normally not possible to bond to substrates such as bitumen or similar torch on membranes.

ScreedPro accepts no liability for delamination or failure to adhere to polyurethane membranes or other non-porous or non-concrete substrates as mentioned above.

Post Installation Care

Protection from heat and wind

Heat and hot or dry winds, whether direct or indirect can have a negative effect on the curing and performance of screed. Rapid dehydration under windy condition results in the cementitious binder not forming optimal strength bonds in the affected areas and can affect the overall strength of the screed. Symptoms of screed which has been heat or wind affected typically include dusty screed on the surface. Care should be taken that even interior areas can be wind affected as open corridors on construction sites can often act as wind tunnels causing a significant drying effect.

Exposed screeds on rooftops or balconies or in high wind areas when hot and windy conditions are expected should be protected from the elements during the first 4 days of curing to prevent rapid dehydration of the screed during the initial curing phase.

Rehydrating

ScreedMax Pro™ screeds should not be rehydrated after installation.

The application of water after installation can affect the strength of the screed and can result in some of the cementitious particles being washed out of the top layer of the screed leaving the sand behind and can result in a dusty surface.

Heavy Equipment

Following installation, the screed should be protected from heavy equipment such as elevated work platforms or similar machinery or heavy objects and particular machinery with high point loading or twisting actions (forklifts, EWPs etc)

If access is required over the screed prior to the installation of the flooring product, the risk of damage to the screed can be reduced by covering the screed in 12mm ply boards.
Any damage caused by heavy equipment access over the screed should be repaired prior to subsequent works being conducted.

Exposure after installation

Screed is not designed to be left exposed to the elements for extended duration but should be protected by the floor covering or temporary covering as the elements and foot or machinery traffic will damage unprotected screed. In addition to being protected following installation we recommend that internal screeds be covered with the final flooring product after no more than 21 days and external screeds be covered with the final flooring product after no more than 14 days. Any damage from the elements or traffic in the interim should be repaired prior to the application of the flooring product.

Performance, Standards and Testing

Difference between design strength and in-situ performance

All products are designed to reach specified compressive strengths under laboratory conditions. In-situ performance varies depending on a range of factors including compaction, adhesives, finishing, curing conditions, post-installation care and unprotected traffic. Accordingly, laboratory compressive strength performance are given as indicative guideance only.

SCREEDPRO

1300 GET PUMPED ▲ SCREEDPRO.COM

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

Difference between lab curing and in-situ curing

It should be noted that lab cured screed samples are wet-cured either under water or in humidity controlled environments to allow controlled curing conditions. In-situ curing conditions are not “wet cured” but are dry cured with humidity depending on the environmental conditions. This inevitably results in differing curing and test results between lab cured samples and in-situ samples and as such they cannot be directly compared.

Failure to compact is the primary cause of low strength screed

Installers must compact the screed to the recommended density of at least 2,100kg/m3. Failure to compact the screed to the recommended density will result in sub-optimal strength, dusty or crumbly screed and internal sheering. ScreedPro accepts no liability or responsibility for screed which has not been compacted to at least 2,100kg/m3.

BS8204-1:2003 Screed bases and in-situ floorings

In the absence of an Australian Standard on screed performance, ScreedPro refers to BS8204-1:2003 “Screed bases and in-situ floorings” for all assessments of screed suitability and performance.

BS8204-1:2003 outlines screed performance categories A-C which relate to floor usage categories ranging of heavy, medium and light which are affected by the floor covering thickness of thin, medium and thick per the below
:

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

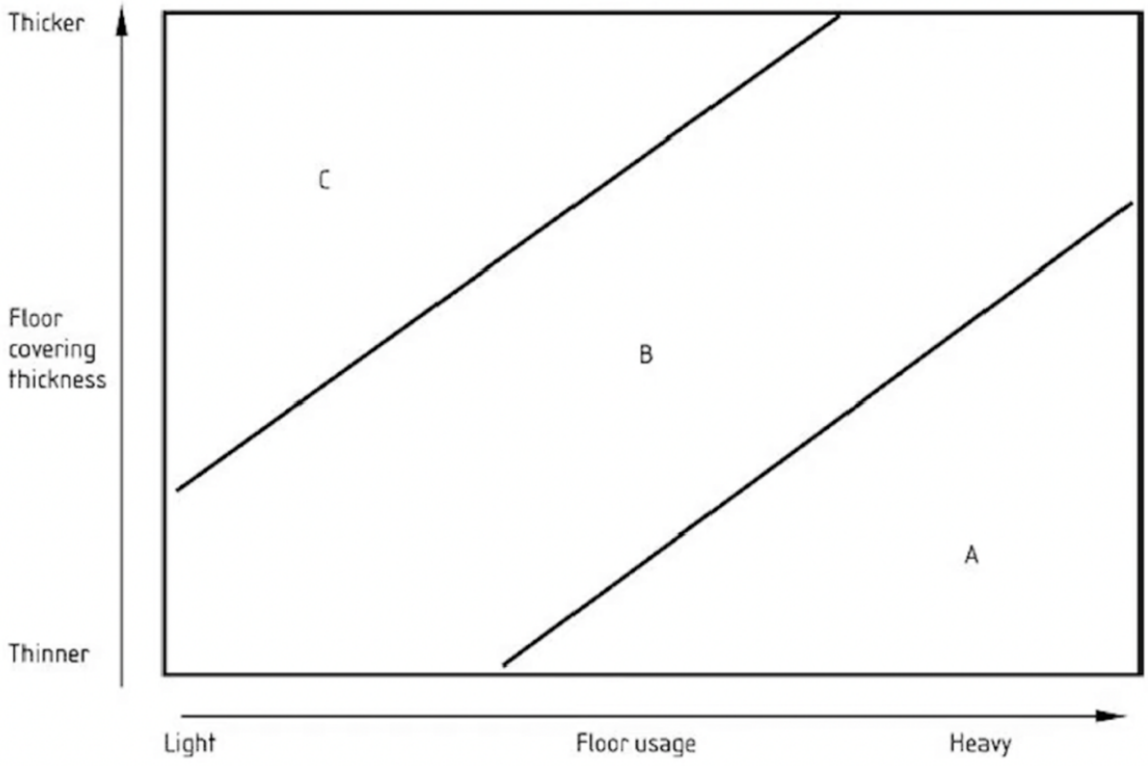
Table 4 — Acceptance limits for in situ crushing resistance test (after dropping the weight four times)

Category	Maximum depth of indentation mm	
	Bonded and unbonded screeds (see Annex D)	Floating screed (see Annex E)
A	3	3
B	4	4
C	5	2.5 (using 2 kg weight only)

NOTE 1 Up to 5 % of indentations may exceed those in this table by up to 1 mm.

NOTE 2 Tests carried out on an area of levelling screed that has been laid with a rough texture or has been roughened by wear can result in some extra compaction of the surface layer on the first impact, possibly giving rise to an increase in indentation of up to 1 mm.

NOTE 3 The method of test for ISCR measures the strength and integrity of a levelling screed in depth. It does not measure the surface strength of a screed. Very occasionally screeds can be encountered that pass the test but, because they have a weak or dusty surface, they are unsuitable to receive flooring.



Technical Data Sheet

SCREEDMAX Pro™ Screed Range

Floor usage category	Description
Heavy	Areas expected to take very heavy foot traffic and/or heavy trolleys, or where any breakdown of the screed would be unacceptable: for example, hospital operating theatres, X-ray rooms, main hospital corridors and rooms where radioactive material is handled.
Medium	Areas expected to take heavy foot traffic and/or medium weight trolleys: for example, public areas, corridors, main lift and lobby areas, canteens and restaurants, public rooms in residential accommodation, classrooms, hospital wards and offices.
Light	Other areas subjected to foot traffic and light trolleys: for example, light office use, consulting rooms and domestic housing.
Floor covering thickness	**Typical examples**
Thick	20 mm to 25 mm timber block flooring, 16 mm ceramic tiles, 20 mm natural stone or 28 mm terrazzo tiles.
Medium	Adhesive bedded 9 mm ceramic tiles.
Thin	Thermoplastic sheet/tiles (see BS 8203).
NOTE For categories A, B and C see Table 4.	

BRE Testing is solely accepted to determine fit for purpose

All testing of ScreedPro screeds for determining whether the installed screed is fit for purpose must be conducted using BRE drop hammer testing in situ in accordance with BS8204-1:2003.

Testing results will determine the categorisation of the installed screed as category A, B or C and as such its suitability for the intended floor usage having regard to the floor covering being installed.

Destructive testing is not reliable

Destructive testing of screed involving cutting/jackhammering of screed sections, subsequent cutting in the laboratory and crushing does not yield results that are consistent with in-situ performance and should not be relied upon. ScreedPro accepts no liability for reliance upon such testing methodologies.

Care must be taken when comparing the results of samples taken from the field with samples prepared by ScreedPro under laboratory conditions.

There are many variable factors that affect the consistency and reliability of field samples by external agencies including: the type of mould used (cylinder versus foam cube versus steel cube and size of cube 75mm versus 50mm), the level of compaction and method of compaction (or lack thereof) in the mould, the storage of the sample on site, the method of transport from site to the lab and vibration resulting therefrom, the humidity control of the environment for the sample at the lab (in particular whether cured underwater or in a humidity controlled environment), the temperature of the curing environment, how the sample is prepared for crushing (whether the crush surfaces are polished and/or capped to remove the point loading effects of particles protruding or sitting proud of the crush surface) how the sample is orientated for crushing (whether the top/bottom is crushed or the sample is rotated first to crush the side/side profile), whether the type of machine and calibration of such machine is set up for concrete cylinders, grout cubes or otherwise and other factors that differ between site testing companies and their laboratories.

In ScreedPro's experience, the results from field tests can be subject to unreliability and variability due to one or more of the factors especially with concrete testing agencies who are often unfamiliar with screed sample collection, preparation and testing.

ScreedPro accepts no liability for the variance between field samples by third party agencies

SCREEDMAX Pro™ Screed Range

and laboratory-controlled testing by ScreedPro and the deviation of field samples from laboratory controlled samples is not in of itself an indicator that the screed is in any way unfit for purpose.

ScreedPro solely accepts the results of BRE drop hammer testing for in-situ screed suitability and acceptance testing.

Suitability for Use

It is the responsibility of the user to ensure that products are used in accordance with this data sheet, BS8204-1:2003 and any applicable Australian Standards in applications for which they are intended.

The client agrees to be responsible for considering the applicability of this product for their specific project and intended use.

Laboratory testing

On-site installed and laboratory condition performance can vary. Installed performance, in particular compressive strength, is significantly dependent on the quality of the installation and compaction and environmental conditions and ScreedPro accepts no liability for variations in installed performance compared to typical performance. Purchase of this product constitutes acceptance of ScreedPro's Terms of Trade which can be accessed here or on ScreedPro's website at www.screedpro.com/terms-of-trade

Warranty

If installed correctly in accordance with this TDS and the applicable Australian Standards, ScreedPro warrants that the screed will be fit for purpose. Please refer to our terms of trade for further details.

Licenced installers and builders only

The screed must only be installed by appropriately qualified tilers who are licenced by and regulated with the appropriate State regulator on projects of builders who also hold the appropriate building licence. ScreedPro accepts no liability if the screed is installed by un-licenced tilers or on projects of un-licenced builders.

Compliance with Australian Standards

It is the responsibility of the installer to ensure compliance with relevant Australian Standards including but not limited to (some key points summarised):

ISO 18167:2020 Textile floor coverings – Installation Practices

AS 1884:2021 Floor coverings – Resilient sheet and tiles – Installation practices

Engineered screeds, not sand cement screeds, must be used as a sub floor for resilient flooring and their preparation products (paras 3.2 and 3.3)

AS 4654.2-2012 Waterproofing membranes for external above-ground use, Part 2: Design and installation

To aid in the adhesion of the waterproofing membrane to the screed, the screed surface should have a smoothness profile of at least the equivalent to that of a wood float or a light broom finish. Priming may be required for some types of membranes (para 2.5.3.1).

Where the screed is applied over the top of the membrane, sufficient movement joints shall be installed in the screed to accommodate movement over the membrane, ideally with a minimum width of 10mm every 4.5m in any direction in a bonded screed system (para 2.15.2).

Where an unbonded screed is installed over the top of a membrane, a double slip sheet shall be laid over the membrane to separate it from the screed. Also an unbonded screed over waterproof membrane must be a minimum of 50mm thick with mesh reinforcing and additional movement joints may be required (para 2.15.2).

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

AS 2455.1:2019 Textile floor coverings – Installation practice, Part 1: General

Traditional sand cement screed shall not be used as a substrate for the installation of textile floor coverings (para A.4)

AS 2455.2:2019 Textile floor coverings – Installation practice, Part 2: Carpet tiles

Traditional sand cement screed shall not be used as a substrate for the installation of textile floor coverings (para A.4)

AS 3958.1-2007 Ceramic tiles – Guide to the installation of ceramic tiles

Safety and Legal

Alkaline Irritation

All cement-based products are alkaline and can cause irritation. Although this product is not considered hazardous contact with the eyes and repeated and prolonged skin contact should be avoided.

We recommend the use of long sleeve shirts and pants and well as knee pads to protect skin when installing the screed and safety glasses should always be worn to protect against screed coming in contact with eyes.

Please refer to the Safety Data Sheet for further information.

Respirable Silica Dust

We have confirmed with all our sand and binder suppliers that the raw materials mixed by ScreedPro in the mixing of our screed have detectable levels of silica dust substantially below the reportable levels.

Required PPE

- Long sleeve shirt and pants
- Knee pads
- Safety Glasses

Legal

ScreedPro Australia Pty Ltd and its associated companies cannot guarantee and are not liable for the use of their products outside of Australian Standards installation guidelines and this data sheet.

The technical details and recommendations contained in this data sheet are given in good faith and represent the best of our knowledge at time of printing. Freedom from patent restrictions should not be assumed.

SCREEDPRO

1300 GET PUMPED ▲ SCREEDPRO.COM

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

Automatic Pump Truck System

ScreedPro's fleet of Automatic Screed Pump Trucks are built on ScreedPro's 20-year track record of supplying screed to builders and tilers using it fleet of customised on-site screed mixing and pumping trucks.

Description

ScreedPro Pump Trucks are fully automatic, computer controlled volumetric screed mixing and pumping systems.

The Pump Trucks arrive at site pre-loaded with all the necessary ingredients including sand of varying grades, cementitious binder, admixes and fibres.

The mix recipe is programmed into the computer and the Pump Trucks mix and pump the correct prouct up to 180m horiztonally or 90m (30 stories) vertically at a rate of up to 6 cubic meters per hour and approximately 12 cubic meter per load.

Key statistics

Screed	Characteristic
Length (Truck and Trailer)	15.2 m
Length (Pump trailer only)	11.3 m
Width	2.5 m
Parking and operating space required	17 m
Height	3.75 m (depending on load and air bags height)
Turning circle	12 m (rear steering axles)
Capacity per load	~ 12 m^3 depending on load
Horizontal pumping length	~ 180 m
Vertical pumping height	~ 90 m / 30 stories
Pumping rate	Dependent on height, length of pump and product. Up to 6 m^3/hr. Typically 4-5 m^3/hr on average.
Length of hose carried per truck	Typically 100m. Up to 180m by prior arrangement
Fully loaded weight (truck and trailer)	43.85t
Truck safety features	UHF radio, amber flashing lights, reversing cameras and alarm
Operator minimum qualifications	Construction Industry Card HC/MC Truck License Pump Truck VOC

Advantages

- No on-site storage of raw materials required.
- No hoist or crane resources required
- Eliminate silica dust from the mixing of product
- Eliminate manual handling risks
- Faster, more efficient floor levelling
- Quality controlled mixing and pumping
- Product backed by 20 year warranty

SCREEDPRO

1300 GET PUMPED ▲ SCREEDPRO.COM

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

Requirements on site

The Pump Truck requires a firm area to park the truck on. The truck is 15.2m long and requires 17m to operate within. The Pump Truck will not park or travel on soft sand where there is a risk of bogging, but normal compacted road base or laydown yards are typically suitable.

Other than a safe place to park the truck Pump Truck, the only requirement on site is access to a potable water tap which must be a dedicated resource for the sole use by ScreedPro for the duration of operations.

If traffic control is required, this is the responsibility of the client or builder to organise.

Safety on site

On arrival, the Operators will conduct a site assessment and complete SWMS on their iPad specific for the site conditions.

If site induction is required, this will also be completed.

Toolbox Talk with installers

For new sites and/or installers, the Operators may conduct a Toolbox Talk with the installers to discuss the operations prior to commencing.

Installing of hoses

Pump Hoses will be laid out incorporating the procedures in the SWMS.

Particular care is taken to isolate working areas of the Pump Truck and pedestrian areas where hoses are running.

If clamping up the side of a building or balconies, a specific Safe Work Method Statement is employed for the safe installation of hoses in such vertical sections.

Noise levels

The Pump Trucks are noise insulated and operate at <79 decibels at 7m in accordance with ISO 2151.

Protecting sensitive areas

The Pump Trucks use a number of techniques to protect the site during operations. These include:

Foam sleeves to cover hose couplings to prevent scratching of the floor or walls
Builder's plastic to protect walls and floors
Fabric wrapping of the pump tripod when pumping into finished areas to prevent screed from spraying onto walls or unwanted areas
Inspection app for before and after photos of sensitive areas where required

Flushing of hoses

Pump hoses are flushed with potable water as part of the cleaning cycle either into an area/skip bin specified by the Site Manager or into ScreedPro's custom pump out bags.

Finishing operations

When the supply is finished, the Pump Truck departs leaving the site in the same condition it was upon arrival. The Pump Trucks operate a zero-impact policy.

Supply certificate

At the conclusion of supply a detailed Supply Certification is completed and signed by the Operator and the Client Representative. Detailed information includes:

- Location, date and time of supply
- Operator and client details
- Arrival and departure times
- Product supplied
- Quantity supplied
- Type of flooring product to be installed
- Adhesive used
- Fibres or Admixes
- Temperature and environmental conditions
- Areas on site being screeded

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

- Any safety incidents
- Photos and comments

The Supply Certificate is reviewed and signed off by the relevant Manager and sent to the client attached to the invoice.

Contact

ScreedPro Australia
12 Riversea View
Mosman Park WA 6012
admin@screedpro.com

ScreedPro WA Pty Ltd
(08) 6103 1016 WA

ScreedPro NSW Pty Ltd
(02) 4257 6666 NSW

ScreedPro Vic Pty Ltd
(03) 5024 7778

Version

Version 5.3
Effective 23 February 2025
Valid till 22 February 2026

SCREEDPRO

1300 GET PUMPED ▲ SCREEDPRO.COM

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

Material Safety Data Sheet **ScreedMax Pro Screed**
SDS Number: SPA-SDS-S30-1

Section 1: Identification of the Material and Supplier

Company Details	ScreedPro Australia Pty Ltd 12 Riversea View Mosman Park WA 6011 ABN: 77628455265 Tel: 1300 438786 Website: www.screedpro.com
Emergency Contact Number:	Contact Person: Chief Executive Officer Telephone: 1300 438786 (business hours) or Poisons Information Centre 131126
Product	ScreedMax Pro Screed
Use	ScreedMax Pro Screeds produce a set light concrete mass commonly referred to as “screed”.

Section 2: Hazards Identification

Hazardous Substance. Non-dangerous goods	A low proportion of the fine dust in the supplied dry product will be respirable crystalline silica. Once wetted, in the wet or final set form, risk of any airborne respirable dust will be low, but dry residues, or dust from cutting, grinding, abrading, or finishing the set product may contain respirable crystalline silica.
GHS Classifications	Skin Corrosion/Irritation: Category 2
	Serious Eye Damage / Eye Irritation: Category 1
	Specific Target Organ Systemic Toxicity (Single Exposure): Category 3
	Carcinogenicity: Category 1A
	Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2

DANGER

CAN CAUSE SKIN BURNS & EYE DAMAGE: Avoid contact with the eyes and skin from both wet and dry cement. Wet cement can be corrosive to the eyes and skin and may cause skin sensitisation (dermatitis). Safety: Wear suitable protective clothing, gloves (AS2161), and eye/face protection (AS/NZS1337.1).

IF ON SKIN: Wash thoroughly after handling. Wash clothes before re-use and separately from other clothing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.

SCREEDMAX Pro™ Screed Range

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

RESPIRATORY SENSITISERS: Avoid breathing dust. Repeated inhalation of the dust containing crystalline silica may cause bronchitis, silicosis (scarring of the lung) and the risk of scleroderma. Safety: When exposed to dust, wear a suitable respirator (AS/NZS1715, 1716). When cutting or abrading concrete, keep it wet to avoid creating hazardous dust.

IF INHALED: Remove victim to fresh air immediately and keep at rest in a comfortable position for breathing.

SAFETY EQUIPMENT: Recommended protective clothing when handling product includes gloves, boots, long sleeves/pants, eye protection i.e., goggles, face mask.

FIRST AID: If any above symptoms persist, seek medical attention or contact Poisons Information Centre on 13 11 26 (Australia wide).

DISPOSAL: Follow safety instructions and collect in containers for disposal as trade waste in accordance with local authority guidelines. Please dispose of packaging in appropriate general waste collection (not suitable for recycling).

SPILLS/LEAKS: Keep out of sewers and stormwater.

Section 3: Composition/Information on Ingredients

Chemical Entity	Proportion	CAS Number
Portland Clinker	15-20%	65997-15-1
Gypsum ($CaSO_4 2H_2O$	<1%	10101-41-4
Limestone ($CaCO_3$)	<1%	1317-65-3
Calcium Oxide	<1%	1305-78-8
Hexavalent Chromium Cr (VI)	<1%	1333-82-0
Washed sand	80-85%	14808-60-7
Total respirable silica	Below reporting limits	14808-60-7
1,1',1''-nitrilotripropan-2-ol	<1%	122-20-3

Section 4: First Aid Measures

4.1 Description of first aid measures

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

SCREEDMAX Pro™ Screed Range

First aid facilities	Eye wash facilities and safety shower should be available.

4.2 Most important symptoms and effects, both acute and delayed

Irritating to the eyes, skin and respiratory system. Some individuals may exhibit an allergic response upon exposure to this product, possibly due to the trace amounts of chromium present. Hexavalent chromium compounds are classified as carcinogenic to humans (IARC Group 1).

4.3 Immediate medical attention and special treatment needed

Treat as for moderate to strong alkali and symptomatically.

Section 5: Fire Fighting Measures

Fire/Explosion Hazard:	None
Hazchem Code:	None allocated
Flammability:	Not flammable
Extinguishing Media:	None required
Hazards from Combustion Products:	None
Special Protective Precautions and equipment for fire fighters	None required

Section 6: Accidental Release Measures

Spills	Spills are best cleaned up by vacuum device to avoid generating airborne dust. Recommendations on Exposure Control and Personal Protection should be followed during spill clean-up. Keep product out of storm water and sewer drains. Wetting during clean-up will cause formation of setting screed.

Section 7: Handling and Storage

Handling	Handled in accordance with Hazardous Manual Tasks Code of Practice.
Storage	In dry format, protect from moisture to prevent hardening. Storage may be in concrete silos, steel bins, or plastic lined multi-ply paper bags.

Section 8: Exposure Controls/Personal Protection

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m^3	ppm	mg/m^3
Calcium carbonate	SWA (AUS)	--	10	--	--
Calcium oxide	SWA (AUS)	--	2	--	--
Gypsum	SWA (AUS)	--	10	--	--
Magnesium oxide	SWA (AUS)	--	10	--	--
Portland Cement	SWA (AUS)	--	10	--	--

SCREEDMAX Pro™ Screed Range

Quartz (respirable dust)	SWA (AUS)	--	0.05	--	--

Biological Limits
No biological limit values have been entered for this product.

8.2 Exposure Controls
Engineering controls
Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

PPE

Eye/Face	Wear dust-proof goggles.
Hands	Wear PVC or rubber gloves.
Body	Wear long sleeved shirt and full-length trousers. When using large quantities or where heavy contamination is likely, wear coveralls.
Respiratory	Where an inhalation risk exists, wear a Class P1 (Particulate) respirator. At high dust levels, wear an Air-line respirator or a Full-face Class P3 (Particulate) respirator

When handling wet-mix wear boots. PPE should be changed regularly, with skin washed and completely dried to prevent cement particles from being trapped inside gloves or boots. Clothing / overalls should also be changed regularly after exposure to cement to prevent prolonged skin contact with wet cement. It is recommended that tape or similar is used to close off glove and boot openings.

Section 9: Physical and Chemical Properties

Appearance:	Grey sand textured damp powder mix
Odour:	No distinctive odour
pH:	Not applicable
Boiling Point/Range:	Very high temp
Freezing/Melting Point:	Very high temp (>1200°C)
Vapour Pressure:	Not applicable
Solubility:	Some components slightly soluble in water forming an alkaline (caustic) product (pH 11+)
Specific Gravity/Density:	2.0-2.2
Flash Point:	Not applicable
Ignition Temperature:	Not applicable
UFL:	Not applicable
LFL:	Not applicable

Section 10: Stability and Reactivity
Product is stable, compatible with most other building materials, will not decompose into hazardous by-products and does not polymerise.

Chemical Stability:	Chemically stable
Conditions to Avoid:	Keep free of moisture during storage
Incompatible Materials:	None
Hazardous Decomposition Products:	None
Hazardous Reactions:	None

SCREEDMAX Pro™ Screed Range

Section 11: Toxicological Information

Reproductive	Insufficient data available to classify as a reproductive toxin.
STOT – single exposure	Irritating to the respiratory system. Over exposure may result in irritation of the nose and throat, with coughing. High level exposure may result in breathing difficulties.
STOT – repeated exposure	Repeated exposure to respirable silica may result in pulmonary fibrosis (silicosis). Silicosis is a fibronodular lung disease caused by deposition in the lungs of fine respirable particles of crystalline silica. Principal symptoms of silicosis are coughing and breathlessness. In the wet state, the likelihood of an inhalation hazard is reduced
Acute toxicity	No known toxicity data is available for this product. Based on available data, the classification criteria are not met.
Skin	Irritating to the skin. Contact with powder or wetted form may result in irritation, rash and dermatitis. Prolonged exposure to wet cement can cause serious, potentially irreversible skin damage in the form of chemical burns.
Eye	Causes serious eye damage. Contact with moisture in the eyes may result in irritation, lacrimation, pain, redness, conjunctivitis, and possible alkaline burns aided by mechanical irritation and abrasion. Exposure to wet cement can cause serious, potentially irreversible eye damage in the form of chemical burns.
Sensitisation	Not classified as causing respiratory sensitisation. Some individuals may exhibit an allergic skin response upon exposure to cement, possibly due to trace amounts of chromium.
Mutagenicity	Insufficient data available to classify as a mutagen.
Carcinogenicity	This product contains crystalline silica which is classified as carcinogenic to humans (IARC Group 1). However, there is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis. Therefore, preventing the onset of silicosis will also reduce the cancer risk. Hexavalent chromium compounds are also classified as carcinogenic to humans (IARC Group 1). However due to the trace amounts present, no adverse effects are expected due to this component. In the wet state, the likelihood of an inhalation hazard is reduced.
Aspiration	This product is a solid and aspiration hazards are not expected to occur.

Section 12: Ecological Information

Ecotoxicity:	Product forms an alkaline slurry when mixed with water.
Persistence and Degradability:	Product is persistent and would have a low degradability.
Mobility:	A low mobility would be expected in a landfill situation.

SCREEDMAX Pro™ Screed Range

Section 13: Disposal Considerations
Product can be treated as a common waste for disposal or dumped into a landfill site, in accordance with local authority guidelines.

Keep material out of storm water and sewer drains.

Measures should be taken to prevent dust generation during disposal, and exposure and personal precautions should be observed (see above)

Section 14: Transport Information
Transport is done in bulk form by pump truck

UN Number:	None allocated
Proper Shipping Name:	None allocated
Class and Subsidiary Risk:	None allocated
Packing Group:	None allocated
Special precautions for user:	Avoid generating and breathing dust
Hazchem Code:	None allocated

Section 15: Regulatory Information

15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture

Poison schedule	A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
Inventory listings	**AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**
	All components are listed on AICS or are exempt.

Section 16: Other Information

For further information on this product contact	Telephone: 1300 438786 (business hours)

Next Review Date for this MSDS: 31 December 2026.

Australian and New Zealand Standards:
AS 2161: Industrial Safety Gloves and Mittens (excluding electrical and medical gloves). AS/NZ 1336: Recommended Practices for Occupational Eye Protection.
AS/NZS 1715: Selection, use and maintenance of respiratory protective devices. AS/NZS 1716: Respiratory protective devices.
AS/NZS 4501: Occupational protective clothing.

Advice Note:
ScreedPro Australia believes the information in this document to be accurate as at the date of preparation noted below, but, to the maximum extent permitted by law, Cement Australia accepts no responsibility for any loss or damage caused by any person acting or refraining from action because of this information.

Technical Data Sheet

SCREEDMAX Pro™ Screed Range

The provision of this information should not be construed by anyone as a recommendation to use this product. In particular, no one should use any product in violation of any patent or other intellectual proprietary rights or in breach of any statute or regulation.

Users should rely on their own knowledge and inquiries and make their own determination as to the applicability of this information in relation to their particular purposes and specific circumstances. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace and in conjunction with other substances or products.

END SDS