

Flowcrete

for the world at your feet



ISOCRETE

Leveling Floor Grouts & Screeds

- ✓ Hospitals
- ✓ Schools & Colleges
- ✓ Leisure Venues
- ✓ Food & Beverage
- ✓ Manufacturing
- ✓ Pharmaceutical



www.flowcreteamerica.com

Cementitious Isocrete Floor Grouts & Screeds

Isocrete is a range of fast-cure, cement based floor grouts, screeds and underlayments used for sloping, patching and leveling the concrete substrate prior to the installation of floor finishes including resinous systems.

Isocrete systems are easily installed, can be applied to green concrete and offer fast-cure properties to reduce downtime. Once cured, Isocrete grouts offer excellent compressive strength, moisture resistance and non-shrinkage properties.

Grouts offering enhanced durability and resistance are available for industrial areas and manufacturing facilities subject to heavy load bearing and high traffic conditions.

Isocrete Product Selector:

	DESCRIPTION	USES	THICKNESS	FOOT TRAFFIC (70°F)	FULL CURE (70°F)
Isocrete 1500	A rapid drying, pre-mixed, self-leveling cement based flooring compound free from protein.	Universal underlayment designed for general purpose use and traffic conditions.	>3/16"	4 hours	28 days
Flowscreed Industrial Top	A rapid drying, pre-mixed, self-leveling cement based flooring compound containing durable quartz aggregates.	Durable underlayment designed for industrial use and highly trafficked areas.	>3/16"	4 hours	28 days
Isocrete 4000	A trowel-applied, fast cure and high performance cement based flooring compound for sloping and patching floors.	Easily worked underlayment designed for sloping and patching floors.	1/4" - 4"	2 hours	28 days

Isocrete Application Suitability



Hospitals



Schools & Colleges



Leisure Venues



Food & Beverage



Manufacturing



Pharmaceutical

Performance Benefits

- ✓ Provides a durable, level surface for the installation of final floor finishes
- ✓ Contains a plasticising and accelerating admixture to deliver a fast track solution
- ✓ Proven performance since 1969, meeting ISO 9001 and BS 8204-1 standards
- ✓ High compressive strength (8,000psi) compared to sand and cement screeds
- ✓ Allows for the early installation of moisture sensitive finishes



Isocrete 1500 (>3/16")

A polymer-modified, cementitious, single component surfacing compound designed for use on new or worn concrete substrates.

Isocrete 1500 has been designed to provide a fast drying underlayment, for easy levelling of concrete floors before the installation of floor coverings.



Moisture Resistant:

Protects against external moisture ingress, condensation and water spillages.



Excellent Bond Strength:

Acrylic polymer modification produces excellent adhesion.



Flexible:

Can be overcoated with a variety of finishes including tiles, vinyl and resinous flooring.

Technical Profile

COMPRESSIVE STRENGTH:

ASTM C 109	4 hours: 1,000 psi (6.9 MPa) 24 hours: 2,500 psi (17.2 MPa) 7 days: 4,000 psi (27.6 MPa) 28 days: 5,000 psi (34.5 MPa)
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FLEXURAL STRENGTH:

ASTM C 109	7 days: 650 psi (4.5 MPa) 28 days: 850 psi (5.9 MPa)
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SHRINKAGE:

ASTM C 348	7 days: -0.056% 28 days: -0.060%
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FLOW TIME:

15 minutes

WORKING TIME:

30 minutes

SPEED OF CURE:

	50°F	70°F	90°F
Light Traffic	10 hrs	4 hrs	2 hrs
Full Traffic	48 hrs	24 hrs	16 hrs
Full Chemical Cure	35 days	28 days	21 days

Technical Profile

COMPRESSIVE STRENGTH:

ASTM C 109	4 hours: 1,000 psi (6.9 MPa) 24 hours: 2,500 psi (17.2 MPa) 7 days: 4,000 psi (27.6 MPa) 28 days: 5,000 psi (34.5 MPa)
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Full Chemical Cure	35 days	28 days	21 days

Flowscreed Industrial Top (>3/16")

A hardwearing, heavy duty polymer-modified, cementitious surfacing compound.

Flowscreed Industrial Top has been designed for use in warehouses, production zones, aircraft hangers, automotive process lines and other areas where a hardwearing level floor is needed.



Fast Cure:

Accelerates cure time, providing a trafficable and stainable surface in just 4 hours.



Strong:

Durable surface achieving a compressive strength of 5,000 psi.



Heavy Load Bearing:

Superior shear strength under heavy loads and when subject to high traffic conditions.

Isocrete 4000 (1/4" - 4")

A trowel-applied, fast cure and high performance cement base for sloping and patching floors.

Isocrete 4000 has been designed to repair, slope or level structurally sound, interior and exterior concrete surfaces that are pitted, worn, scaled or spalled.



Hygienic:

Protein-free formulation prevents the growth and spread of bacteria.



Trowel Applied:

Hand troweled to fill holes and depressions as well as create slopes.



Strong:

Can be installed up to 4" thick for areas subject to frequent and heavy traffic.

Technical Profile

COMPRESSIVE STRENGTH:

ASTM C 109	3 hrs: 2,500 psi 28 days: 8,000 psi
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BOND STRENGTH:

ASTM C 882	1 day: 2,000 psi 7 days: 2,500 psi
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LENGTH CHANGE:

ASTM C 157	28 days wet: +0.03% 28 days dry: +0.05%
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CHLORIDE ION PERMEABILITY:

ASTM C 1202	3 days: <500 coulombs 28 days: <300 coulombs
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SPEED OF CURE:

	50°F	70°F	90°F
Light Traffic	4 hrs	2 hrs	1.5 hrs
Full Traffic	8 hrs	4 hrs	3 hrs
Full Chemical Cure	35 days	28 days	21 days





Suitable Floor Finishes

- | | |
|---|-----------------------|
| ✓ | Epoxy Resin |
| ✓ | Cementitious Urethane |
| ✓ | Seamless Terrazzo |
| ✓ | Ceramic Tiles |
| ✓ | Carpet |
| ✓ | Wood / Laminate |
| ✓ | Vinyl |
| ✓ | Cork |
| ✓ | Wood Block Linoleum |

Common Screeding Terms Explained

Bonded Screed	A bonded screed is laid on a prepared concrete substrate and bonded using a PVA, SBR or epoxy resin bonding agent. Bonded screeds are ideal for thinner applications where heavy loads are expected.	Partially Bonded Screed	An inexpensive but very problematic method of installation due to its tendency to crack as a result of a weak bond.
Cement	Cement is a binding material comprising of calcined mixtures of clay and limestone, usually mixed with water, sand and gravel aggregates to form concrete.	Power Trowelled Screed	Power trowel machines are fitted with circular blades to help smooth the screed. The metal blades are rotated over the surface to achieve a hardened surface. Power trowelled screeds have a flat smooth dense finish.
Cementitious Screed	Cementitious screeds contain cement that act as a binder in the screed formulation. Cementitious screeds can either be a traditional sand:cement mix or a proprietary screed mix.	Proprietary Screed	A proprietary screed is a mix designed screed that offers a consistency and reliability that traditional sand:cement screeds can lack. Proprietary screeds are often installed by licensed applicators, offering peace of mind.
Concrete	Concrete comprises a blend of cement, water and aggregates such as coarse gravel, limestone or gravel alongside fine sand. The cement reacts with the water, creating a binding agent for the aggregates.	Resin Bonded Screed	Epoxy resin bonding agents can be used to bond screeds to the substrate, meaning that the screed can be laid thinly without the risk of cracking or curling. Resins can be applied in multiple layers to provide a Damp Proof Membrane (DPM).
Concrete Slab	A concrete slab is usually the substrate upon which a screed is laid, whether partially or fully bonded, unbonded or floating. In some applications, the concrete slab will require preparation to receive a screed.	Screed	A screed is a layer of a well compacted mixture of cement and fine aggregate that is applied to a base at the appropriate thickness and that has a surface suitable for receiving a floor finish.
Drop Hammer Test / ISCR (In-Situ Crushing Resistance)	In order to measure the strength and durability of a screed, a 9lb weight is used to make four consecutive blows on the screed surface. The depth of the indent is used to give an indication of the soundness of the screed.	Self Leveling Screed	Sometimes referred to as self smoothing, self leveling screeds spread with only a partial aid, resulting in a flat and smooth surface.
Floating Screed	Floating screeds are chosen for both thermal and acoustic requirements and are laid on insulation.	Semi Dry Cementitious Screed	Semi-dry cementitious screeds are cement based, semi-dry hand trowel applied screeds that deliver a high strength sub-floor finish that is resistant to construction traffic.
Granolithic Screed	A granolithic screed is an extremely hard wearing screed that can be left uncovered in areas subject to heavy traffic to provide a durable floor finish. Granolithic screeds usually contain a granite aggregate.	SR Rating (Surface Regularity)	A floor screed's SR Rating gives an indication of the flatness of the installed product, expressed in the scale SR1, SR2 and SR3. Environments requiring the flattest possible floor surface would be aiming for an SR1 rating.
Movement / Expansion Joint	A mechanism to prevent the cracking of a screed resulting from heat induced expansion and contraction or the movement of a building. These joints are normally filled with elastomeric sealants.	Traditional Screed	A traditional screed typically has a sand:cement ratio of 3-5:1 and is mixed on site. Traditional Screeds can be reinforced with a mesh or Polypropylene Fibres to enhance strength and durability.
Non Cementitious Screed	Non cementitious screeds include substitutes for cement, many times polymer based, in order to combat the environmental issues associated with the production of the material.	Unbonded Screed	Unbonded screeds are not bonded to the substrate, but rather laid on top of a separating membrane that may act as a DPM. As the screed is not bonded, these applications are usually thicker to ensure that there is no movement.
Ordinary Portland Cement	Ordinary Portland Cement is a common cement blend comprising a ground limestone-based clinker and calcium sulfate. It is often considered bad for the environment as its production generates equal amounts of CO ₂ .		



Flowcrete

Flowcrete is the world's leading manufacturer of seamless resin floor, wall and coving solutions as well as a range of other specialist coating technologies with operations across the globe.

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