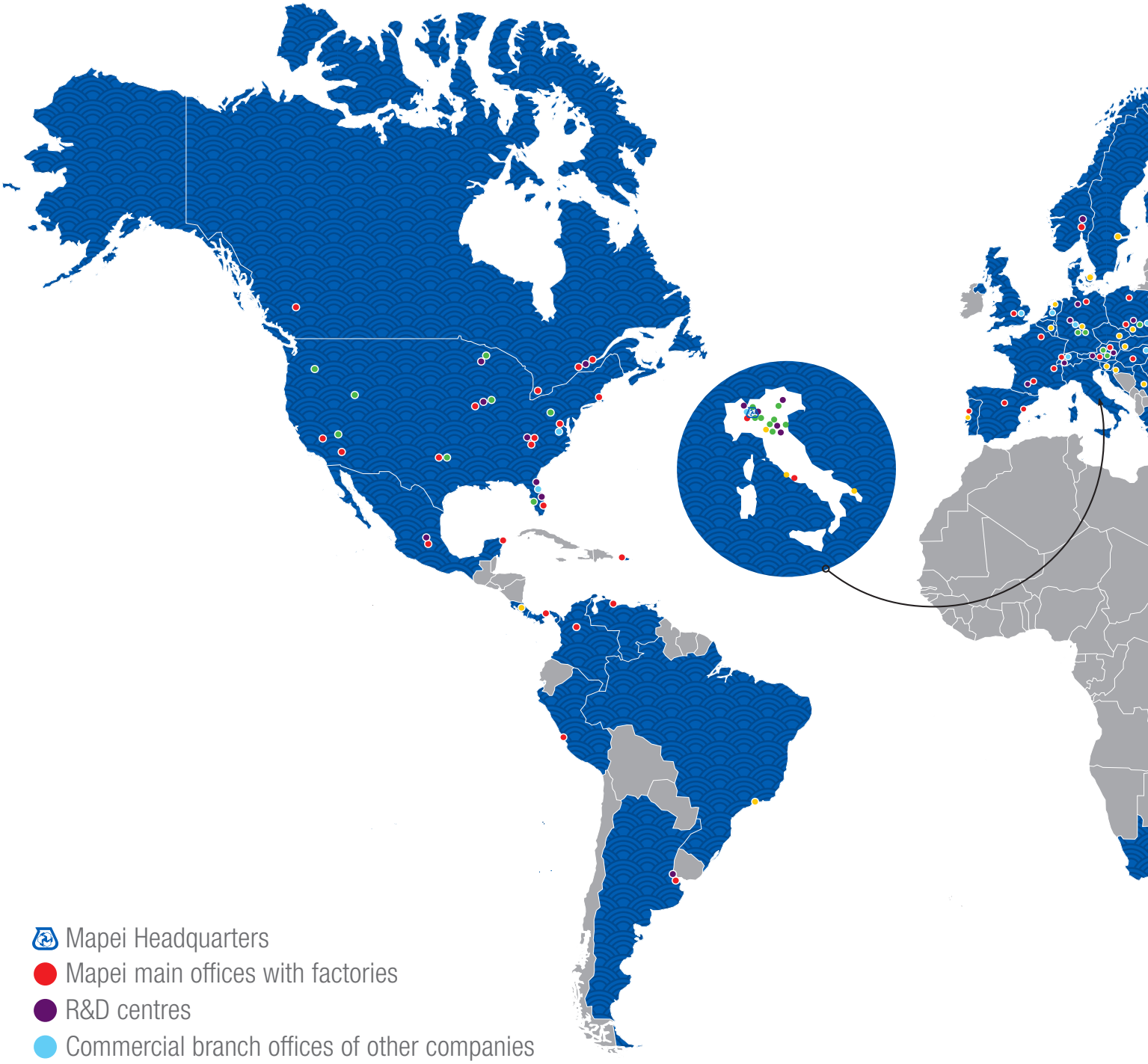
RAPID DRYING SCREEDS

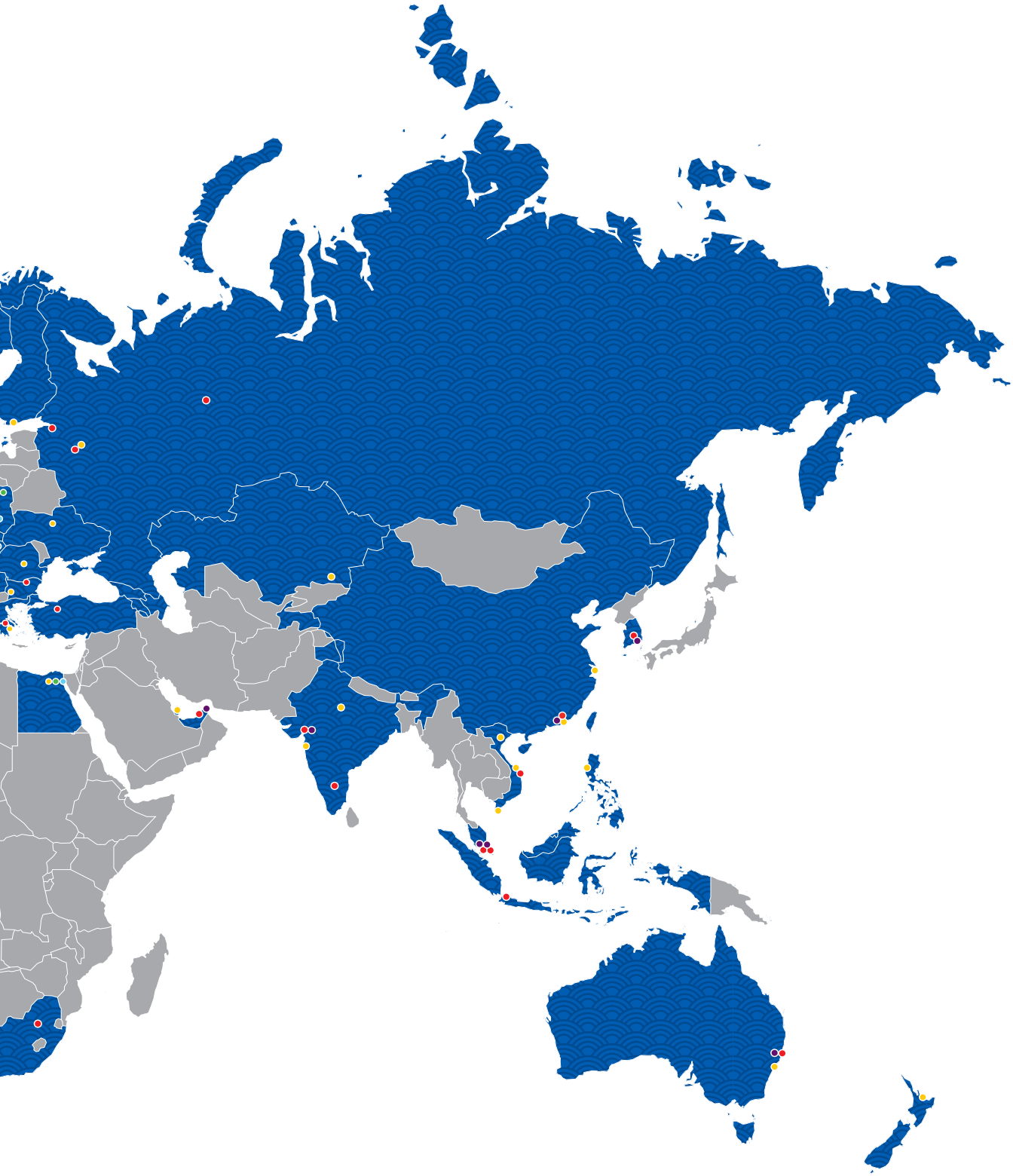
MAPEI®

ADHESIVES · SEALANTS · CHEMICAL PRODUCTS FOR BUILDING

THE WORLD OF MAPEI



- Mapei Headquarters
- Mapei main offices with factories
- R&D centres
- Commercial branch offices of other companies
- Main offices with factories of other companies
- Mapei commercial branch offices



MAPEI UK

Manufacturing facilities at Halesowen are capable of producing 103,000 tonnes of product annually. Over 150 product SKU's are manufactured in the UK at the 24 hour operational site, employing over 245 members of staff to provide support and assistance to an ever increasing customer base of more than 700.

In addition to an expanding manufacturing plant and offices in the West Midlands, Mapei UK has a dedicated nationwide network of Specification Managers who offer a full NBS specification service with products listed in the BIM library. The Specification Managers work closely with the Technical Services Department to ensure seamless advice throughout each project from initial specification stage, to installation and post-completion.

As part of the learning and product education events Mapei hosts, a fully equipped training facility, Mapei Academy is located in the West Midlands which offers both general product range training and more in-depth seminars to demonstrate Mapei's system solutions for a range of construction scenarios.

Mapei UK is on hand every step of the way to assist with your project, making the conventional, exceptional.

HEAD OFFICE

DISTRIBUTION CENTRE

MAPEI® WORLD
LONDON CITY

MAPEI®
ACADEMY

PRODUCT LINES

CERAMICS&STONE MATERIAL

RESILIENT&TEXTILE MATERIAL

WOODEN FLOORING

CEMENTITIOUS&RESIN FLOORING

ACOUSTIC INSULATION

STRUCTURAL STRENGTHENING

BUILDING

REPAIROFMASONRY

THERMAL INSULATION

ADMIXTURES FOR CONCRETE

PROTECTIVE&DECORATIVE COATINGS

WATERPROOFING

UNDERGROUND TECHNOLOGY TEAM (UTT)

ELASTIC SEALANTS&ADHESIVES

MARINE INDUSTRY

CERTIFICATION

Mapei systems are certified by recognised external institutes and laboratories.

All Mapei adhesives have been awarded CE marking in compliance with Euronorm EN 12004 annex ZA, as prescribed by the current European Directive 89/106/EEC.

All Mapei mortars for installing and grouting ceramic tiles and stone conform to Euronorms EN 12004 and the international standards ISO 13007-1.

This symbol is used to identify Mapei products which give off a low level of volatile organic compounds (VOC) as certified by GEV (Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.), an international organisation for controlling the level of emissions from products used for floors.

The sanitaire logo is obligatory in France, and must be applied on all construction products for internal use. It is similar to the energy efficiency label applied on household appliances, and indicates the class of the product (A+ is the highest and C is the lowest) regarding the emission of volatile organic compounds (VOC) to safeguard the quality of indoor air and, as a result, the health of final users.

Mapei was awarded Certiquality certification in 2016 for their EPD (Environmental Product Declaration) issuing process. An EPD describes the environmental impact of a product throughout its entire life cycle by measuring its impact using standardised LCA (Life Cycle Assessment) methods.

LEED is a voluntary system for the design, construction and management of high-performance, sustainable buildings. The LEED certification system indicates the requirements for constructing environmentally sustainable buildings in terms of energy and the consumption of natural resources involved in the construction process. The LEED protocol was created in the USA, and is currently applied in more than 100 countries.

An independent, third party non-profit distributing organisation, our ambition is to provide reassurance to the construction industry that manufacturers' products, systems and procedures are 'fit for purpose'. Accredited by the United Kingdom Accreditation Service (UKAS), our testing is carried out in accordance with ISO/IEC 17025.

Mapei constantly promotes sustainability by joining international programmes and organisations and developing technologically-advanced products and solutions which contribute to safeguarding the environment and our health.

Mapei products help designers and contractors create innovative projects certified LEED "The Leadership in Energy and Environmental Design", in compliance with the U.S. Green Building Council.

Mapei's Low Dust technology allows dust emissions during the mixing, working and application phases of powdered products to be reduced by 90%, with advantages for the environment and the health of floor layers.

Mapei's FastTrack Ready technology includes products that reduce the number of steps required to complete an installation, products that complete a job faster than traditional installation products.

Lightweight adhesives characterised by their low density and higher yield compared with traditional adhesives.

Building a sustainable future together

GREEN CRE DEN TIALS

Global environmental management
Mapei is a member of the chemical industry's global Responsible Care programme.

BioBlock® Technology
Innovative technology preventing mould formation.

Low Dust Technology
Significant reduction of dust released into the environment during manufacturing and use.

Ultralite Technology™
Lightweight adhesives offering higher yield, less effort and lower environmental impact due to transport.

Construction of green buildings
Mapei's most recent production facilities are designed and built according to LEED certification criteria.

R&D focused on indoor air Quality
Products and systems with very low volatile organic compounds emissions.

Energy saving strategy
Rationalisation of energy consumption and solutions for energy-saving buildings.

Green education strategies
Targeted training courses for professionals for a correct use of Mapei eco-sustainable materials.

Evaluation of the life-cycle of products
Dedicated team specialized in evaluating the environmental impact of the whole life cycle of our products.

A history of commitment
Certified products for the building industry respectfull for the wellbeing of the environment and the final user.

"Reduce, reuse, recycle" strategies
Reduction of solid waste and wastewaters and use of recycled materials.

Products safeguarding the environment
70% of our Research is devoted to the development of eco-sustainable products.

Supporting green programmes worldwide
Mapei products give an important contribution to all protocols for eco-sustainable buildings all around the world.

Logistic and shipping strategies
Reduction in the consumption of fuel and pollutants by promoting the use of rail transport instead of road transport.

RESEARCH, DEVELOP AND DELIVER THE MOST ADVANCED RANGES OF SCREED IN THE WORLD

There are a wide range of floor finishes available in today's marketplace, available for use in a seemingly endless variety of applications including Schools, Airports, Hospitals, Housing, Commercial and Industrial projects to name just a few. Mapei, the world's largest producer of adhesives for these finishes, has long held the belief that a floor finish will only perform to your expectations if it is installed onto a high quality substrate. This is accomplished by meeting all the technical requirements of both the floor finish and the environment into which it is designed to be used.

Screed construction forms a vital element for flooring and Mapei has invested heavily to develop a screeding product range that exceeds client expectations in every respect.

Mapei invested in excess of £125 million in research and development during 2017 through its central laboratories based in Milan. With this investment they work to deliver products that are respectful to the environment, contain no harmful VOC's or solvents and perform to the highest technical standards.

Mapei screed systems are to be found in the worlds greatest projects as well as local developments like housing and retail stores. This is achieved through comprehensive specification support, partnerships with major screeding contractors and a national network of distributors supplying the needs of local builders.

UNI EN ISO **9001:2015**
UNI EN ISO **14001:2015**
UNI EN ISO **45001:2018**

CERTIQUALITY

CERTIFIED MANAGEMENT SYSTEMS

MAPEI - THE SECRET INGREDIENT

Traditional screeds lose moisture by 2 methods:

1. Firstly moisture evaporates at a rate which is typically quoted as 1 day for each mm of thickness up to 50 mm from the surface and then 2 days for each mm for the remaining depth. On this basis a 75 mm screed could take up to 100 days to dry. In order to speed up the drying process of the Portland cement based screeds, a special binder incorporating admixtures in powder form, able to reduce the amount of mixing water, has been developed. It consequently increases the mechanical strength and reduces shrinkage and drying time. TOPCEM and TOPCEM PRONTO are based on this technology.
2. The second method of drying is through the hydration of the binder where some of the moisture will chemically combine and therefore is no longer able to evaporate. MAPECEM and MAPECEM PRONTO are based on the above mentioned technology.

PROJECTS FROM ACROSS THE UK

IMPERIAL WAR MUSEUM, LONDON

ASTON MARTIN SHOWROOM, NEWCASTLE

SPECIFICATION & SYSTEMS

Mapei's rapid drying screeds have been specified on many prestigious projects in the UK and around the world including

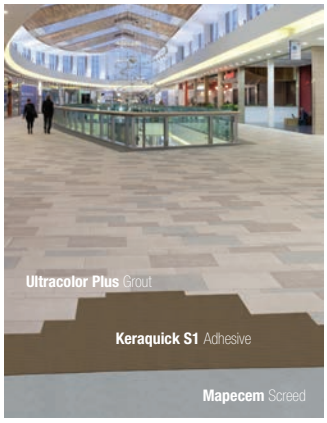
Union Square Shopping Centre
ABERDEEN, SCOTLAND

A system of MAPEI products were specified and installed at the Aberdeen shopping centre covering two levels and a retail park.

In total an area of approximately 7,000 m^2 of Topcem was installed at a thickness 70 mm. Nearing completion the remaining 350 m^2 replaced Topcem with Mapecem again at 70 mm to allow the project to complete on schedule.

MAPEI PRODUCTS

TOPCEM Screed Binder
MAPECEM Screed Binder
KERAQUICK S1 Tile Adhesive
ULTRACOLOR PLUS Grout
MAPESIL AC Silicone Sealant



QUALITY GUARANTEED

Many screeds are manufactured on site. The process involves mixing the cement, aggregate, water, fibres and any additives in precise quantities using a combination mixer/pump unit. When looking back at historical problems with screed quality it's often this process that has proved to be the weakest link. The EU standard BS EN 13813 defines quality by specifying various properties such as Compressive Strength, Flexural Strength, Wear Resistance, Surface Hardness and Shrinkage. Mapei not only offer constituents for traditional on site manufacture but also complete factory mixed screeds known as "Pronto" with guaranteed characteristics according to BS EN 13813.

Application of Mapecem

QUEEN ELIZABETH HOSPITAL, BIRMINGHAM

SIEMENS SUSTAINABILITY CENTRE, LONDON

TOPCEM

Specialist fast drying cement binder for shinkage-compensated screeds.

Formulated cement binder, which, when mixed with graded aggregates and water, has the extraordinary ability to harden in just 12 hours and be completely dry in 4 days, to accept moisture sensitive floor coverings

- Ceramic tiles can be laid after 24 hours, natural stone after 2 days, resilient and wood floorings after 4 days.
- Set to light traffic after 12 hours.
- Ideal for incorporating underfloor heating systems.
- Ideal for patching, repairing and replacing floor screeds where rapid restoration is required.
- Internal and external use.

WHERE TO USE

Formation of bonded, unbonded and floating screeds on both existing and new substrates prior to the installation of wood, PVC, linoleum, ceramic tiles, natural stone, carpet or any other flooring where rapid drying is required for short installation times.

Topcem being placed by pump

Project References

ASTON MARTIN SHOWROOM

Newcastle, UK

Mapei product system

Topcem, Ultraplan Eco 3210, Keraquick S1, Latex Plus, Ultracolor Plus

Typical Values

Compressive strength at 24 hours	> 8 N/mm^2
Compressive strength at 4 days	> 15 N/mm^2
Compressive strength at 28 days	> 30 N/mm^2
Insitu crushing resistance	Cat A
Residual moisture after 4 days	< 2%
Density	2100 kg/m^3
Open Time	up to 60 minutes
Resistance to alkali	Excellent
Resistance to oil	Excellent
Resistance to solvents	Excellent
Laying of tiles	24 hours
Laying of natural stone	2 days
Laying of wood / vinyl / resin	4 days
Laying of industrial toppings	7 days
Coverage	2 - 2.5 kg/m^2 per cm of thickness
Minimum thickness -Bonded	10mm
-Unbonded	35mm
-Floating	55mm

TOPCEM PRONTO

Pre-blended ready-to-use screed mix with normal setting and fast drying properties.

For forming floating, unbonded and bonded screeds on new and existing sub floors interior and exterior prior to installation of ceramic tiles, natural stone, resilient & wood coverings.

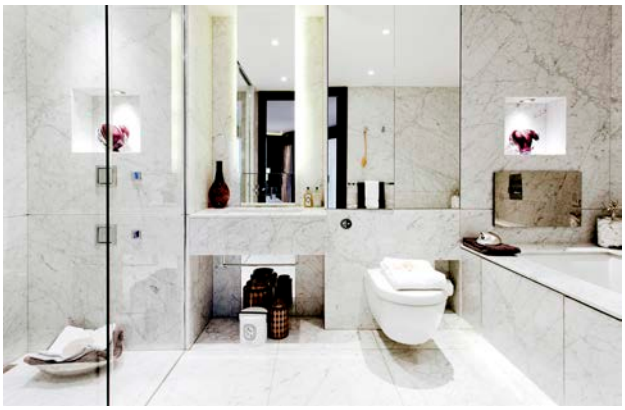
- Extremely easy to use: just mix with water.
- Set to light traffic after 12 hours.
- Ready to receive ceramic tiles after 24 hours and natural stone tiles after 2 days, resilient and wood flooring after 4 days.
- Ideal for repairing screeds in areas where it is required to lay flooring in a short time.
- Ideal for forming heated screeds.
- Internal and external use.

WHERE TO USE

For the installation of wood, PVC, linoleum, ceramic tile, natural stone, carpet, or other floor coverings in areas where fast-drying screeds are required in order to lay floorings in a short time.

Topcem Pronto being compacted

Project References



CHELSEA CREEKS APARTMENTS

London, UK

Mapei product system

Topcem Pronto, Ultraplan Renovation Screed 3240, Mapeguard WP System, Keraflex Maxi S1, Keraquick S1, Latex Plus, Keracolor FF, Fugolastic

Typical Values

Compressive strength at 24 hours	> 8 N/mm²
Compressive strength at 4 days	> 15 N/mm²
Compressive strength at 28 days	> 30 N/mm²
Insitu crushing resistance	Cat A
Residual moisture after 4 days	< 2%
Density	2100 kg/m³
Open Time	up to 60 minutes
Resistance to alkali	Excellent
Resistance to oil	Excellent
Resistance to solvents	Excellent
Laying of tiles	24 hours
Laying of natural stone	2 days
Laying of wood / vinyl / resin	4 days
Laying of industrial toppings	7 days
Coverage	18 - 20 kg/m² per cm of thickness
Minimum thickness -Bonded	10mm
-Unbonded	35mm
-Floating	55mm

MAPECEM

Specialist fast setting and drying cement binder for shinkage-compensated screeds.

Formulated cement binder, which, when mixed with graded aggregates and water, has the extraordinary ability to harden in just a few hours and be completely dry within 24 hours. regardless of thickness.

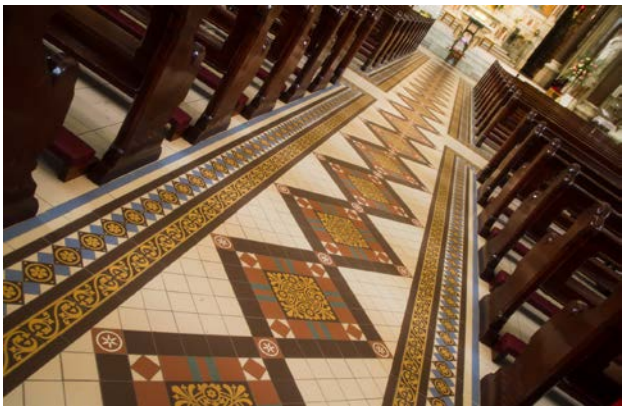
- Set to light traffic after 2-3 hours.
- Ready for tiling in 3-4 hours.
- Very high compressive strength.
- Ideal for incorporating underfloor heating systems.
- Ideal for patching, repairing and replacing screeds in live areas subject to continuous traffic e.g. supermarkets, hospitals, airports, shopping centres, etc.
- Totally dry within 24 hours for all floor finishes.

WHERE TO USE

Preparation of bonded, unbonded and floating screeds on existing and new internal sub floors for the installation of wood, PVC, linoleum, ceramic tiles, carpet or any other flooring where fast-drying is required for minimum downtime.

Mapecem being placed by pump

Project References



CLONARD MONASTRY

Belfast, UK

Mapei product system

Mapecem, Topcem, Mapetex System, Keraquick S1, Latex Plus, Mapesil AC, Ultracolor Plus, Primer G, Ultraplan Renovation Screed 3240, Ultraplan Eco 3210, Eporip

Typical Values

Compressive strength at 24 hours	> 30 N/mm^2
Compressive strength at 4 days	> 40 N/mm^2
Compressive strength at 28 days	> 50 N/mm^2
Insitu crushing resistance	Cat A
Residual moisture at 24 hours	< 2%
Density	2200 - 2250 kg/m^3
Open Time	up to 30 minutes
Resistance to alkali	Excellent
Resistance to oil	Excellent
Resistance to solvents	Excellent
Laying of tiles	3 - 4 hours
Laying of natural stone	3 - 4 hours
Laying of wood / vinyl / resin	24 hours
Laying of industrial toppings	3 days
Coverage	3.5 - 4.5 kg/m^2 per cm of thickness
Minimum thickness -Bonded	10mm
-Unbonded	35mm
-Floating	55mm

MAPECEM PRONTO

Pre-blended, ready-to-use, fast setting and drying, shrinkage controlled screed mix.

Internal screed mix which has extraordinary ability to harden in just a few hours and be completely dry within 24 hours, regardless of thickness. Ideal for projects where a rapid turn-around is required.

- Extremely easy to use: just mix with water.
- Set to light foot traffic after 2-3 hours, dry after 24 hours.
- Screeds on which it is possible to lay PVC, linoleum, wood and natural and artificial stone material after only 24 hours (residual moisture lower than 2%).
- Ideal for incorporating underfloor heating systems.
- Ideal for patching, repairing and replacing screeds in live areas subject to continuous traffic e.g. supermarkets, hospitals, airports, shopping centres, etc.
- Extremely high compressive strength.

WHERE TO USE

Bonded, unbonded and floating screeds on old and new floor slabs, for laying wood, PVC, linoleum, carpet, ceramic, natural stone and any other type of floor covering where quick drying is required for immediate laying of the floor covering.

Mapecem Pronto being compacted

Project References

AUDI MUSEUM

Ingolstadt, Germany

Mapei product system

Mapecem Pronto, Mapecem, Mapetex System, Planicrete, Granirapid, Keracolor FF

Typical Values

Compressive strength at 24 hours	> 40 N/mm²
Compressive strength at 4 days	> 50 N/mm²
Compressive strength at 28 days	> 60 N/mm²
Insitu crushing resistance	Cat A
Residual moisture after 24 hours	< 2%
Density	2200 - 2250 kg/m³
Open Time	up to 30 minutes
Resistance to alkali	Excellent
Resistance to oil	Excellent
Resistance to solvents	Excellent
Laying of tiles	3 - 4 hours
Laying of natural stone	3 - 4 hours
Laying of wood / vinyl / resin	24 hours
Laying of industrial toppings	3 days
Coverage	20 kg/m² per cm of thickness
Minimum thickness -Bonded	10mm
-Unbonded	35mm
-Floating	55mm

MAPESCREED 704

CE EN 934-2

Plasticing and water-reducing admixture for producing rapid-drying screeds.

A liquid admixture which, when added to conventional sand:cement screed mixed at a rate of 1.5% of the cement weight, produces a screed with improved workability, reduced porosity and shrinkage and reduced drying time.

- Set to foot traffic after 12 - 24 hours.
- Ceramic tiles can be laid after 7 days.
- Resilient flooring and wood installed after 14 days.

Project References

SPORTS TRIO

Aberdeen, UK

Mapei product system

Mapescreed 704, Topcem, Mapeprim SP, Keraquick S1, Keraflex, Kerapoxy, Adesilex P9

Typical Values of Screed Mix

Compressive strength	Dependant on screed mix design
Insitu crushing resistance	Cat A
Moisture at 14 days	<2% w/w
Addition rate of product to screed mix	1.5% by weight of cement
Laying of tiles	7 days
Laying of natural stone	7 days
Laying of wood / vinyl / resin	14 days
Laying of industrial toppings	14 days

WHERE TO USE

To form bonded, unbonded and floating screeds on both existing and new substrates, prior to the installation of ceramic tiles, natural stone, carpet, vinyl and any other flooring where a rapid-drying screed is required for shorter installation times.

PLANICRETE

Synthetic rubber latex for producing effective bonding slurries for screeds and SBR screed mixes.

When mixed with cement and water, Planicrete produces a bonding slurry that is suitable for use with all screed mixes that require bonding to a substrate.

Bonding Slurry

- Better adhesion to substrates.

SBR Screed Mix

- Improved compressive and flexural strengths.
- Greater resistance to abrasion.
- Greater impermeability.
- Improved resistance to diluted acids and oils.

WHERE TO USE

To form effective bonding slurries for bonded sand:cement screed mixes, and sand:cement screed mixes with improved workability and mechanical properties.

Project References

AL HABTOOR CITY (AL HABTOOR PALACE)

Dubai, United Arab Emirates

Mapei product system

Planicrete, Topcem, Adesilex P9, Keracolor FF, Keraquick S1, Keraflex Maxi S1, Mapelastic Smart, Mapeplan TU WL, Mapetex SEL, Planigrout 300, Primer G.

Typical Values

Consistency	Fluid Liquid	
Colour	White	
Density (g/cm^3)	1.02	
Dry solids content (%)	36	
Bonding Slurry		
	Topcem	Mapecem
Planicrete	1	1
Water	1	1
Binder	3	2
SBR Screed Mix		
Add Planicrete at a rate of 10% of the cement weight. Note: the water content will be reduced when adding Planicrete to a screed mix.		

MAPEFIBRE NS12

Mono-filament Polypropylene fibres for use in screed mixes.

When included in sand:cement screed mixes, the 12mm long fibres create a particularly strong matrix, that is better able to resist the stresses induced by the setting and hardening process, thereby helping to reduce the formation of cracks.

- Easily and evenly dispersed throughout the screed mix.
- Reduces the formation of cracks.
- Increases cohesion and reduces segregation.
- Improves abrasion resistance.
- Provides durability.

WHERE TO USE

Add to the screed mix along with the sand, cement, water and any other admixtures, to ensure a homogenous mix is produced.

Mapefibre NS12

Project References

LOERIESFONTIEN WIND FARM

Loeriesfontien, South Africa

Mapei product system

Mapefibre NS12, DMA 2000, Mapecure E, Mapecure SRA 25

Typical Values

Length of fibres (mm):	12
Density (g/cm3):	0.91
Flame point:	+160°C - 170°C
Melting point:	+400°C
Water absorption:	None
Resistance to alkalis, acids and salts:	High
Tensile strength (N/mm2):	400 - 500

RIBA ACCREDITED CPD SEMINAR

Fast Track Screeds

Mapei CPD's are independently certified by RIBA CPD Providers Network and the Construction CPD Certification Service. They are offered free of charge either onsite at your premises or are available to book at our Mapei World Specification Centre in Clerkenwell.

- Avoid screed failures by correctly specifying suitable materials and construction methods.
- Understand how material types differ in performance.
- Be aware of current European and British Standards as well as Building Regulations.
- Understand British Standards compliance criteria.

For more information or to book 'Fast Track Screeds' CPD contact:
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NOTES

NOTES

MK 999230 (GB) 06/19

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