



Adeflex R



Premium grade deformable rubber modified cement based adhesive for bonding ceramic tiles and stone material with superior coverage



SURPASSES THE REQUIREMENTS OF ISO 13007-1

Adeflex R is a normal (1), cementitious (C) adhesive classified as C1.

Adeflex R is a deformable adhesive classified as S1.

Adeflex R mixed with **Isolastic 50** is a highly deformable adhesive classified as S2.

WHERE TO USE

For interior floor and wall installations, suitable for most ceramic tile types, mosaics, porcelain, natural stone, fully vitrified and quarry tiles, over most traditional, well prepared substrates including fully cured concrete and render, plasterboard and fibre cement sheeting.

Some application examples

Bonding ceramic tiles and mosaics on the following substrates:

- for gypsum substrates and anhydrite screeds, provided they are dry and have been treated with a coat of **Primer G**;
- conventional concrete slabs or suspended concrete slabs provided they are completely cured and stable;
- conventional renders and cement mortar walls;
- plasterboard and fibre cement sheeting that is pre-primed and installed for tiling purposes;
- timber flooring (including rigid plywood, structural particleboard, chipboard, etc.) provided that fibre

cement ceramic tile underlay (CTU) has been installed prior to tiling;

- rigid plywood or structural particleboard substrates if mixed with **Isolastic 50**;
- suitable for use over MAPEI and/or MAPEI approved waterproofing membranes.

TECHNICAL CHARACTERISTICS

Adeflex R is an off-white powder composed of cement, special fillers based on recycled materials synthetic resins and special additives according to a formula developed in the MAPEI Research Laboratories.

When **Adeflex R** is blended with water, it becomes a creamy mortar which has an extraordinary pot life and is easy to spread. It has excellent thixotropic properties allowing it to be applied on vertical substrates without slumping or sagging.

Adeflex R is easily workable with exceptional coverage. It has a short setting time and floors can be grouted after approximately 6-8 hours.

Adeflex R is a cementitious, deformable adhesive of Class C1S1 when mixed with water.

The adhesion strength and deformability of **Adeflex R** can be improved by mixing it with **Isolastic 50** or **Isolastic** diluted 1:1 with water, resulting in an adhesive of Class C2S2 (improved and highly deformable).

RECOMMENDATIONS

DO NOT use **Adeflex R** in the following cases:



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Installing ceramic tiles

- on wooden, metallic, rubber, PVC or linoleum substrates;
- not suitable for external use;
- for tiling on existing tiled floors and wet areas unless it is mixed with **Isolastic 50**;
- where a fast setting adhesive is required;
- to install agglomerates or moisture sensitive stone. Use **Granirapid**, **Keraquick S1** mixed with **Latex Plus**, **Keralastic T** or **Kerapoxy**.
- for total immersion scenarios such as pools or spas.

APPLICATION PROCEDURES

Preparation of the substrate

All supporting substrates must be structurally flat, sound, solid, stable, dry, completely cured, level, plumb and true to tolerances as per the relevant Australian Standards. They must be clean, free of dust, oil, grease, paint, tar, wax, curing agents, sealers, release agents or any deleterious substances and debris, which may prevent or reduce adhesion.

Completely remove all loosely bonded topping, paint, loose particles and construction debris by mechanical means eg. shot blasting, scarification or sanding. Neutralise any trace of acid or alkali from the substrate prior to the application of any product.

Cementitious substrates

Cementitious substrates must not be subject to shrinkage after the installation of the tiles therefore concrete slabs should be cured for at least 6 weeks and screed and renders for at least 1 week prior to tiling. The surface should be true and level and pitched to drains where required.

Steel trowelled concrete should be mechanically roughened to remove any laitance and provide a good key for tiling. Gypsum substrates and anhydrite screeds must be perfectly dry, sound and free from dust.

It is absolutely essential that they are treated with **Primer G** or **Mapeprim SP**.

Substrates heated due to exposure to sunlight should be cooled down with water.

Preparing the mix

Mix **Adeflex R** with clean water until a smooth, lump free paste is obtained. Use a low speed mixer (approx. 300 rpm). Leave the mix to rest for approximately 5 minutes and then re-mix. The adhesive is now ready for use.

Use 5.8-6.4 litres of clean water or 6.6-7.2 kg of **Isolastic 50** for every 20 kg bag of **Adeflex R**. Mixed this way, **Adeflex R** remains workable for at least 8 hours.

Applying the mix

Apply **Adeflex R** on to the substrate using a notched trowel with sufficient depth to ensure a coverage as recommended by the current Australian Standards or better.

To maximise adhesion, spread a thin layer of **Adeflex R** onto the substrate using the flat side of the trowel. Immediately thereafter build up the thickness required using the notched

side of the trowel.

In the case of floors subject to heavy traffic and point loads, **Adeflex R** should also be spread on to the back of the tile (back-buttering method), in order to ensure complete coverage.

LAYING THE TILES

It is not necessary to wet the tiles before they are laid. Only in the case where the backs of the tiles are very dusty do we recommend washing them by dipping them in clean water and allowing them to dry.

Place the tiles in position following the recommendations of the relevant Australian Standards.

The open time of **Adeflex R** is 20 minutes under normal temperature and humidity conditions. Unfavourable conditions, such as direct sunlight, wind and/or high temperatures, or if the substrate is very absorbent, may drastically reduce this time, possibly to only a few minutes.

It is therefore necessary to repeatedly check that a skin has not formed on the surface of the adhesive and that it is still fresh. If a skin forms on the surface, refresh the adhesive by re-spreading it with the trowel. It is inadvisable to wet the adhesive with water once a skin has formed, because instead of dissolving the skin, the water will form an anti-adhesive film.

If necessary the tiles must be adjusted within 30 minutes of installation.

Tiling installed with **Adeflex R** must not be washed down or exposed to rain for at least 24 hours and must be protected from frost and strong sunlight for at least 5-7 days.

GROUTING AND SEALING

Wall joints can be grouted after 6-8 hours and floor joints can be grouted after 24 hours with the appropriate MAPEI cementitious or epoxy grout which is available in a variety of colours. Expansion joints should be sealed with a suitable MAPEI sealant.

SET TO LIGHT FOOT TRAFFIC

Floors are ready for light traffic after approximately 24 hours.

READY FOR USE

Surfaces may be put into service after approximately 14 days.

Cleaning

Tools and containers may be cleaned using fresh water while the **Adeflex R** is still fresh. Surfaces must be cleaned with a damp cloth before the adhesive sets.

CONSUMPTION

A 20 kg bag of **Adeflex R** covers approximately 9 to 10m² depending on the tile size and substrate. Coverage will vary depending on the site conditions and the application technique.

PACKAGING

Adeflex R is available in 20 kg bags.

STORAGE

Adeflex R may be stored for 12 months in original packaging in a dry, elevated area.

TECHNICAL DATA (typical values)

In compliance with:

- ISO 13007-1 as C1S1
- ISO 13007-1 as C2S2 when mixed with Isolastic 50 or Isolastic diluted 1:1 with water
- European EN 12004 such as C1 S1
- European EN 12004 such as C2 S2 when mixed with Isolastic 50 or Isolastic diluted 1:1 with water

PRODUCT IDENTITY

Type:	powder
Colour:	off-white
Bulk density (kg/m ³):	860
Dry solids content (%):	100

APPLICATION DATA (at +23°C and 50% R.H.)

Mixing ratio:	100 parts Adeflex R with 29-32 parts water by weight or 100 parts Adeflex R with 33-36 parts Isolastic 50 by weight
Consistency of the mix:	pasty
Density of the mix (kg/m ³):	1150
pH of the mix:	13
Pot life:	> 8 hours
Application temperature:	from +5°C to + 35°C
Open time (according to EN 1346):	20 minutes
Ready for grouting on walls:	4-8 hours depending on the absorbency of the back of the tiles
Ready for grouting on floors:	after 24 hours depending on the absorbency of the back of the tiles
Set to light foot traffic:	24 hours
Ready for use:	14 days

FINAL PERFORMANCES

Bonding strength in accordance with EN 1348 (N/mm ²):	Adeflex R mixed with water	Adeflex R mixed with Isolastic 50 or Isolastic diluted 1:1 with water
Initial bonding after 28 days:	1.1	1.7
Bonding after heat exposure:	1.1	2.4
Bonding after immersion in water:	0.8	1.3
Bonding after freeze/thaw cycles:	1.0	1.4
Resistance to alkali:	excellent	
Resistance to oil:	excellent (poor to vegetable oil)	
Resistance to solvents:	excellent	
Temperature when in use:	from -30°C to +90°C	

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SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Adeflex R contains cement that when in contact with sweat or other body fluids may cause an irritant alkaline reaction and allergic reactions to those predisposed. It can cause damage to eyes. During use wear protective gloves and goggles and take the usual precautions for handling chemicals. If the product comes in contact with the eyes or skin, wash immediately with plenty of water and seek medical attention.

For further and complete information about the safe use of our product, please refer to the latest version of our Safety Data Sheet available from our website at www.mapei.com.au.

PRODUCT FOR PROFESSIONAL USE.



 **Our Commitment To The Environment**
MAPEI products contribute valuable points towards Green Star™ certified projects, in compliance with the Green Building Council of Australia.

GREEN INNOVATION

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.

The most up-to-date TDS can be downloaded from our website www.mapei.com.au

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

All relevant references for the product are available upon request and from www.mapei.com.au

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