

ROCK PROOF 777 EL

Waterproofing Damp-proofing Cementitious Slurry

PRODUCT DESCRIPTION

Rock Proof 777 EL is a two-part polymer modified cementitious waterproof mortar slurry comprising of a liquid polymer and cement based mix incorporating special admixtures. Suitable for use in hot and tropical climates.

Uses Rock Proof 777 EL is used for:

Interior and exterior waterproofing and damp-proofing of concrete, cementitious rendering, brickwork and blockwork

Protection of concrete structures against the effects of de-icing salts and freeze-thaw attack

Rigid waterproofing of basement walls in new construction and refurbishment

Pore / blowhole filling Waterproofing basement and cellars (not subject to hydrostatic water pressure)

Sealing fine "hairline" cracks in concrete structures (not subject to movement)

Levelling mortar for concrete repair works

Layer Thickness 0.75 mm minimum.
1.5 mm maximum.

Thermal Expansion 13×10^{-6} per °C

Carbon Dioxide Diffusion

Coefficient (μCO_2) $\mu\text{CO}_2 \sim 35.000$

Water Vapour Diffusion

Coefficient ($\mu\text{H}_2\text{O}$) $\mu\text{H}_2\text{O} \sim 500$

Mechanical / Physical Properties

Compressive Strength (According to EN 196-1)

3 days $\sim 20 \text{ N/mm}^2$

28 days $\sim 35 \text{ N/mm}^2$

Flexural Strength (According to EN 196-1)

3 days $\sim 6 \text{ N/mm}^2$

28 days $\sim 10 \text{ N/mm}^2$

Tensile Strength Cured in water: $\sim 3.2 \text{ N/mm}^2$ after

14 days exposure (According to DIN 53455)

Cured in air: $\sim 4.5 \text{ N/mm}^2$ after 14 days exposure

Bond Strength 2.0 to 3.0 N/mm^2 (failure in substrate)

E-Modulus Static: $\sim 8.4 \text{ kN/mm}^2$

CHARACTERISTICS /ADVANTAGES

Easy to apply by brush or in thin trowel applications

No water required

Pre-batched components

Hand or spray applied

Easy and fast mixing

Very good adhesion

Protects concrete against carbonation

Protects against water penetration

Non-corrosive to steel or iron

Over paintable

Approved for potable water contact

SYSTEM INFORMATION

Application Details

Consumption / Dosage Dependent on the substrate roughness, surface profile and thickness of the layer applied.

As a guide, $\sim 2.0 \text{ kg/m}^2/\text{mm}$ (excluding allowances for loss wastage, surface profile and porosity, etc.).

1 unit of 25 kg yields $\sim 12.5 \text{ lt}$ of mortar.

Substrate Quality The substrate must be structurally sound and free of all traces of contaminants,

loose and friable particles, cement laitance, oils and grease etc.

The concrete "pull off" (tensile adhesive) strength must be $> 1.0 \text{ N/mm}^2$.

Substrate Preparation General:

The substrate must be prepared by suitable mechanical preparation techniques

such as high pressure water jetting, needle guns, blast cleaning, scabblers etc.

and properly pre-wetted to a saturated surface dry condition.

For pore / blowhole filling:

Blast clean to remove all contaminants including from within the pores / blowholes.

As a levelling mortar:

Prepare and clean all surfaces by suitable mechanical means such as abrasive

blast cleaning or equivalent to ensure cement laitance, surface contamination

and all existing coatings are removed and all blowholes and honeycombed

PRODUCT DATA

Form Brush or trowel able mortar.

Appearance /Colors

Part A: white liquid

Part B: grey or white powder

Mixed product: cement grey or off-white

Packaging 25 kg units (20 kg bag and 5 kg pail)

Storage

Storage Conditions/Shelf-Life

6 months from date of production if stored properly in undamaged and unopened original sealed packaging in dry and cool conditions. Liquid component must be protected from frost.

Technical Data

Chemical Base

Part A: liquid polymer and additive

Part B: Portland cement, selected aggregates and admixtures

Density Fresh mortar density: $\sim 2.00 \text{ kg/lt}$

areas are exposed. The resultant surface must be profiled to achieve maximum bond strength.

APPLICATION

Conditions / Limitations

Substrate Temperature +8°C min. / +35°C max.

Ambient Temperature +8°C min. / +35°C max.

Application Instructions

Mixing Used as slurry: A : B = 1 : 4 (parts by weight)

Used as mortar: A : B : 1 : 4.5 (parts by weight)

Mixing Time ~ 3 minutes

Mixing Tools **Rock Proof 777 EL** must be mechanically mixed using a forced action mixer or in a clean drum using a drill and paddle (max. 500 rpm). A normal concrete free fall mixer is NOT suitable.

Application Method /Tools

Shake part A before using it. Pour approximately half of part A into the mixing container and add part B slowly while mixing. Add the remainder of part A and continue mixing until a uniform lump free consistency is achieved. The surface must be pre-wetted to a saturated surface dry condition before application.

As a slurry:

Apply the mixed **Rock Proof 777 EL** either mechanically, by spray or by hand using a stiff brush. Applied in the same direction. Apply the 2nd coat of **Rock Proof 777 EL**, applied by brush in crosswise direction to the first application as soon as the first coat has hardened.

As a mortar:

When **Rock Proof 777 EL** is applied by trowel (e.g. for a smooth surface finish), the product must be mixed with a 10% reduction of part A (~ 1A : 4.5B). Apply the 2nd coat of **Rock Proof 777 EL** as soon as the first coat has hardened. For pore / blowhole filling, tightly trowel into the pores / blowholes of the surface.

Cleaning of Tools Clean all tools and application equipment with clean water immediately after use. Hardened / cured material can only be removed mechanically.

Pot life ~ 30 minutes at +20°C

Waiting Time /

Overcoat ability

Waiting time between coats

+10°C ~ 12 hours

+20°C ~ 6 hours

+30°C ~ 3 hours

If waiting time period exceeds 24 hours, lightly blast clean the surface.

Rock Proof 777 EL can be over painted using solvent based primers or coatings.

Rock Proof 777 EL must cure for a minimum of 7 days before over coating.

Notes on Application / Limitations

Rock Proof 777 EL is not a decorative treatment and may display signs of "blooming" after rain or in damp weather. This does not affect the performance of the coating, in any way.

Where **Rock Proof 777 EL** will be visible after completion of the works, then the off-white colour, which is aesthetically more pleasing, should be used.

Avoid application in direct sun and/or strong wind.

Do not add water in any circumstances. Apply only to sound, prepared substrates. Do not exceed maximum layer thickness.

For waterproofing or damp proofing application, always use at least 2 coats to give a total thickness of between 1.5 to 2.0 mm. In areas of severe water penetration, three coats might be required. Protect freshly applied material from freezing conditions and rain etc.

Rock Proof 777 EL does not provide a trafficable finish. Use Rock 101 Finishing Mortar for trafficked surface.

For waterproofing / damp-proofing works, special attention is required to avoid puncturing the waterproof coating with fixings. These must be accommodated by surface bonding.

When used in contact with drinking structures, ensure that all associated Citychem products and construction materials also comply with the local regulations for drinking water contact.

Curing Details

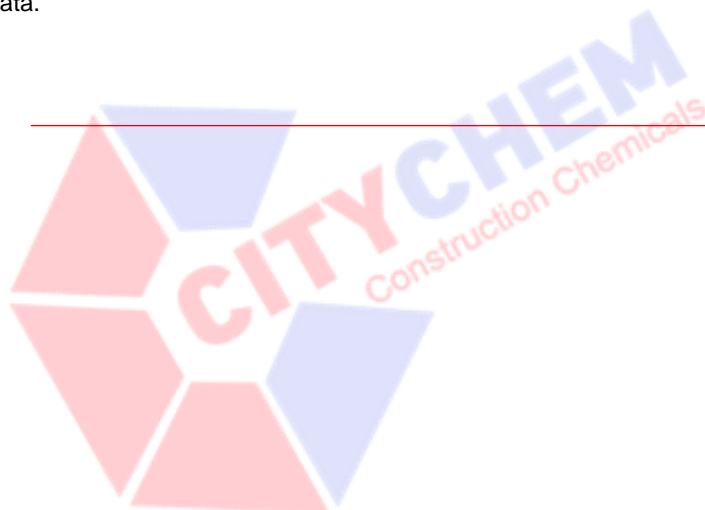
Curing Treatment, it is essential to cure **Rock Proof 777 EL** immediately after application for a minimum of 3 to 5 days to ensure full cement hydration and to minimize cracking. Use polythene sheeting or similar approved methods.

Notes All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Local Restriction Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the product uses.

HEALTH AND SAFETY INFORMATION

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.



Al-Obour Buildings - Salah Salem Road - Nasr City - Cairo - Egypt.
10th Of Ramadan City.



info@CityChem.net



[@City_Chem](https://twitter.com/City_Chem)



[City Chem](https://www.facebook.com/CityChem)



+202 240 456 35



+2010 277 810 11



+2010 672 213 44

The Information Herein is Based on Our Present Knowledge and Experiences. This Information Merely Describes the Properties of Our Products but No Guarantee In the legal Sense Shall Be Implied. We Recommend Testing Our Products As To Their Suitability For Your Envisaged Purpose Prior To Use. No Warranties Of Any Kind, Either Express or Implied Including Warranties of Merchantability or Fitness For a Particular Purpose Are Made Regarding Any Products Mentioned Herein and Data or Information That Such Products, Data or Information May Be Used Without Infringing Intellectual Property Rights of Third Parties. We Reserve The Right To Make Any Changes According To Technological Progress or Further Developments. This Copy Replaces All Previous Versions - Printed in Egypt - 2020.



CONSTRUCTION