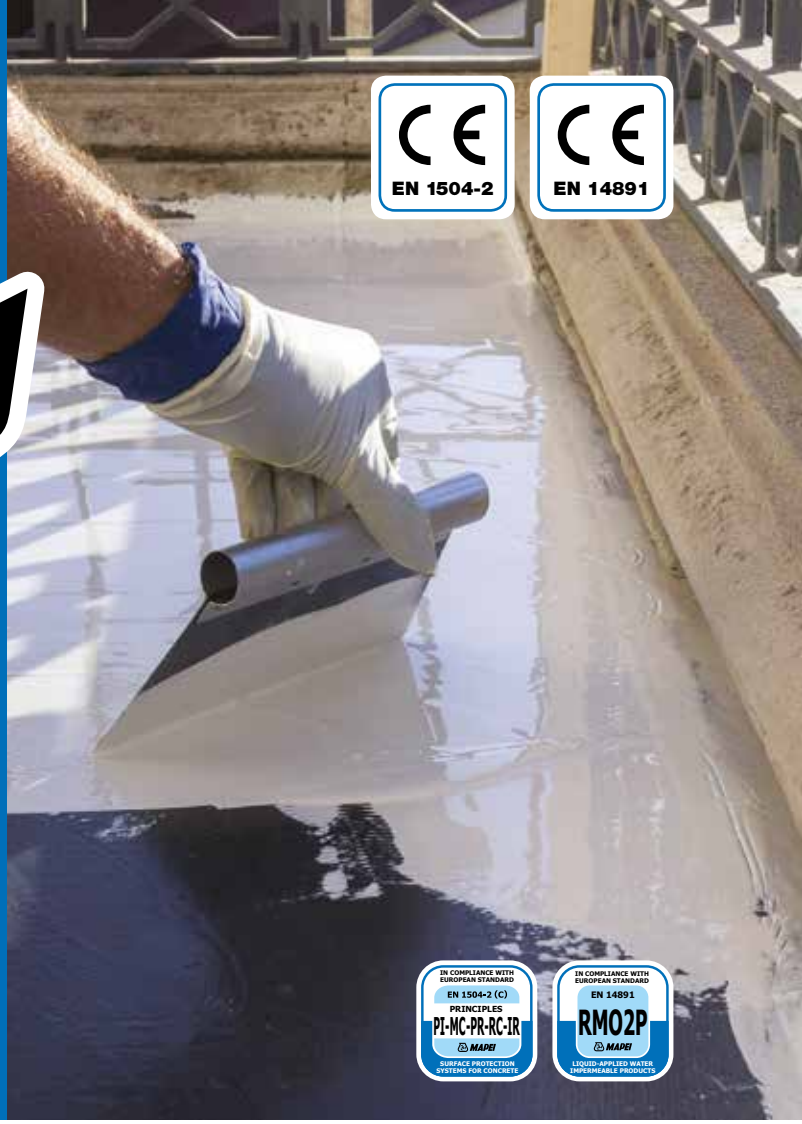
MAPEI

Purtop Easy

One-component elastic polyurethane waterproofing membrane



WHERE TO USE

For waterproofing:

- new roofs and repairs to existing roofs;
- terraces, balconies, walkways and pedestrian areas in general;
- green roofs.

Purtop Easy may be applied on:

- concrete;
- cementitious screeds;
- ceramic;
- fibre-cement boards;
- old bituminous membranes;
- metal.

ADVANTAGES

- **Purtop Easy** forms a highly elastic and durable membrane (**Purtop Easy System Roof** has a certified service life of 25 years according to ETAG 005).
- **Purtop Easy** is a one-component, ready-to-use product and is very easy to apply.
- When **Purtop Easy** is admixed with **Purtop ADY** it may be applied in a single 1.2 mm thick coat and has better mechanical properties and lower drying times.
- **Purtop Easy** maintains its mechanical properties at temperatures down to -40°C.

TECHNICAL CHARACTERISTICS

Purtop Easy is a ready-to-use polyurethane aromatic waterproofing membrane, developed in MAPEI R&D Laboratories.
Once applied, in just a few hours **Purtop Easy** forms a seamless, elastic membrane with no overlaps and excellent crack-bridging properties which is able to withstand normal dynamic stresses acting on structures.
Thanks to the complete range of primers available, **Purtop Easy** adheres perfectly to numerous types of substrate.
Purtop Easy has excellent mechanical characteristics that remain stable over the years, making the product highly durable.
Purtop Easy is easy to apply by trowel or spray on horizontal, vertical and sloping surfaces.

Purtop Easy complies with the principles defined in EN 1504-9 ("*Products and systems for the protection and repair of concrete structures: definitions, requirements, quality control and evaluation of conformity. General principles for the use of products and systems*") and the requirements of EN 1504-2 coating (C) according to principles PI, MC, PR, RC

and IR ("*Surface protection systems for concrete*").

Purtop Easy is a membrane certified for use as a liquid waterproofing system for roofs in compliance with ETAG 005 (refer to the **Purtop Easy System Roof** System data sheet).

RECOMMENDATIONS

- Do not apply **Purtop Easy** if the ambient temperature is lower than +5°C or higher than +35°C or if it is about to rain.
- Do not apply if there is dew on the substrate.
- Do not apply **Purtop Easy** on substrates with rising damp or with more than 4% of residual moisture.
- Do not use on bituminous membranes that have only recently been applied (< 6 months). Always wait until the surface to be treated has completely oxidised.
- **Purtop Easy** is not suitable for surfaces that are continuously immersed.

APPLICATION PROCEDURE

Preparation of the substrate

All substrates, whether new or old, must be solid, clean, dry and free of all traces of oil, grease, old paint, rust, mould and any other material which could affect adhesion.

1. Application on concrete substrates and cementitious screeds

Surfaces must be prepared according to specification by sand-blasting, shot-blasting, scarifying, bush-hammering or other methods, depending on which type of substrate the product is to be applied. Then treat the substrate with a suitable primer as follows.
Hollows, cavities and detached portions in the substrate must be repaired with suitable products from the **Mapegrout** and **Planitop** ranges. Choose the most suitable product according to the thickness to be repaired, the time available and the operating conditions on site.
After preparing the substrate, apply **Primer PU Fast** two-component polyurethane primer, or **Mapecoat I 600 W**, two-component epoxy primer in water dispersion, diluted at a 1 : 1 ratio with water, or **Primer SN** two-component, fillerized epoxy primer and then broadcast the surface while still wet with **Quartz 0.5**.
If the level of residual moisture in the substrate is higher than 4% and it is not possible to wait until it drops to a lower value, apply two or more coats of **Primer EP4 Fast**, two-component epoxy primer, depending on the condition of the substrate, until the pores in the substrate are completely sealed.

2. Application on bituminous membranes

Clean the bituminous membrane to remove all traces of oil, grease, dirt in general and any other material which could affect adhesion of the primer, and remove all traces of dust with a vacuum cleaner or compressed air. The membrane must be perfectly dry before inspecting the surface and any damage in the membrane, such as blistering, tears or detached areas, must be repaired before applying the primer.
Apply **Mapecoat I 600 W** two-component, water-based epoxy primer, diluted at a 1 : 1 ratio with water, on all the horizontal surfaces and vertical hems with a roller or airless spray.

3. Application on metal surfaces

Check the state of the substrate and dry sand-blast the surface to grade SA 2½ (according to Swedish Standards).
If it is not possible to dry sand-blast the substrate, prepare the surface using an alternative method, such as with a scrubbing-action or percussion-action cleaning machine.
Once the metal surfaces have been prepared as specified, apply **Primer EP 100W** two-component, water-based epoxy primer with a roller, brush or by airless spray, or alternatively **Mapedeck Primer 200** adhesion promoter for polyurethane systems, with a roller.

4. Application on old ceramic floors

Old floors in ceramic, porcelain, clinker, terracotta, etc. must be well bonded to the substrate and must be completely free of any substances which could affect adhesion, such as grease, oil, wax, paint, etc. Prepare the surface with suitable tools and/or by sanding to remove traces of material that could affect adhesion of **Purtop Easy**.
Make sure the existing flooring is well bonded to the substrate and remove any areas that have become detached. Fill these areas and any empty grout lines with **Adesilex P4** cementitious skimming compound.
Prepare the surface as specified, apply **Primer SN** two-component, fillerized epoxy primer with a trowel or by spray and broadcast the surface while still wet with **Quartz 0.5**.

Before applying **Purtop Easy**, pay particular attention to the expansion joints, fillets between horizontal and vertical surfaces, which must be suitable treated.
In case of fillet joints between horizontal and vertical surfaces, it is recommended to form a fillet with **Planitop Fast 330**, quick-setting cementitious mortar, or mixing **Primer SN** at a ratio of 1 : 7/1 : 10 with **Quartz 1.9**.
Structural joints have to be previously waterproofed with **Mapeband TPE** bonded

Purtop Easy: ***one-component polyurethane membrane for waterproofing terraces and roofs, in compliance with the requirements of EN 14891 and EN 1504-2 coating (C) principles PI, MC, PR, RC and IR***

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	
Consistency:	thick liquid
Colour:	white, grey
Density (g/cm³):	1.4
Dry solids content (%):	82
Brookfield viscosity (mPa·s):	3,000 (rotor 5 - 50 RPM)
APPLICATION DATA	
Application temperature:	+5°C to +35°C
Service temperature:	-40°C to +80°C
Waiting time from application to putting into service at +23°C and 50% R.H. (hours):	24
MECHANICAL CHARACTERISTICS	
Elongation at failure (ISO 37) (%):	> 400
Tensile strength (ISO 37) (N/mm²):	≥ 2 (≥ 4 with **Purtop ADY**)
Tear strength (ISO 34-1) (N/mm):	> 15
Shore A hardness (DIN 53505):	50

FINAL PERFORMANCE DATA (1.2 mm thickness)

Performance characteristics	Test method	Requirements according to EN 1504-2	Performance of product (mixed with Purtop ADY)
Permeability to water vapour:	EN ISO 7783-2	Class I s_D < 5 m Class II 5 m ≤ s_D ≤ 50 m Class III s_D > 50 m	Class I (average s_D = 3 m)
Capillary absorption and permeability to water:	EN 1062-3	w < 0.1 kg/m²·h$^{0.5}$	average w = 0.01 kg/m²·h$^{0.5}$
Permeability to CO_2:	EN 1062-6	s_D > 50 m	s_D = 111 m
Direct traction adherence test:	EN 1542	***Flexible systems*** with no traffic: ≥ 0.8 N/mm² with traffic: ≥ 1.5 N/mm²	1.8 N/mm²
Static crack-bridging at -10°C expressed as maximum width of cracking:	EN 1062-7	from class A1 (> 0.1 mm) to class A5 (> 2.5 mm)	Class A4
Dynamic crack-bridging at +23°C:	EN 1062-7	from class B1 to class B4.2	Class B3.2
Impact strength:	EN ISO 6272-1	No cracks or delamination after loading Class I: ≥ 4 Nm Class II: ≥ 10 Nm Class III: ≥ 20 Nm	Class I
Resistance to thermal shock (1x):	EN 13687-5	After thermal cycles a) no swelling, cracking or delamination b) average direct traction adherence test (N/mm²) ***Flexible systems*** with no traffic: ≥ 0.8 N/mm² with traffic: ≥ 1.5 N/mm²	1.6 N/mm²
Abrasion resistance (Taber test):	EN ISO 5470-1	Loss in weight less than 3000 mg with H22 abrasive disk/1,000 cycles/1,000 g load	loss in weight < 2000 mg
Exposure to artificial atmospheric agents:	EN 1062-11	After 2,000 hours of artificial inclement weather: no swelling according to EN ISO 4628-2 no cracking according to EN ISO 4628-4 no flaking according to EN ISO 4628-5 Slight colour variations, loss of brightness and crumbling may be acceptable	no swelling, cracking or flaking (colour change)
Resistance to severe chemical attack:	EN 13529	Reduction of hardness less than 50% when measured according to the Shore method (EN ISO 868), 24 hours after removing the coating material from immersion in the test liquid Class I: 3 days with no pressure Class II: 28 days with no pressure Class III: 28 days with pressure	NaCl 20%: class II CH_3COOH 10%: class II H_2SO_4 20%: class II KOH 20%: class II
Reaction to fire:	EN 13501-1	Euroclass	E

Performance characteristics	Test method	Requirements according to EN 14891	Performance of product (mixed with Purtop ADY)
Impermeability to water in pressure (1.5 bar for 7 days of positive side):	EN 14891-A.7	no penetration	no penetration
Crack-bridging ability at +23°C (mm):	EN 14891-A.8.2	≥ 0.75	5
Crack-bridging ability at -20°C (mm):	EN 14891-A.8.3	≥ 0.75	4
Initial adhesion (N/mm^2):	EN 14891-A.6.2	≥ 0.5	> 0.80
Adhesion after immersion in water (N/mm^2):	EN 14891-A.6.3	≥ 0.5	≥ 0.50
Adhesion after application of heat source (N/mm^2):	EN 14891-A.6.5	≥ 0.5	> 1.00
Adhesion after freeze-thaw cycles (N/mm^2):	EN 14891-A.6.6	≥ 0.5	> 0.70
Adhesion after immersion in basic water (N/mm^2):	EN 14891-A.6.9	≥ 0.5	> 0.60
Adhesion after immersion in chlorinated water (N/mm^2):	EN 14891-A.6.8	≥ 0.5	> 0.55
FINAL PERFORMANCE			
Resistance to root penetration (EN 13948):	no penetration		

*Adhesion values according to EN 14891 determined with **Purtop Easy** and C2S2 type cementitious adhesive in accordance to EN 12004*

to the substrate with **Adesilex PG4** epoxy resin (then, when applying the **Purtop Easy** membrane, it is necessary to fix it on the sides of the tape, on **Adesilex PG4**, and avoid it gets in contact with the grey rubber part). Upon completion of the works, these joints must be protected with a suitable metal flashing.

Preparation of the product
Purtop Easy is a one-component, ready-to-use product but it is recommended to mix it before use to make sure it is perfectly blended.

If you decide to apply the product in a single coat it must be admixed with **Purtop ADY**, which is available in pre-dosed packs according to the various sizes of **Purtop Easy**.

Application of the product
After carefully preparing and priming the substrate, apply **Purtop Easy** starting from the fillet joints between horizontal and vertical surfaces. It is recommended to locally strengthen the membrane on fillet joints with a strip of **Mapetex FG** glass fibre reinforcing mesh approximately 20 cm wide. The temperature of the substrate must be at least 3°C above dew-point and the level of residual moisture must be no higher than 4%.
Apply at least two even coats of **Purtop Easy** with a trowel or by spray to form a total thickness higher than 1.2 mm.

If **Purtop Easy** has been admixed with **Purtop ADY**, a 1.2 mm thick layer may be applied in a single coat.

When the product is applied in two coats, it is possible to lay **Mapetex FG**, glass fibre reinforcing mesh, on the first coat while it is still wet. Wait until the first coat is completely dry before applying the second coat.

If application of **Purtop Easy** is interrupted and then taken up again after the maximum recoat time (24-48 hours), apply a coat of **Primer PU 60** and form an overlap at least 30 cm wide.

When applying **Purtop Easy** on vertical hems or on surfaces in general with a slope of more than 1.5%, it must be admixed with up to 3.6% in weight of **Additix P** thixotropising agent.

Purtop Easy may also be applied by airless spray if it hasn't been admixed with **Purtop ADY** or **Additix P**. When applying **Purtop Easy** by spray it must be diluted with 5-10% of **Thinner PU**.

Finishing off the membrane
If a non-slip finish or coloured finish that remains stable over time is required, coat **Purtop Easy** within 24-48 hours of application with **Mapecoat PU 20N** two-component, aliphatic polyurethane finish, to be applied in at least two coats. If a

finish is not applied over the membrane, it may lose its colour or flake slightly.
If installation of a ceramic covering on **Purtop Easy** is required, use **Keralastic** epoxy-polyurethane adhesive, **Kerapoxy Adhesive** epoxy adhesive or, as an alternative, **Kerabond** cementitious adhesive mixed with neat **Isolastic**.
When using **Kerabond** cementitous adhesive, spread on the dry 1.2 mm thick **Purtop Easy** membrane a further thin layer of the same **Purtop Easy** and broadcast it with **Quartz 0.5** sand while still fresh.

Cleaning
It is recommended to clean tools with thinner before the product starts to set. Once hardened, cleaning is much more difficult and must be carried out mechanically.

CONSUMPTION
2 kg/m^2 corresponds to a dry coat around 1.2 mm thick.
In general, the consumption rates below are for a seamless film on a flat surface and will be higher on uneven substrates.

PACKAGING
6, 15 and 25 kg drums.

STORAGE
Purtop Easy may be stored for 12 months in its original packaging in a dry, covered area at a temperature of between +5°C and +35°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION
Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.com.

PRODUCT FOR PROFESSIONAL USE.

WARNING
Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

LEGAL NOTICE

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

Purtop Easy

7482-3-2021 (GB)

MAPEI®

BUILDING THE FUTURE