



MAPEI QUALITY CHEMICAL ANCHORS

Mapei's experience in the building and construction field has been applied to the chemical anchors sector, with a range of products that are simple to choose and employ. They have such a high level of hold and reliability that they are a better option compared with mechanical fastening systems.

With the products on offer from the **Mapefix range**, Mapei highlights once again their vocation for producing only the highest quality products with total reliability in their results; safe, versatile, efficient solutions for all your anchoring needs during both the design phase and on site.





FOR EVERY
TYPE OF LOAD



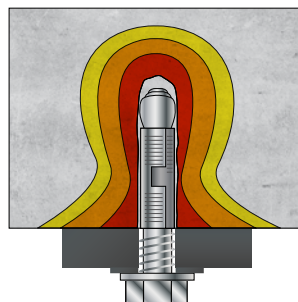
ADVANTAGES THROUGHOUT THE ENTIRE RANGE

Mechanical fastening systems used in the building industry generally consist of a threaded component inside a cylindrical body with moving parts. When the threaded part is turned it causes the moving parts in the cylindrical body to expand and, through the friction generated, prevent the fastener from slipping. Loads on the substrate, therefore, are localised and irregular.

Chemical anchors, on the other hand, allow for a more even distribution of loads along the whole surface of the wall of the hole, which means the pitch between each anchor, the depth of each hole and the distance of anchors from edges may all be reduced, highly beneficial in terms of improved performance and reliability over the years. Also, since chemical anchors are compatible with every type of substrate and drilling method used, they simplify site logistics.

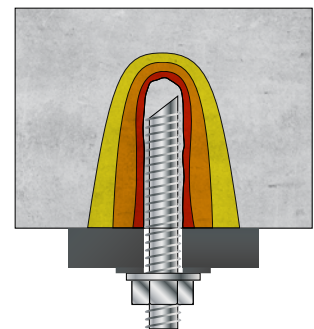


MECHANICAL FASTENER



UNEVEN SPOT LOADING

CHEMICAL ANCHOR



EVEN LOAD DISTRIBUTION

THE IDEAL SOLUTION FOR ALL YOUR ANCHORING NEEDS

With just five products the **Mapefix** line offers all the best solutions for all your anchoring needs: from light loads right up to the most demanding structural requirements.



300 ml

380 ml

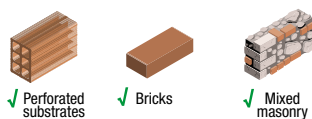
MAX
2.1 kN
M12

Mapefix PE Wall

Polyester resin

CHEMICAL ANCHOR FOR MASONRY

ideal for anchors in brickwork, stone masonry, mixed masonry, solid and perforated blocks and reinforced render



✓ Perforated substrates

✓ Bricks

✓ Mixed masonry



MB + M12



300 ml

420 ml

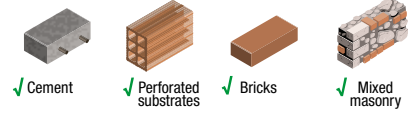
MAX
52.2 kN
M24

Mapefix PE SF

Polyester resin

CHEMICAL ANCHOR FOR CONCRETE AND MASONRY

ideal for anchors in compressed zones (concrete without cracks), rough holes (hammer-drilled), or in dry or damp holes



✓ Cement

✓ Perforated substrates

✓ Bricks

✓ Mixed masonry



MB + M24





LIGHT LOADS HEAVY LOADS STRUCTURAL LOADS STRUCTURAL LOADS STRUCTURAL LOADS



MAX
88.9 kN
M30
Ø 32

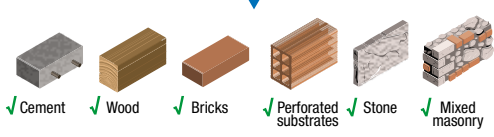
300 ml 420 ml 825 ml

Mapefix VE SF

Vinylester resin

CHEMICAL ANCHORS FOR ALL TYPES OF MATERIAL

ideal for anchors in C1 seismic areas, tension zones (cracked concrete), compressed zones (concrete without cracks), second pours, rough holes (hammer-drilled), and in dry, damp or wet holes



MAX
80.5 kN
M30
Ø 32

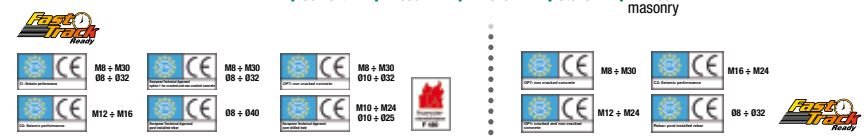
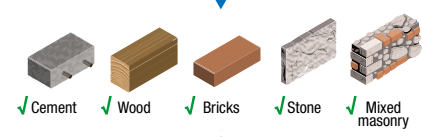
385 ml 585 ml

Mapefix EP

Epoxy resin

CHEMICAL ANCHORS FOR ALL TYPES OF MATERIAL

ideal for anchors in C2 seismic areas, tension zones (cracked concrete), compressed zones (concrete without cracks), second pours, rough holes (hammer-drilled), smooth holes (core-drilled), and in dry, damp, wet or flooded holes



Mapefix EP 470 Seismic



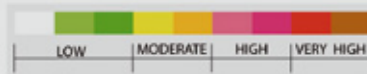
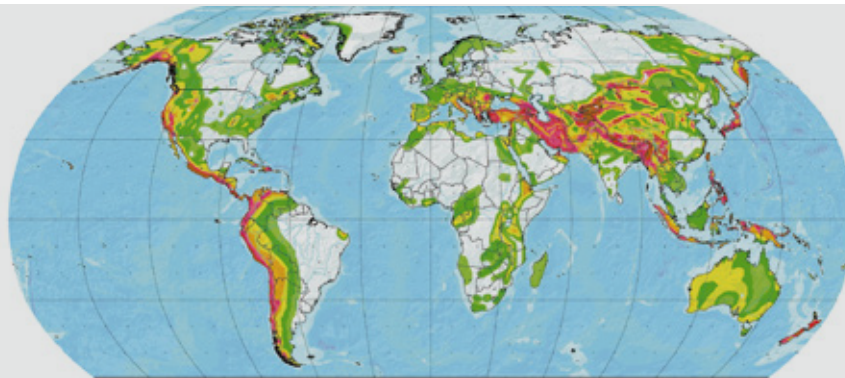
MAX
106.6 kN
M30

470 ml

PRODUCTS CERTIFIED ACCORDING TO EOTA FOR STATIC AND DYNAMIC LOADS



Apart from complying with the requirements of Eurocode standards, the Technical Reports issued by EOTA (European Organisation of Technical Assessment), which have the most severe guidelines in the anchoring sector (ETAG 001, TR029, TR023 and ETAG 029), are testimony of the superior reliability of the **Mapefix** range of products. The parameters for chemical anchors used by EOTA take into consideration not only static loads, but also dynamic loads, particularly loads generated by seismic activity (ETAG 001 and TR 45).



MAPEFIX OFFERS TOTAL ANTI-SEISMIC SECURITY

Seismic phenomena affects large areas of the world. Since 2013 EOTA, through the specific Euronorm ETAG 001 - TR 045, has set a calculation protocol and test methods for the design of anchors in seismic areas. The products from the **Mapefix** range allow you to choose the most appropriate solution according to the seismic risk of a specific area, the characteristics of the building and the type of anchor and loads.



EU approvals		Mapefix PE Wall	Mapefix PE SF	Mapefix VE SF	Mapefix EP	Mapefix EP 470 Seismic
anchoring rebar for second pours	ETA rebar accordingly to TR 023	no	no	yes	yes	yes
threaded rods in tensile area or cracked concrete	ETA option 1 accordingly to TR 029	no	no	yes	yes	yes
threaded rods in compressive area or uncracked concrete	ETA option 7 accordingly to TR 029	no	yes	yes	yes	yes
anchoring rebar in smooth core-drilled holes	ETA core drill accordingly to TR 029	no	no	no	yes	no
masonry	ETA masonry accordingly to ETAG 029	yes	no	no	no	no
metallic rod in low seismic areas C1	ETA option 1, accordingly to TR 029 and TR 45	no	no	yes	yes	yes
metallic rod in high seismic areas C2	ETA option 1, accordingly to TR 029 and TR 45	no	no	no	yes	yes

classification of buildings according to strategic importance							
public		private					
		residential		commercial		industrial and manufacturing	
hospitals	cat. IV	private homes	cat. II	hotels	cat. III	power stations	cat. III to IV
government buildings	cat. IV	apartment blocks	cat. II	shopping centres	cat. III	activities with a high impact on the environment	cat. III to IV
emergency services	cat. IV	rural	cat. I	offices	cat. III	petrochemical	cat. III
airports	cat. IV					activities with a low impact on the environment	cat. II
schools	cat. III						cat. I
infrastructures	cat. II to IV						

seismic certification for chemical anchors						
ground loads	intensity of seismic activity	non-structural anchors			structural anchors	
		cat. I buildings	cat. II and III buildings	cat. IV buildings	cat. I buildings	cat. II, III and IV buildings
< 0.05 g	low	NO	NO	NO	NO	NO
0.05 to 0,1 g	medium		C1	C2		C2
> 0.1 g	high		C2			

C1 seismic classification: **Mapefix VE SF, Mapefix EP, Mapefix EP 470 Seismic**

C2 seismic classification: **Mapefix EP, Mapefix EP 470 Seismic**



TABLE OF USE

		Mapefix PE Wall	Mapefix PE SF	Mapefix VE SF	Mapefix EP	Mapefix EP 470 Seismic
		POLYESTER	POLYESTER	VINYLESTER	EPOXY	EPOXY
metallic rods	threaded	yes	yes	yes	yes	yes
	rebar	no [°]	yes [°]	yes	yes	yes
substrates	concrete	yes [°]	yes	yes	yes	yes
	compact masonry	yes	yes	yes	yes	yes
	hollow masonry	yes	yes	yes	yes	yes
	wood	no	no	yes	yes	yes
type of loads	static	yes	yes	yes	yes	yes
	dynamic	no	no	yes	yes	yes
	seismic C1	no	no	yes	yes	yes
	seismic C2	no	no	no	yes	yes
place of holes	tensile area	no	no	yes	yes	yes
	in compressed zones	yes	yes	yes	yes	yes
drilling methods	core drill	no	no	no	yes	yes [°]
	rotary hammer drill	yes	yes	yes	yes	yes
hole conditions	dry	yes	yes	yes	yes	yes
	damp	no	yes	yes	yes	yes
	wet	no	no	yes	yes	yes
	flooded	no	no	no	yes	yes

[°] = may be adopted but not certified according to ETA guidelines



ANCHORING ACCESSORIES FOR MORE PRACTICAL OPERATIONS

To help make anchoring operations even simpler, quicker and safer, Mapei has developed a series of specific accessory items: **tools, instruments and complementary materials**.

Their use helps optimise application procedures and prevents wasting products, even in the most demanding situations and site conditions.



SUPPORT & TOOLS FOR DESIGNERS AND CONTRACTORS

Technicians and designers can now count on a tool that can be downloaded free of charge from our website www.mapei.it:

Mapefix Software Design.

A specific technical software package developed in compliance with current European standards to help calculate the correct dimensions of an anchor using resins from the **Mapefix** range. Mapei Technical Services Department also provides a personalised technical consultancy service to assist designers and contractors and meet their specific anchoring needs.





● **Technical documentation**

From the technical area menu you can view the technical documentation divided per product lines and type of document.

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