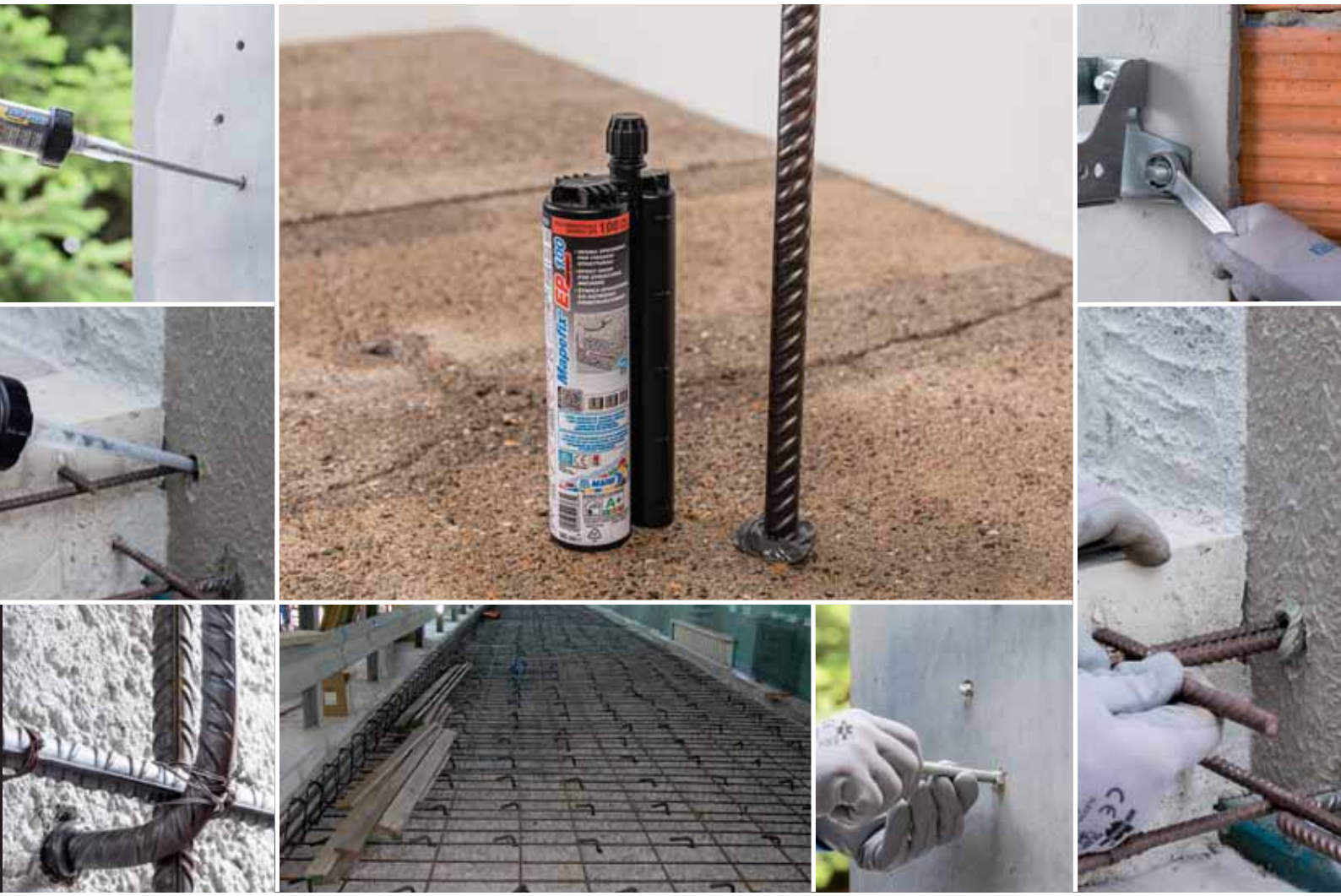
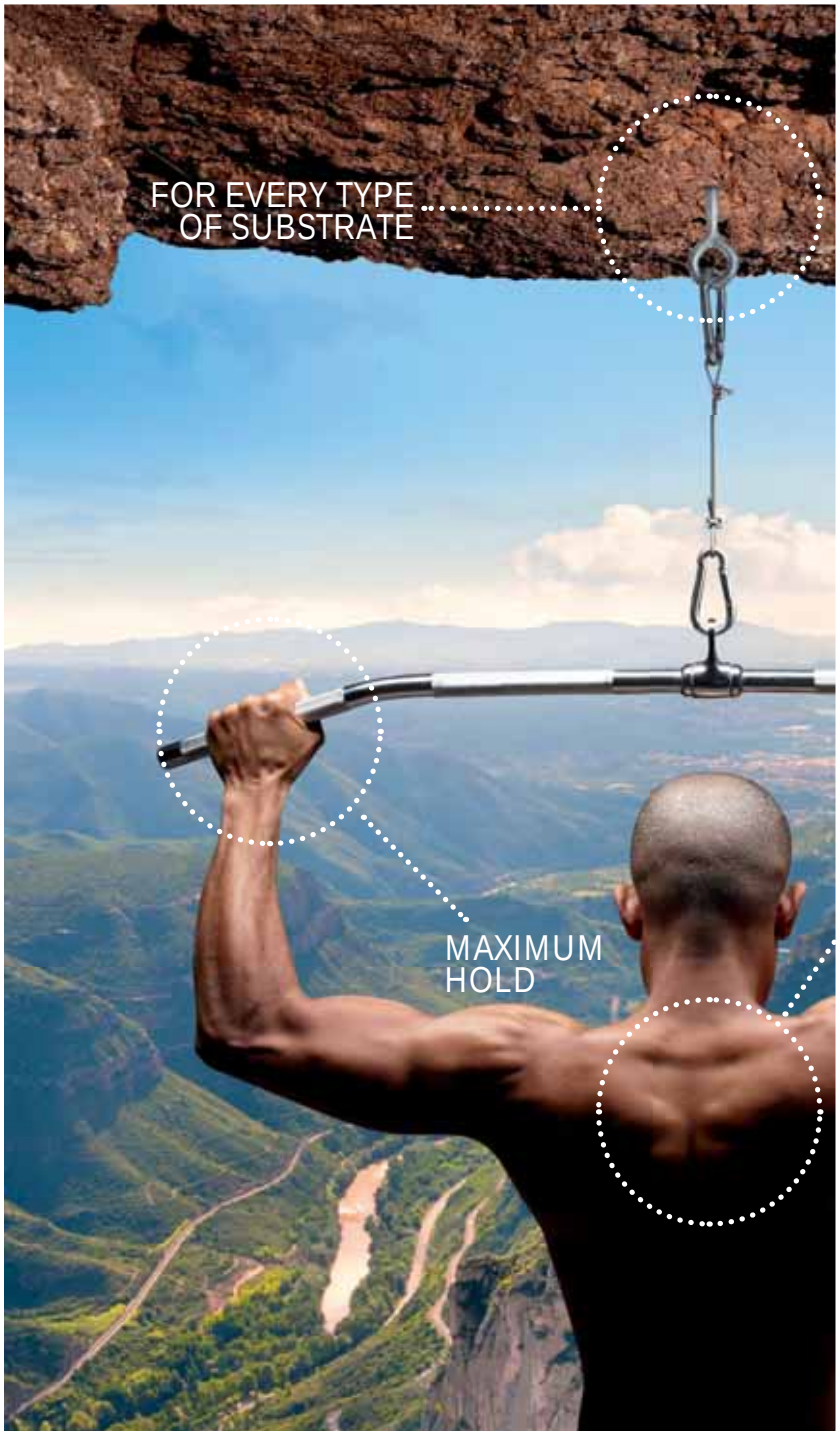
SELECTION CHART OF PRODUCTS FOR CHEMICAL ANCHORS

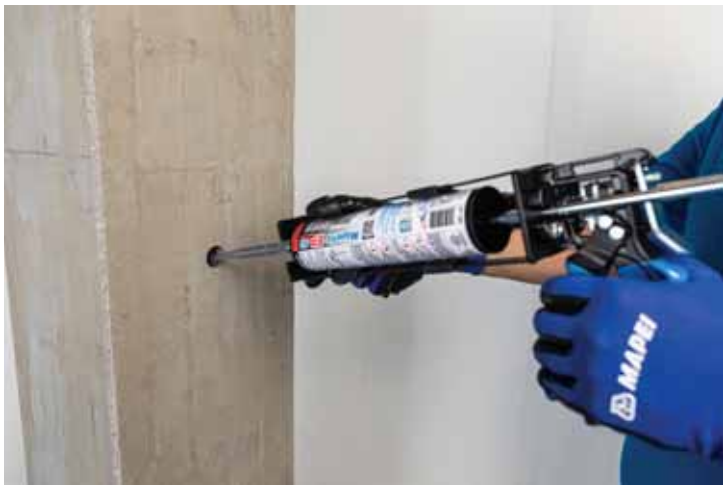


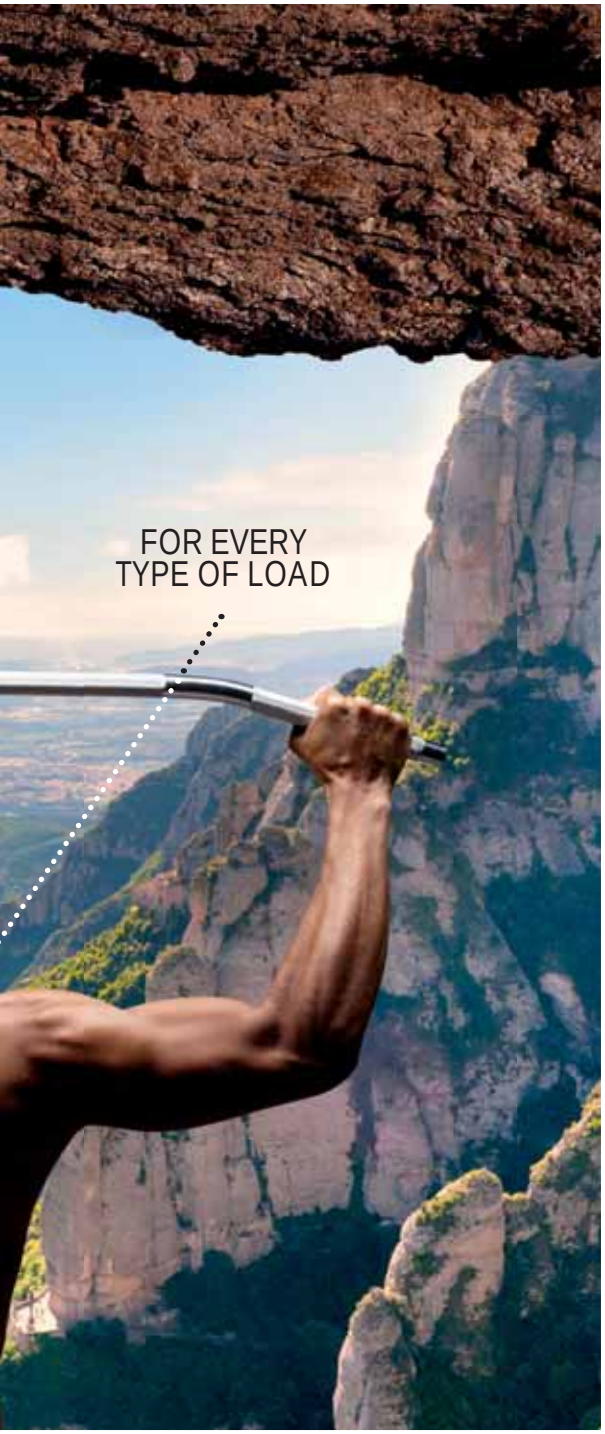
MAPEI QUALITY **CHEMICAL ANCHORS**

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.







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 reduce, highly beneficial in terms of improved performance and reliability over the years.

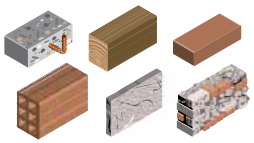
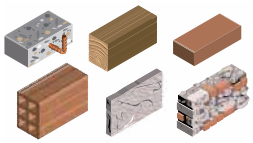
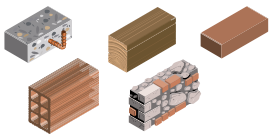
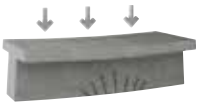
Also, since chemical anchors are compatible with every type of substrate and drilling method used, they simplify site logistics.

CHEMICAL ANCHORS

EVEN LOAD DISTRIBUTION

MECHANICAL FASTENER

CONCENTRATED LOAD

	Mapefix PolyBond	Mapefix PE SF	Mapefix VinyBond
SUBSTRATES			
PERFORATION METHOD			
STATE OF THE HOLE			
BARS			
DIAMETER OF CERTIFIED BARS	• **NON CRACKED CONCRETE** M8-M24	• **NON CRACKED CONCRETE** M8-M24 • **MASONRY** M8-M16	• **NON CRACKED CONCRETE** M8-M30, Ø8-Ø32 • **CRACKED CONCRETE** M8-M30, Ø8-Ø32, IG M6-M20 • **COLD JOINTS** Ø8-Ø32, M12-M24 ZA
SERVICE LIFE OF PROJECT	**50 years**	**50 years**	**50 years**
HOLE POSITION	 COMPRESSED AREA	 COMPRESSED AREA	 COMPRESSED AREA  TENSE AREA
APPLICATION TEMPERATURE (MIN/MAX)	0/+35°C	-5/+35°C	-10/+35°C
WAITING TIME (MIN./MAX)	20'/3 h	20'/6 h	15'/7 h
SERVICE TEMPERATURE	-40/+80°C	-40/+80°C	-40/+120°C
FIRE RESISTANCE			
LEED POINTS			

THE IDEAL SOLUTION FOR ALL YOUR **ANCHORING NEEDS**

The **Mapefix** range offers all the best solutions for all your anchoring needs: from light loads right up to the most demanding structural requirements.

HEAVY LOADS
FOR CONCRETE AND MASONRY

300 ml 420 ml

Mapefix PolyBond

POLYESTER RESIN

Ideal for anchors in non-cracked concrete, also suitable for masonry and damp holes

ETA CE
OP7: non cracked concrete

M8-M24

HEAVY LOADS
FOR CONCRETE AND MASONRY

300 ml 420 ml

Mapefix PE SF

SOLVENT-FREE POLYESTER RESIN

Ideal for anchors in masonry and non cracked concrete, also in damp holes

European Technical Approval ETAG 029 — M8-M16

OP7: non cracked concrete — M8-M24

STRUCTURAL LOADS
FOR CONCRETE AND MASONRY

300 ml 420 ml

Mapefix VinyBond

SOLVENT-FREE VINYLESTER RESIN

Ideal for anchors in cracked or non-cracked concrete, cold joints, also in wet holes

Rebar: post installed rebar — Ø8-Ø32 M12-M24 ZA

OP7: non cracked concrete — M8-M30 Ø8-Ø32 IG M6-M20

OP1: cracked and non cracked concrete — M8-M30 Ø8-Ø32

STRUCTURAL LOADS
FOR ALL TYPES OF MATERIAL

300 ml 420 ml 825 ml

Mapefix VE SF

SOLVENT-FREE VINYLESTER RESIN

ideal for anchors in cracked or non-cracked concrete, cold joints, seismic areas (C1 class), also in flooded holes

Rebar: post installed rebar — Ø8-Ø32, M12-M24 ZA

OP7: non cracked concrete — M8-M30, Ø8-Ø32

C1: Seismic performance — M8-M30, Ø8-Ø32

OP1: cracked and non cracked concrete — M8-M30, Ø8-Ø32

STRUCTURAL LOADS
FOR ALL TYPES OF MATERIAL

420 ml

Mapefix UM-H

URETHANE-METHACRYLATE HYBRID RESIN

ideal for anchors in cracked or non-cracked concrete, cold joints, seismic areas, (C1 and C2 class), also in flooded holes, even with high service temperatures

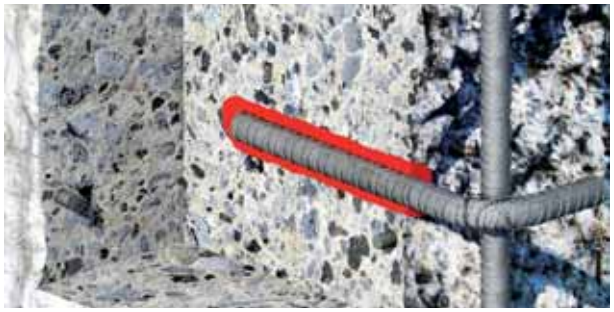
Rebar: post installed rebar — Ø8-Ø32, M12-M24 ZA

C2: Seismic performance — M12-M24

OP7: non cracked concrete — M8-M30, Ø8-Ø32, IG M6-M20

C1: Seismic performance — M8-M30, Ø8-Ø32

OP1: cracked and non cracked concrete — M8-M30, Ø8-Ø32, IG M6-M20



STRUCTURAL LOADS
FOR ALL TYPES OF MATERIAL

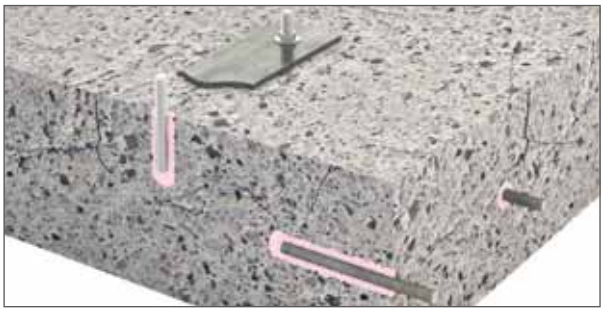
585 ml

Mapefix EP 50

PURE SOLVENT-FREE EPOXY RESIN

ideal for anchors in cracked or non-cracked concrete, cold joints, smooth or rough and in flooded holes

Rebar: post installed rebar	Ø8-Ø40
OP7: non cracked concrete	M8-M30 Ø8-Ø32
OP1: cracked and non cracked concrete	M8-M30 Ø8-Ø32



STRUCTURAL LOADS
FOR ALL TYPES OF MATERIAL

SEISMIC

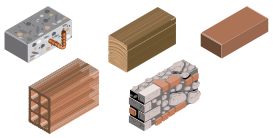
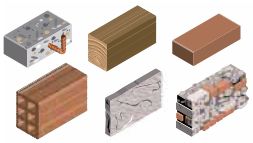
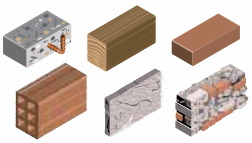
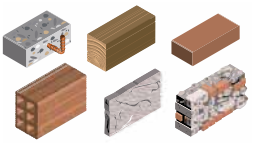
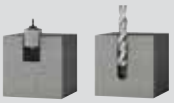
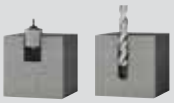
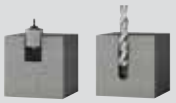
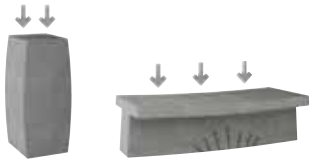
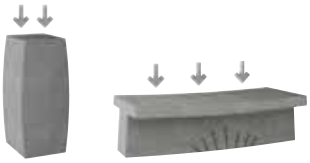
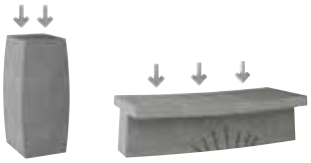
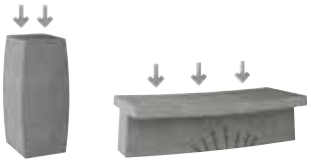
585 ml

Mapefix EP 100

PURE SOLVENT-FREE EPOXY RESIN

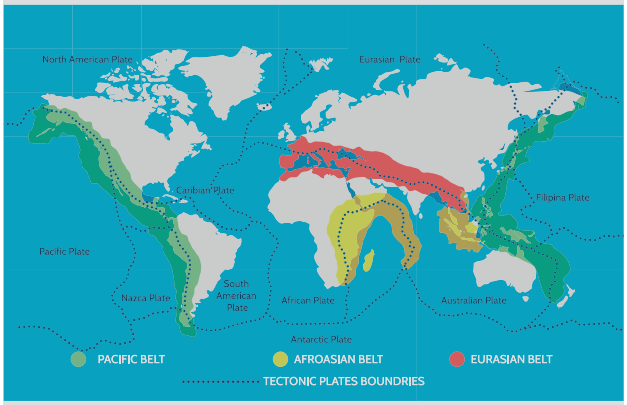
ideal for anchors in cracked or non-cracked concrete, cold joints, seismic areas, (C1 and C2 class) smooth or rough and in flooded holes

Rebar: post installed rebar	Ø8-Ø40
OP7: non cracked concrete	M8-M30 Ø8-Ø32
OP1: cracked and non cracked concrete	M8-M30 Ø8-Ø32
C2: Seismic performance	M12-M24
C1: Seismic performance	M8-M30 Ø8-Ø32

Mapefix VE SF	Mapefix UM-H	Mapefix EP 50	Mapefix EP 100
			
			
			
			
• **NON CRACKED CONCRETE** M8-M30, Ø8-Ø32 • **CRACKED CONCRETE** M8-M30, Ø8-Ø32 • **COLD JOINTS** Ø8-Ø32, M12-M24 ZA • **ANTISEISMIC C1** M8-M30, Ø8-Ø32	• **NON CRACKED CONCRETE** M8-M30, Ø8-Ø32, IG M6-M20 • **CRACKED CONCRETE** M8-M30, Ø8-Ø32, IG M6-M20 • **COLD JOINTS** Ø8-Ø32 • **ANTISEISMIC C1** M8-M30, Ø8-Ø32 • **ANTISEISMIC C2** M12-M24	• **NON CRACKED CONCRETE** M8-M30, Ø8-Ø32 • **CRACKED CONCRETE** M8-M30, Ø8-Ø32 • **COLD JOINTS** Ø8- Ø40	• **NON CRACKED CONCRETE** M8-M30, Ø8-Ø32 • **CRACKED CONCRETE** M8-M30, Ø8-Ø32 • **COLD JOINTS** Ø8-Ø40, M12-M24 ZA • **ANTISEISMIC C1** M8-M30, Ø8-Ø32 • **ANTISEISMIC C2** M12-M24
50 years	**100 years**	**50 years**	**100 years**
 COMPRESSED AREA TENSE AREA	 COMPRESSED AREA TENSE AREA	 COMPRESSED AREA TENSE AREA	 COMPRESSED AREA TENSE AREA
-10/+35°C	0/+40°C	+5/+40°C	0/+40°C
15'/24 h	30'/5 h	4 h/60 h	4 h/144 h
-40/+120°C	-40/+160°C	-40/+70°C	-40/+72°C

PRODUCTS CERTIFIED ACCORDING TO EOTA FOR STATIC, DYNAMIC AND SEISMIC LOADS

ETA system certifications, emitted by independent entities recognised by EOTA (European Organisation of Technical Assessment), are the best guarantee for the reliability and reproducibility of all **Mapefix** chemical anchors performances.
ETA certifications guarantee that all performances among substrate/chemical anchor and metal bar are certain, replicable and verifiable, because they have been obtained according to EAD specifications (European Assessment Document) for static, dynamic, seismic and fire loads.



MAPEFIX **MEANS TOTAL ANTI-SEISMIC SECURITY**

Earthquakes are the consequences of continuous movement of the tectonic plates composing Earth's crust. Said movement causes friction and releases energy manifesting in natural phenomena such as earthquakes. Design criteria for buildings in seismic areas, defined in Europe by EN 1992-4:2018 (part of Eurocode 2), require the use of chemical anchor that are certified for seismic classes C1 and C2.

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 peak acceleration	intensity of seismic activity	non-structural anchors			structural anchors	
		cat. I buildings	cat.I and II 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 UM-H**, **Mapefix EP 100**
C2 seismic classification: **Mapefix UM-H**, **Mapefix EP 100**

SUPPORT AND TOOLS FOR DESIGNERS AND CONTRACTORS

Technicians and designers can now count on a tool that can be downloaded from our website *www.mapei.com*: **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 form the **Mapefix** range. Furthermore, Mapei Technical Services Department provides a personalised technical consultancy service to assist designers and contractors and meet their specific anchoring needs.

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.

EVERYTHING'S OK, WITH MAPEI

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