

MasterCrete ANC 932

A high-performance chemical anchor based on pure epoxy resin, designed for structural anchoring and applications in seismic zones requiring performance in categories C1 and C2.

Material description

MasterCrete ANC 932 is a two-component, styrene-free chemical anchor based on pure epoxy resin, with a 1:1 mixing ratio, supplied in cartridges.

The product offers high performance for the structural anchoring of threaded bars and reinforcing bars in concrete and masonry substrates; it meets the performance requirements of categories C1 and C2 for use in seismic zones on cracked and uncracked concrete in both dry and damp conditions.

Main uses

The two-component epoxy anchor **MasterCrete ANC 932** enables high-performance anchoring of threaded bars and structural reinforcement bars.

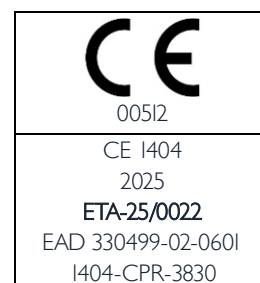
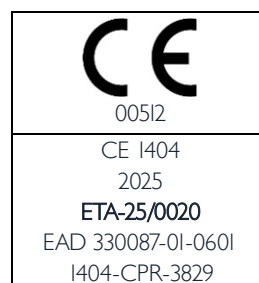
Some examples of application are:

- anchoring of bars with improved grip and threaded bars in concrete, reinforced concrete and masonry substrates;
- vertical and horizontal anchoring, for both indoor and outdoor applications;
- anchoring of metal structures and fixing of non-structural elements where high performance is required for safety reasons.

Features

- High adhesion performance on a variety of substrates and under various conditions.
- Rapid development of resistance.
- Extended opening hours.
- Excellent adhesion in structural anchoring applications: under static, dynamic and low, long-term loads (fatigue).
- Quick and easy application thanks to the mechanical mixing system built directly into the nozzle. The product can be applied using a manual, cordless or pneumatic gun.
- Thixotropic consistency for easy application vertically and overhead.
- It does not contain any solvents.
- It is not flammable.
- The product can also be applied to damp surfaces.
- ETA certificate for anchors in cracked and non-cracked concrete with performance classes C1 and C2.

- ETA certificate for post-installed anchors.
- Fire-resistant.
- Low VOC emissions: **Class A+**.



Consumption

Approximately 1.5 kg of product per litre of fluid mixture.

The number of cartridges used will depend on the volume to be filled.

For each anchor to be installed, it is recommended that the borehole be filled to 3/5 of its total volume.

Packaging and storage

MasterCrete ANC 932 is available in 400 ml two-component cartridges. Boxes of 12 pieces.

Keep the product in its original packaging in a dry, protected location at a temperature between +5°C and +35°C.

Do not store the product at a temperature exceeding +25°C for more than 24 hours at a time.

Under the above conditions, the product has a shelf life of 24 months.

Preparation and method of application

Preparing the substrates

- Drill the hole to suit the anchor bar, in accordance with the design specifications.
Remove all dust from the drill hole using a vacuum cleaner, compressed air or cleaning brushes.
- The substrate must therefore be clean, sound and free from any substances that could impair the adhesion of the

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chemical anchor.

- The surface may be damp but not wet, and any film of water must be removed using compressed air and a vacuum cleaner.

Preparing the cartridge-based anchor

Open the **MasterCrete ANC 932** cartridge by unscrewing the top cap, remove the internal seal and insert the cartridge into the gun.

Insert the mixing nozzle and extrude an initial amount of waste material outside the hole to be filled, to ensure that the product achieves a uniform colour and appearance.

Installation

Extrude **MasterCrete ANC 932** from the cartridge using a manual, electric or pneumatic gun, filling between 3/5 and 2/3 of the volume of the hole previously drilled.

The filling should be done starting from the bottom and working upwards towards the surface.

The metal component to be anchored is to then be inserted into the still-fresh product, rotating it slightly as it is pushed in deeper. Before applying load to the anchor, allow sufficient curing time.

Application temperatures

Application environment temperature needs to be between +5°C and +40°C.

Warnings

- Do not apply directly on plaster, crumbly, mixed or painted surfaces. The support must be strong enough to bear the design loads.
- Do not add cementitious binders, sand or any other substances that could affect the product's properties.
- Do not use the first portion of the product that comes out of the mixing nozzle; wait until its colour and consistency are uniform.

Technical data

Product identification data	
Packaging	400 ml two-component cartridges Boxes of 12 cartridges
Type of anchor	Pure epoxy
Mixing ratio	1:1
Density (A+B)	1.45 g/dm ³
Consumption	Depending on the volume to be filled.
Texture	Plastic-Thixotropic
Workability time	At 5°C: 70 min At 15°C: 28 min At 25°C: 22 min At 30°C: 20 min At 40°C: 18 min

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Curing time on dry concrete (In damp conditions, double the time)	At 5°C: 48 hours At 15°C: 30 hours At 25°C: 17 hours At 30°C: 16 hours At 40°C: 12 hours
Application temperature	+5°C to +40°C
VOC content	Class A+

Performance – Physical properties

Feature	24 hours (N/mm ²)	72 hours (N/mm ²)	Test method
Elastic recovery	21.5	21.5	ASTM D638
Compression strength	95	100.9	UNI EN 196-1
Flexural strength	34	46	UNI EN 196-1
Flexural modulus	2520.3	2985.2	ASTM D790
Elastic modulus	5997	12024.3	UNI EN 196-1

Performance – Tensile strength with standard anchorage depth

Concrete, C20/C25, 5.8 threaded bar						
Bar size	Recommended load (kN)		Distancing (Scr,N)	Tip diameter	Hole diameter	Anchoring depth
	Tension (Nrec)	Shear (Vrec)	(mm)	(mm)	(mm)	(mm)
M8	9.07	5.14	160	10	9	80
M10	14.36	8.57	200	12	12	90
M12	20.86	12.00	240	14	14	110
M16	38.86	22.29	320	18	18	125
M20	60.64	34.86	400	22	22	170
M24	87.43	50.29	480	28	26	210
M30	138.93	81.43	600	35	32	280

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Performance – Strength properties of cellular concrete

Typical tensile and shear strength values for autoclaved aerated concrete. Compressive strength of the substrate > 6 MPa. Operating temperatures from -40°C to +40°C.

Bar size	Condition	d/d	w/w & w/d	d/d, w/w & w/d
	Hef (mm)	Tension (kN)	Tension (kN)	Shear (kN)
M8	80	2.0	1.5	5.0
M10	90	3.0	2.5	8.0
M12	100	4.0	3.5	8.0
M16	100	5.5	4.5	8.0

Note: These values apply to threaded bars of grade 5.6 or higher. For classes 4.6 and 4.8, multiply the VR_{k,b} values by 0.8.

Performance – Chemical resistance

Substance	Prolonged contact	Brief contact	Contact not recommended
Water	•		
Saltwater	•		
Water at 60°C	•		
Petrol	•		
Kerosene	•		
Diesel	•		
Methanol		•	
Acetone		•	
50% sodium hydroxide solution		•	
10% hydrochloric acid solution (+20°C)		•	
50% sulphuric acid solution (+30°C)			•
Citric acid		•	
Chlorinated water		•	

If MasterCrete ANC 932 comes into contact with substances not included in the list above, please contact the Master Builders Solutions technical support team.

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Safety instructions

For guidance on the correct and safe use, transport, storage and disposal of the product, please see the latest Safety Data Sheet (SDS).

Other services

For additional technical information, brochures, references, technical reports and technical assistance please visit www.master-builders-solutions.com/it-it or alternatively contact infomac@masterbuilders.com.

Scan QR code to visit the product page and download the latest version of this technical sheet and any additional documentation.



Disclaimer

Since 16/12/1992, Master Builders Solutions Italia Spa has been operating under a Certified Quality System compliant with the UNI EN ISO 9001 Standard. Furthermore, the Environmental Management System is certified according to the UNI EN ISO 14001 Standard and the Safety Management System is certified according to the UNI ISO 45001 Standard.

For further information, please consult the local Technician of Master Builders Solutions. The technical advice on how to use our products, either written or verbally given, are based on the current state of our scientific and practical expertise, and does not imply the assumption of any guarantee and/or responsibility for the final results of works executed using our products.

Therefore, the customer is not exempted from the exclusive task and responsibility of verifying the suitability of our products for the intended use and purposes.

This version supersedes all the previous ones.

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