



# Mapei Steel Bar 304 Mapei Steel Bar 316

**Ultra high-strength  
AISI 304 and AISI 316  
stainless steel helical  
bars for structural  
repointing on  
masonry structures**



## WHERE TO USE

This system is recommended for structural repointing for joints in masonry, stone and tuff structures to limit cracking and for crack stitching repairs.

### Some application examples

- Reinforced pointing for joints on exposed masonry walls.
- Tying masonry walls together.
- Localised crack stitching repairs.

## TECHNICAL CHARACTERISTICS

**Mapei Steel Bar** are helical bars made by AISI 304 and AISI 316 stainless steel characterised by their very high strength and chemical stability. The special shape of the bars allows them to be anchored firmly in place and guarantee a very high level of mechanical grip to the mortar or epoxy resin in which they are embedded.

**Mapei Steel Bar 304** and **Mapei Steel Bar 316** are 6 mm in diameter and are supplied in 10 metre lengths. The helical bars have been tested according to EN 845-1 standards.

## ADVANTAGES

Unlike interventions using conventional methods, the special shape of **Mapei Steel Bar 304** and **Mapei Steel Bar 316** helical bars means they may be installed very quickly and, in many cases, without disruption normal operations in buildings. They remain perfectly stable over the years, are resistant to corrosion and provide excellent adherence.

## RECOMMENDATIONS

All workers must be provided with protective gloves and goggles and anti-dust masks.

## APPLICATION PROCEDURE

**Mapei Steel Bar 304** and **Mapei Steel Bar 316** helical bars are applied as follows:

1. Cut the bar to the length required with a hand grinder.
2. Scrape the mortar from out of the bed joints and remove all dust. We recommend washing the surface after removing all the dust.
3. Anchor the **Mapei Steel Bar 304** or **Mapei Steel Bar 316** in the joint with **Planitop HDM Maxi** or **Planitop HDM Restauro** or **Mape-Antique Allettamento** or **MapeWall Muratura Fine** mortar or with **MapeWrap 11** or **MapeWrap 12** epoxy adhesive. Refer to the relative Technical Data Sheet for each product.
4. After placing the helical bars in position, grout the joints with the same product used for the anchor.

## PACKAGING

**Mapei Steel Bar 304** and **Mapei Steel Bar 316** are supplied in rolls.

## STORAGE

Store in a dry, covered area.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

**Mapei Steel Bar 304** and **Mapei Steel Bar 316** are articles and referring to the current European regulations (Reg. 1906/2007/CE - REACH) do not require the

TECHNICAL DATA (typical values)		
PRODUCT IDENTITY		
	MAPEI STEEL BAR 304	MAPEI STEEL BAR 316
Type of fibre:	AISI 304 stainless steel	AISI 316 stainless steel
Appearance:	helical bar	helical bar
Nominal diameter (mm):	6	6
Nominal area of bar (mm <sup>2</sup> ):	7.4	7.4
Ultimate tensile strength (kN):	> 8.5	> 8.5
Shear strength resistance (MPa):	≥ 1,000	≥ 1,000
Deformation of bar at failure (mm):	> 2.5	> 2.5
Modulus of elasticity (GPa):	> 100	> 100
Ultimate shear strength of bar (kN):	> 5	> 5
Shear strength of bar (MPa):	> 600	> 600

preparation of the Safety Data Sheet. During use it is recommended to wear gloves and goggles and follow the safety requirements of the workplace.

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](http://www.mapei.com)

#### LEGAL NOTICE

***The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.***

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***ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.***

**All relevant references for the product are available upon request and from [www.mapei.com](http://www.mapei.com)**