

MAPEWRAP 31 T

Thixotropic epoxy adhesive for impregnating MapeWrap fabrics using the “dry system”



WHERE TO USE

MapeWrap 31 T is used for the impregnation of MapeWrap fabrics, when concrete, reinforced concrete and masonry elements need repair or strengthening by using the “dry system”.

TECHNICAL CHARACTERISTICS

MapeWrap 31 T is a solvent-free, epoxy resin-based adhesive with a thixotropic consistency that has been specifically developed in MAPEI Research & Development laboratories for in-situ impregnation of MapeWrap fabrics using the “dry system”.

MapeWrap 31 T is made up of two pre-dosed components (component A = resin and component B = catalyser) which must be mixed together prior to use. After mixing MapeWrap 31 T remains workable for approximately 50 minutes at +23°C.

Once hardened, MapeWrap 31 T is very strong and has excellent dielectric properties.

MapeWrap 31 T responds to the principles defined in EN 1504-9 (“Products and systems for protecting and repairing concrete structures: definitions, requirements, quality control and conformity evaluation. General principles for the use and application of systems”), and the minimum requirements for EN 1504-4 (“Structural bonding”).

RECOMMENDATIONS

· Do not use MapeWrap 31 T once it starts to harden.

APPLICATION PROCEDURE

Preparation of MapeWrap 31 T

The two components which make up MapeWrap 31 T must be mixed together. Pour component B into component A and mix with a drill at low-speed with a mixing attachment until the product is completely blended. Mixing ratio: 4 parts by weight of component A with 1 part by weight of component B. To avoid dosage errors, use the entire contents of the two components. If only partial quantities are required, use high-precision electronic scales to weigh out the components.

Application of MapeWrap 31 T and MapeWrap fabrics

Apply a first even layer of MapeWrap 31 T with a smooth trowel. Lay the MapeWrap fabric immediately in place, with hands protected by waterproof rubber gloves, making sure there are no creases, then roll well using a firm rubber or metal roller (MapeWrap Roller) so that the adhesive penetrates through the fibres of the fabric. Apply a second layer of MapeWrap 31 T over the MapeWrap fabric and pass over the surface of the impregnated fabric with a MapeWrap Roller to eliminate any air bubbles trapped in the fabric during the previous steps.

PRECAUTIONS TO BE TAKEN BEFORE APPLICATION

No special precautions need to be taken if the temperature is between +5°C and +30°C.

In hot weather, do not expose the product to direct sunlight and apply the adhesive during the cooler parts of the day. In cold weather, if the product is applied outside and the temperature is lower than +5°C, heat the substrates to be repaired or strengthened with MapeWrap fabric 24 hours before bonding the fabric and use a suitable insulating system

to prevent the risk of freezing. The substrate must then be kept insulated for at least the next 24 hours. Store the product in a warm place before use.

CLEANING

MapeWrap 31 T forms a strong bond and tools should be cleaned with solvent (such as ethanol, toluene, etc.) before it hardens.

CONSUMPTION

Consumption depends on the type (unidirectional, bidirectional or quadridirectional) and width of the fabric used:

MapeWrap C (CARBON fabrics)			
Type of fabric	Consumption (g/m ²)	Height (cm)	Consumption (g/m)
UNI-AX 300 o UNI-AX HM 300	1400-1600	10	140-160
		20	280-320
		40	560-640
UNI-AX 600 o UNI-AX HM 600	1680-1920	10	168-192
		20	336-384
		40	672-768
BI-AX 230	1300-1500	20	260-300
		40	520-600
BI-AX 360	1560-1800	20	312-360
		40	624-720
QUADRI-AX 380	1400-1600	30	420-480
		48,5	679-776

PACKAGING

Available in 5 kg kits (component A = 4 kg - component B = 1 kg).

STORAGE

The product may be stored for 24 months in its original packaging and at temperatures not below +5°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

MapeWrap 31 T component A is irritant for the eyes and skin; both component A and B may cause sensitization if they come in contact with the skin of predisposed subjects.

MapeWrap 31 T component B is corrosive and may cause burns.

The product contains low-weight epoxy resins, which when in contact with the skin may cause sensitization if cross-contamination occurs.

During use, wear protective gloves and goggles and take the usual precautions for handling chemicals. If the product comes in contact with the eyes or skin, wash immediately with plenty of clean water and seek medical attention. When the product reacts it generates considerable heat. After mixing components A and B we recommend applying the product as soon as possible and never leave the container unguarded until it is completely empty.

MapeWrap 31 T components A and B are dangerous for aquatic life. Do not dispose of them in the environment.

For further and complete information about the safe use of our product, please refer to the latest version of our Safety Data Sheet.

RESTRICTED TO PROFESSIONAL USERS.

TECHNICAL DATA (typical values)		
PRODUCT IDENTITY		
	component A	component B
Consistency:	paste	paste
Colour:	dark yellow	light yellow
Specific gravity (g/cm³):	1.34	1.25
Brookfield viscosity (mPa·s):	200,000 (rotor 6 - 5 revs)	20,000 (rotor 5 - 10 revs)
APPLICATION DATA (after 7 days at +23°C - 50% R.H.)		
Mix ratio:	component A : component B = 4 : 1	
Mix consistency:	thixotropic paste	
Colour of mix:	yellow	
Specific gravity of the mix (g/cm³):	1.30	
Brookfield viscosity (mPa·s):	70,000 (rotor 6 - 10 revs)	
Workability time: – at +23°C:	50 mins.	
Setting time: – at +23°C:	4 hours	
Application temperature:	from +5°C to +30°C	
FINAL PERFORMANCES		
Adhesion to concrete (N/mm²):	> 3 (after 7 days - failure of concrete)	
Tensile strength* (ASTM D 638) (N/mm²):	≥ 20	
Tensile strain* (ASTM D 638) (%): – after 28 days:	1.0	
Compressive strength (ASTM D 695) (N/mm²):	≥ 70	
Flexural strength* (ISO 178) (N/mm²):	≥ 25	

* Results obtained from tests carried out on 5 samples (+23°C (+73°F) - 50% R.H.)

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

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.

The most up-to-date TDS can be downloaded from our website www.mapei.com.

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

1036-9-2019-gb

Any reproduction of texts, photos and illustrations published here is prohibited and subject to prosecution

