

Mapeband PVC

PVC tape for flexible sealing and waterproofing of expansion joints and fissures subject to movement



WHERE TO USE

Waterproofing expansion joints of road works, tunnels, hydraulic and covering works subject to movement up to 5 or 10 mm wide, using **Mapeband PVC 14** or **Mapeband PVC 18** respectively.

Some application examples

- Flexible waterproofing of expansion joints subject to heavy working movements.
- Flexible waterproofing of joints in tunnels, road works, etc.
- Sealing expansion joints in prefabricated panels.
- Sealing facial structural joints.
- Sealing holding joints for hydraulic works such as canals, basins, sewer trunk lines, water pipes, etc.
- Waterproofing road joints.
- Waterproofing expansion joints in flat roof coverings.

TECHNICAL CHARACTERISTICS

Mapeband PVC is a 14 and 18 cm PVC band, **Mapeband PVC 14** and **Mapeband PVC 18** respectively, 1 mm thick, reinforced on the external edges by a polyester fabric that should be installed with **Adesilex PG1** or **Adesilex PG2**, epoxy adhesives with thixotropic consistency.

Mapeband PVC can be welded with a Leister, a hot air drier suitable for bonding heat sealing material. Once welded, the lined joints of special pieces, that must be waterproof, can be easily created. The band maintains

its flexibility and deformability permanently, even at low temperatures. Furthermore, it is age resistant even when exposed to atmospheric agents and ultraviolet rays.

Due to its composition, **Mapeband PVC** has an excellent resistance to alkali, slightly acidic, or salt solutions.

RECOMMENDATIONS

- Do not apply **Mapeband PVC** on substrates that are not perfectly clean, flat and dry.
- Protect **Mapeband PVC** from perforation.
- Weld the different bands only by hot-welding machine.

APPLICATION PROCEDURE

Preparing the substrate

Before applying **Mapeband PVC** the surfaces must be free of oils, grease, paint, dust and crumbling or loose parts.

All surface contaminations must be removed by sand blasting or grinding. This must be carried out especially if the surfaces have been treated with polyester, epoxy and polyurethane resins or if they are made of glass materials.

If **Mapeband PVC** must be applied over a metal surface, remove all traces of rust, paint, grease etc. by sandblasting down to white metal.

The surface must be dry when **Mapeband PVC** is applied.

In order to obtain well defined joint profiles, apply the

Mapeband PVC

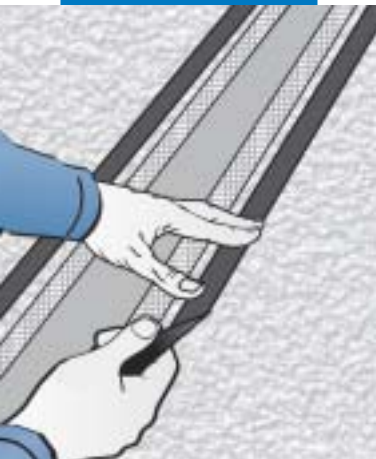


Figure 1



Figure 2



Figure 3

masking paper tape for body work on the external surface of the concrete which will be spread with the adhesive (fig. 1). The masking tape will be removed once installed, bond and finished with a trowel.

Products to be used for bonding Adesilex PG1, Adesilex PG2 or Mapelastic (the choice of the product depends on the temperature and the type of work to be done).

Preparing the Adesilex PG1 adhesive

Mix the two **Adesilex PG1** components.

Pour Part B (white hardener) into Part A (grey) and mix with whip drill until perfect homogeneity is obtained, i.e. a uniform grey colour.

The packages are already pre-dosed therefore avoid using partial quantities of the product so as to avoid wrong dosages of the two parts which could lead to lack of or complete hardening.

When external temperatures are higher than +20°C, use **Adesilex PG2** as an alternative to **Adesilex PG1**, because it has an extended open time.

The preparation process for **Adesilex PG2** is the same as that of **Adesilex PG1**.

Mapeband PVC can also be bonded with **Mapelastic**, a flexible cement-based mortar, when waterproofing small terraces.

Preparing Mapelastic

Pour Part B (liquid) into a suitable clean container, then slowly add Part A (powder) while stirring with a mechanical mixer.

Carefully mix the **Mapelastic** for a few minutes, making sure to mix in any powder from the walls and bottom of the container.

Mix until the product is perfectly homogeneous using a low-speed electric paddle in order to avoid any excessive incorporation of air. Do not prepare the mix by hand.

For further information, consult the technical data sheet of the above mentioned products.

Bonding the product

Apply with a smooth trowel on a perfectly clean and dry substrate a first uniform layer of approximately 1 to 2 mm of **Adesilex PG1**, **Adesilex PG2** or **Mapelastic**. Try to avoid introducing the adhesive inside the joint (fig. 2).

Install **Mapeband PVC** by applying a light pressure on the sides of the polyester fabric band and making sure not to create creases or air bubbles (fig. 3).

While still wet, apply a second layer of **Adesilex PG1**, **Adesilex PG2** or **Mapelastic** trying to completely cover the fabric strip of the new layer (fig. 4). Smooth the product with a smooth trowel (fig. 5).

Once the second layer of **Adesilex PG1**, **Adesilex PG2** or **Mapelastic** has been applied, slowly remove the masking tape (fig. 6).

The **Mapeband PVC** must be protected from damage (ex. holes) during the application phases.



Figure 4



Figure 5



Figure 6

TECHNICAL DATA (typical values)

PRODUCT IDENTIFICATION:

Colour:	grey	
Available sizes:	14 cm (Mapeband PVC 14) 18 cm (Mapeband PVC 18)	
Thickness:	1 mm	
Breaking load (according to DIN 53504):	longitudinal	11 N/mm ²
	transversal	8 N/mm ²
Ultimate elongation (according to DIN 53504):	longitudinal	350%
	transversal	325%
Bending at low temperature (SIA 280):	< -20°C	
Resistance to atmospheric agents and ultraviolet rays:	< 5000 h	
Resistance at roots (SIA 280):	no root passage	
Protection index against fire hazard (SIA 280):	class 5.2	
Reaction in water (SIA 280):	bending at low temperature	-20°C
	change in mass (8 months)	< 3.5%
Resistance to mechanical perforation (height of drop):	400 mm	
Thermal aging (SIA 280):	ultimate elongation change	< 4%
	change in mass	-1.24%
Resistance to tear (ISO R34-1/B):	> 30 N/mm ²	
Resistance to temperature:	from -40°C to +90°C	
Maximum elongation of the expansion area:		
- Mapeband PVC 14:	5 mm	
- Mapeband PVC 18:	10 mm	

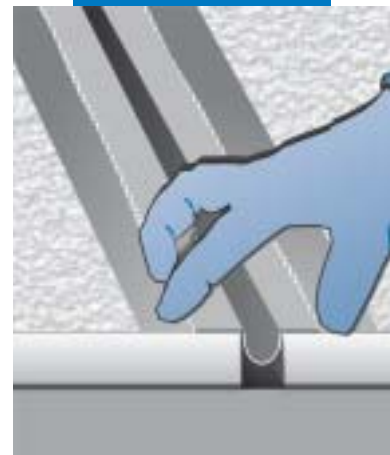


Figure 7

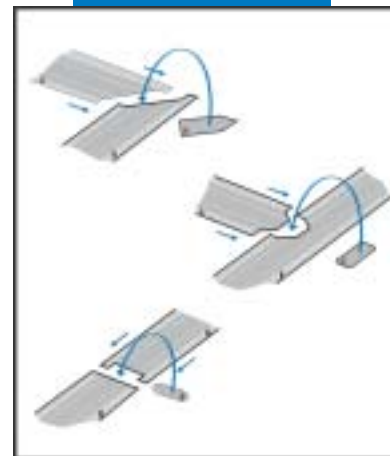


Figure 8

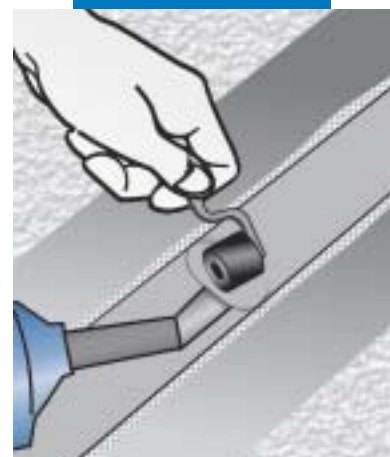


Figure 9

For movement joints, **Mapeband PVC** must be positioned within the joint in the shape of an upside down omega (Ω) (fig. 7). Joints between the **Mapeband PVC** strips must be made after having cut the extremity of the strip and the overlapping strip, as shown in fig. 8, according to the type of joint (butt joint, corner joint or "T" joint). The joints between the two **Mapeband PVC** strips must be made by overlapping the two lateral polyester strips by a couple of centimeters and then seal the middle PVC part with a hot air "Leister" industrial drier. To ensure the PVC parts are fully sealed, apply pressure with a heat resistant flat iron (fig. 9).

PACKAGING

Mapeband PVC is available in two sizes and are supplied in carton boxes:

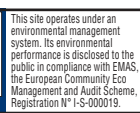
- **Mapeband PVC 14** (width 14 cm) one 30 m x 14 cm roll;
- **Mapeband PVC 18** (width 18 cm) one 30 m x 18 cm roll.

WARNING

N.B. - Although the technical details and recommendations contained in this product report 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 applications: 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.

Mapeband PVC

(GB) A.G. BETA



348-2-2001