

StrataShield Expansion Tape

High performance, elastic, joint sealing system

Product overview

StrataShield Expansion Tape is a high performance sealing system for expansion joints, cracks and fissures. It consists of an elastic, flexible and waterproof TPE tape with two lateral thermo-welded geotextile bands. Once fixed on the substrate, it allows large movements in several directions, and can be used both indoors and outdoors.

StrataShield Expansion Tape can be fixed with epoxy adhesive or with cementitious mortar where there is moisture present within the joints.

Features & benefits

- Highly elastic even at low temperatures
- Completely waterproof
- Suitable for applications in permanent immersion
- Excellent adhesion to all types of substrate
- Can be applied on dry and humid substrates
- Good chemical resistance to diluted acids, bases and salts
- Very high UV resistance
- Polypropylene-geotextile composition ensures compatibility with cementitious products
- Easy to install

Substrate preparation

The substrate must be clean and free of loose particles, oils and greases, etc. Metal elements must also be clean and rust-free. All demoulding agents, along with loose or fissured elements must be removed by brush, grinder or sandblasting. Before the application of the system, superficial damages and imperfections must be repaired with repair mortar.

Tape preparation

Cut the tape into the needed length and shape (corners, overlaps, intersections, etc) and place them onto the surface before the application.

Make sure the edges of the geotextile and the substrate are completely dry if you are using epoxy glue.

Technical characteristics

Properties	Unit / Description
Description	Thermoplastic elastomer (TPE) with non-woven polypropylene geotextile
Geotextile	On both sides to offer the perfect adhesion with different types of adhesive
Packaging	50m rolls
Colour	Dark grey
Roll length	30m
Width of elastic tape	170 mm (110+50 mm)
Approx. thickness	1.5mm
Approx. weight	160 g/m
Resistance to temperature: min/max	-30°C / +90°C
Burst pressure	1.8 bar
Breaking load longitudinal (only flexible zone) DIN 527-3	56 N / 15 mm
Breaking load longitudinal DIN 527-3	140 N / 15 mm
Breaking load lateral DIN 527-3	58 N / 15 mm
Longitudinal elongation at break (only flexible zone) DIN 527-3	279%
Elongation at break Din 527-3 L/T	33% / 486%
Power absorption at 25% / 50% Elasticity lateral DIN 527-3	0.8 N/mm / 1 N/mm
Water pressure resistance DIN EN-1828	> 3 bar
UV resistance DIN EN ISO 4892-2	> 2.480 hours
Storage	Can be stored indefinitely in its original packaging, tightly closed, and in a fresh place, covered and protected from humidity, sunlight and frost.

Mixing and application

Depending on the substrate, the work conditions and the technical requirements you may choose between two different products for setting the tape:

Dry supports: If the substrate is completely dry, it is recommendable to use epoxy glue to assure best adhesion levels.

Mix the glue according to the instructions indicated on its technical data sheet. Using a trowel or spatula, apply enough epoxy glue onto the substrate on both sides of the joint (at least 10mm beyond the geotextile profile) at a thickness of 1.0-1.5 mm.

Immediately after the application of the epoxy glue, apply the StrataShield Expansion Tape, with the geotextile sides down, onto the substrate and press onto it with a trowel or rigid roller so that it soaks up the glue.

Apply another layer of glue on wet and again smooth the surface with a spatula or trowel in order to obtain a nice finish. It is recommended to profile the joint with adhesive tape to improve the finish.

It is also possible to adhere the tape using the StrataShield waterproofing membrane. After applying StrataShield in the usual way, put StrataShield Expansion Tape onto the fresh resin. After curing, apply another layer of StrataShield onto the joint.

Humid substrate: In case of a humid substrate or where adhesion requirements are not the best, use a flexible waterproof mortar, as this will gives higher performance at a lower cost.

Humidify the area until saturation. Once it has lost its gloss, mix the mortar and apply enough quantity with a brush, a spatula or trowel onto the support, about 10mm beyond the edge of the geotextile at a thickness of 1.0-1.5mm. Immediately after the application of the mortar, apply the elastic tape StrataShield Expansion Tape, with the geotextile sides down, onto the support and press onto it with a trowel or rigid roller so it saturates with mortar.

Later, apply another layer of mortar by brush, spatula or trowel smoothing the surface to obtain an even finish. It is recommended to profile the joint with adhesive tape in order to improve the finish.

Connection between pieces

The unions between the two pieces of the tape are made with a patch of the same tape or an overlap of at least 40-50mm width welded with hot air, making sure to use enough heat to melt the TPE.

Curing

The necessary time before returning to service or permanent contact with water depends on the humidity and temperature conditions. Under normal conditions, e.g. an outdoor application at 20°C and 50% H.R., the curing time will be 3-4 days.

Chemical resistance

Chemical (7 days, room temp)	Weight gain
Hydrochloric acid (3%)	Favourable
Sulfuric acid (35%)	Favourable
Citric acid (100g/l)	Favourable
Lactic acid (5%)	Favourable
Potassium hydroxide (20%)	Favourable
Sodium hypochlorite (0.3g/l)	Favourable
Saltwater (20g/l)	Favourable

Tool cleaning

All working tools can be cleaned immediately after use with water or solvent, depending on the used quantity of adhesive. Once hardened the material can only be removed mechanically.

Safety and environmental considerations

Always follow the instructions and safety precautions provided in the material safety datasheet. Any leftover StrataShield Expansion Tape material is considered as inert waste. Dispose of any waste responsibly in accordance with local applicable law.

Instructions to consider

- Apply between +5°C and +30°C
- Do not expose the material for long periods of time at temperatures higher than 70°C
- Do not apply if rain is expected in the 24 hours after the application
- Do not use other adhesives than those recommended
- In case of negative water pressure, install a metal plate on one side
- The completed system must be protected from suffering subsequent mechanical damage.

Further information

The information contained in this datasheet, along with any advice provided (either written or verbal) through testing are based on our experience and do not constitute any product guarantee for the installer.

We recommend that all of the information provided is carefully studied before proceeding with application, and strongly advise that suitable tests are carried out onsite before application in order to determine the suitability and compatibility for the specific project.

The application, use and processing of our products are beyond our control, and therefore under the exclusive responsibility of the installer. As a result, the installer will be solely responsible for any damage derived from the partial or complete disregard of our guidance or the general mis-use of any of our materials.