

ELAST PRO

TPE Expansion Joint Tape, TPE Construction Joint Tape,
TPE Movement Joint Tape, TPE Crack repair
Waterproofing Tape



ELAST PRO
FLEXIBLE HUMAN . ELASTIC WORLD

EXPANSION JOINT

An expansion joint is an assembly designed to safely absorb the heat-induced expansion and contraction of various construction materials. They are commonly found between sections of slabs, bridges, and other structures. An expansion joint is a continuous vertical or horizontal joint left completely free of mortar and filled with elastomeric sealant to keep it watertight.

Throughout the year building faces and concrete slabs will expand and contract due to the warming and cooling of our planet through the seasons. The structures would crack under the stress of thermal expansion and contraction if expansion joint gaps were not built into the structures. Even today the expansion joint gaps are often neglected during the design process and simple caulking is used to fill these gaps to complete a project. This simple caulking cannot handle the thermal expansion due to the changing seasons ultimately leaving a leak point in the structure. This expansion joint becomes the main source of leakages in the structure which can ruin the interiors of the building if not sealed or treated confidently.

DESCRIPTION OF PRODUCT

Thermoplastic elastomer (TPE) based joint tape designed for watertightness of expansion and construction joints. It is highly elastic, rootproof and chemically resistant. It is Extremely durable has excellent resistance to weathering and is UV and chemically stable. The system allows variable and high levels of movement in more than one direction, whilst maintaining a high quality watertight seal. It is suitable for use in hot and tropical climatic conditions. The bond to the substrate is made using 2-component Epoxy Adhesives namely Epotec YD128 Resin and Epotec Hardner TH7525 of Aditya Birla Grasim.

FIELDS OF APPLICATION

- Waterproofing horizontal and vertical dilatation joints
- Waterproofing wide and irregular cracks
- Connection joints of slabs and walls
- Suitable substrates are concrete, mortar, wood, metal, steel, aluminum, epoxy mortar, natural and artificial stones and many other building materials.

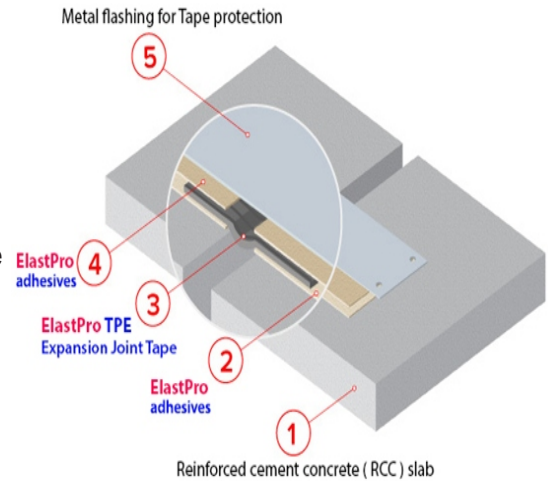
FOLLOWING ARE THE AREAS OF APPLICATION :

- Above and below ground applications
- Foundations and curtain walls
- Pools
- Treatment plants
- Tunnels
- Balconies and parapet joints
- Basements
- Around iron, steel and concrete pipes
- Façades
- Wet rooms
- Dilatation joints
- Car Parks
- Power plants
- Roofs and terraces
- Expansion joints together with sealant application

Treatment Of Expansion Joints

Expansion joints are installed to manage the coefficient of thermal expansion over large spans of concrete. The waterproofing material must not only cope with the movement of the building, but also be designed to resist aging that leads to the weakening of the bond on the concrete and causes failure of the system.

A flexible material is essential so that it does not crack with movement. We offer a highly flexible and durable tape for expansion joints with high elasticity to accommodate the thermal movement and at the same time waterproofing the leakage prone joint.

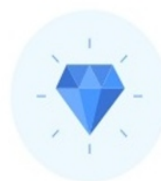


ADVANTAGES

- UV resistant.
- Permanently elastic even at low temperatures.
- Good adhesion to concrete, mortar, steel and many other building materials.
- Resistant to puncturing and tearing, also easy to repair.
- Easy application of adhesive and tape.
- Easy to cut, weld (hot air) and join.
- Resistant to constant exposure to water.
- Resistant to roots.



CRACK BRIDGING



DURABLE



HIGHLY FLEXIBLE



NON CORROSIVE



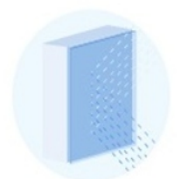
SELF CURING



ROOT RESISTANT



UV RESISTANT



WATERTIGHT

TECHNICAL DATASHEET

| | | |
|-------------------------------------|---------------------|---|
| Width | | 100,150,200,300,400,500,550 (mm) |
| Colour | | Grey |
| Elongation at break | EN ISO 527-3 | >700% |
| Tear growth resistance | EN 12310-2 | > 870 psi |
| Tear resistance lengthwise | EN ISO 527-3 | > 1300 psi |
| Tear resistance crosswise | EN ISO 527-3 | > 870 psi |
| Resistance to cold / heat | SIA 280/3 | -40°C to +80°C |
| Hardness (Shore A) | ISO 868 | 80 |
| Peel off strength | | > 290 psi |
| Resistance to bitumen | DIN 16726 | Resistant |
| Resistance to water pressure | EN 1928 | > 8 bar |
| Resistance to UV radiation | SIA V280/10 | > 7500 hours |
| Chemical resistance | | Water and bitumen based waterproofing products, water, sea water, waste water, UV radiation, hydrolysis, micro organisms |
| pH resistance | | pH = 2 to 10 (below 30°C) pH = 5 to 10 (below 40°C) pH = 6 to 8 (below 60 °C) |
| Limited resistance to | | Acids and alkalis, organic solvents (Ester, Ketone and similar). |

APPLICATION PROCEDURE

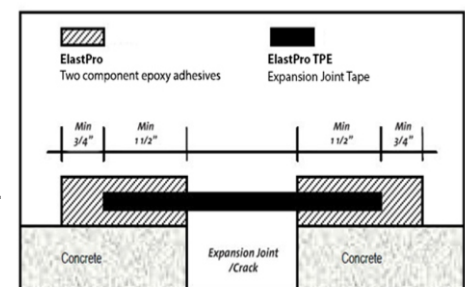
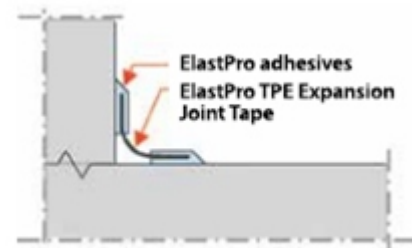
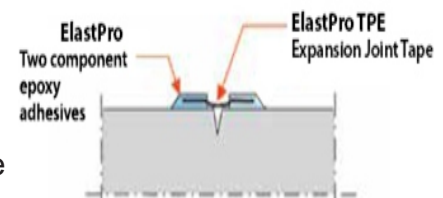
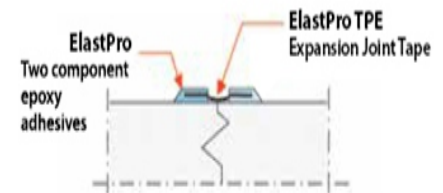
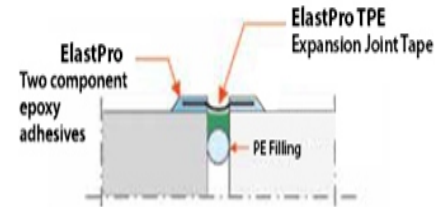
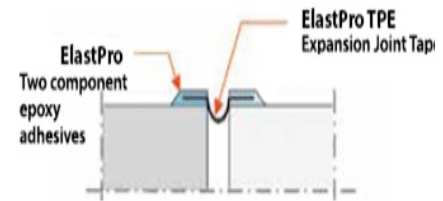
Surfaces must be clean, sound and dry. On damp surfaces the pull off strength should be tested. Dust, oil, grease, old coatings, laitance, efflorescence, rust, curing compounds, wax, formwork release oil and similar contaminants must be removed prior to application.

Over Concrete surfaces if necessary the substrate must be sanded to guarantee optimal adhesion of ElastPro Adhesives.

Verify the substrate has been properly cured. Concrete should obtain 80% of design strength, typically achieved within 3-14 days. Irregularities on the substrate must be repaired.

These tapes may be welded with a hot air welding machine set to 270°C. Maximum temperature allowed for welding is 360°C. Welding of the tape should be carried out prior to the application of the tape. Before welding the tape, roughen the seam area with a wire brush or Scotch Brite scouring pad. To weld the tape, place it on a level substrate and press the overlapping ends of the tape together firmly after applying hot air using a wooden or hardened rubber roller. This way greater length can easily be made on site.

1. ElastPro Adhesives is applied to the prepared substrate on both sides of the joint so both sides of the tape are embedded into the adhesive on a width of at least 1 ½" (38mm). The layer thickness of the Adhesive should be approx. 0.08" (2.0mm).
2. The Tape is then immediately embedded into the fresh adhesive and pressed onto the adhesive using a hand roller or a similar suitable tool. Ensure the tape has good contact to the adhesive everywhere.
3. Then a second layer of Adhesive is applied on top of the Tape so that the edges of the tape are overcoated on a width of min. 2" (50mm). Also, apply Adhesive so that it covers the substrate next to the tape on a width of at least ¾" (19.0mm).



Tape joints by thermal welding :

| | | | | | | |
|-----------------------|---|---|--|--|---|--|
| Straight joint |  <p>Roughen the contact area with sandpaper</p> |  <p>Heat tape surfaces using a hot air welding gun and press them together</p> |  <p>For perfectly sealed tape joints, weld the borders and press them together with the roller</p> |  <p>Completed straight joint</p> | Overlap of butt joints: Straight joint: min. 5 cm Corner joints: min. 2 cm Welding temperature: 270°C - 360°C | |
| |  <p>Cut to the centre of the tape and fit it into the internal corner, overlapping: > 2 cm, cut away the rest</p> |  <p>Roughen the contact area with sandpaper</p> |  <p>Heat tape surfaces using a hot air welding gun and press them together, starting from the corner working outwards</p> |  <p>For perfectly sealed tape joints, weld the borders and press them together with the roller</p> | |  <p>Completed internal corner</p> |
| |  <p>Cut to the centre of the tape and fit it around the external corner</p> |  <p>Roughen the contact area with sandpaper</p> |  <p>Cut a supplementary piece of tape; heat one corner using a hot air welding gun, stretch it slightly and ...</p> |  <p>... fix it to the contact point in the corner also heated before; overlapping: > 2 cm</p> | |  <p>Heat tape surfaces and press them together, starting from the corner working outwards</p> |

CLEANING OF TOOLS

Fresh epoxy adhesive can be removed with Cleaner. Cured material can only be removed mechanically

STORAGE

Store in a cool and dry warehouse away from direct sunlight.

NOTES

- Do not apply below 5°C or if temperatures below 5°C are expected within the next 24 hours.
- Do not apply the system on wet or frozen surfaces.
- Do not apply the system on dusting or weak surfaces. If in doubt, test the pull off strength.
- Cold temperatures prolong and hot temperatures shorten pot life and curing time of the epoxy adhesive.
- High levels of humidity may prevent proper curing of the epoxy adhesive.
- For application of the system as part of negative side waterproofing, please contact our Technical Service.
- In areas which are stressed by traffic, the system should be covered with protective metal plates.

SHELF LIFE

No shelf life limitation under appropriate storing conditions.

HEALTH AND SAFETY PRECAUTIONS

Avoid contact to eyes and mouth during storing and application. Consult a physician urgently if such a contact occurs. Food and drink must be kept outside the application areas. Must be stored away from children.

For safety Data Sheet of 2 component Epoxy Adhesive please visit website : www.grasim.com

DISCLAIMER

The technical information given in this publication is based on the present state of our best scientific and practical knowledge and is only responsible for the quality of the product. We are not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.

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