

TPE EXPANSION JOINT SYSTEMS



GreenShield

Heatshielding & Waterproofing Your Roof

Covers GreenShield™
products:

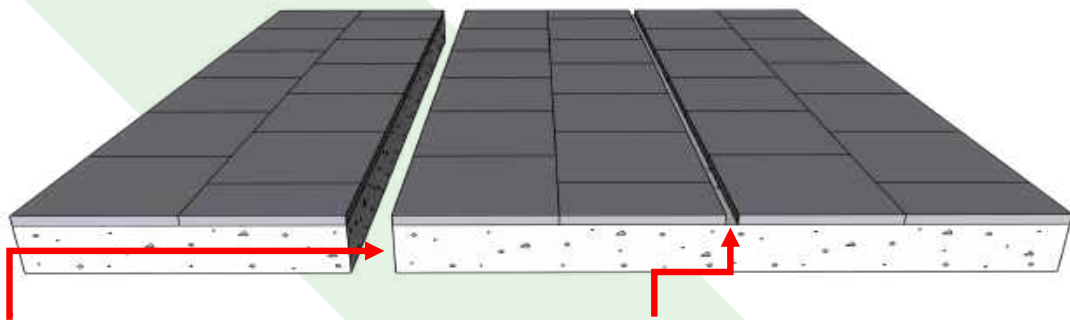
GS TPE TAPES
GS TPE PROFILES

www.greenshield.co.in

Depending on the size of the building or project; architects and builders provide control & expansion joints across areas like split slabs, roofs, exterior walls, below grade / basements, podiums, interiors and so on, to create smaller independent moving structure. Movements can range between 5 to 500 mm, in multiple directions: horizontal, vertical, rotating and so forth and can have differential planes / heights.

These joints are required to absorb temperature induced expansion and contraction of construction materials, absorb vibration and hold parts together as well as allow movement.

Since the joints require complete separation, its important to seal these gaps from moisture, heat & environmental forces, without affecting the purpose of the gap.



Expansion Joints span an expansion gap. These are opening in the structure of a building, at a predetermined location, designed to accommodate the movement of the structure. The movement is caused by thermal, drying, shrinkage, settlement, seismic and wind load forces.

Control Joints induce controlled cracking to prevent damage to floor finishes. These are installed in or over small gaps in the floors and walls where there will be localized movement caused by thermal gain/loss, creep and drying shrinkage



GreenShield™ TPE tapes and profiles are specifically designed for expansion joints, providing buildup across the width of the gap and covering the side thickness, while maintaining integrity of the purpose of the joint.



GS TPE EJ
Tape – suitable for gaps upto **1000** mm



GS TPE EJ 75
Preformed Profile – suitable for gaps upto **75** mm

GreenShield TPE Expansion Joint Tapes & Profile are made from flexible polyolefin elastomers, formulated to provide balance of properties:

- Excellent Tensile, Modulus and Tear strength,
- > 500% elongation,
- High resilience, with low set properties
- Sustains lateral & shear forces exerted across thickness and width of the tape,
- UV, Ozone and Weathering Resistant
- Resistant to Chemical & Corrosion, Alkalis, Acids & Bases, Bacteria, Fungi & Bird Droppings
- Excellent long-term ageing properties retention – 25+ years life
- High degree of puncture resistance with high elongation
- Excellent heat welding at joints & terminations
- Easy to apply
- Provides permanent insulation
- Does not lose elasticity under cold conditions
- High resistance against environmental factors and aggressive mediums

GreenShield TPE EJ Tapes & Profiles are suitable for applications across:

- Below grade / underground applications
- Podiums, Basements, Parking Areas
- Foundations
- Pools, Treatment Plants, Water Tanks
- Tunnel Segments
- Balconies & Parapets
- Terraces and Roof Edges
- Water Insulation & Movement Compensation on dynamic cracks and cold joints

Technical Data: GS TPE EJ Tapes & Profile

PROPERTY	GS TPE EJ
Nominal Thickness (Average) mm	Profile: $1.5 \pm 10\%$ Tapes: $1.0, 1.5, 2.0 \pm 10\%$
Tensile Strength N/mm ² , MD/TD; ISO 527	5.5 Min 6.8 Typical
Elongation at Break %, MD/TD; ISO 527	500 Min 550 Typical
Tearing Strength N; MD/TD; EN 12310-2	50 Min 70 Typical
Service Temperature °C	-40 to 110
Peel Strength N/mm; ASTM D 429	2 Min 3.5 Typical
Weather Resistance KJ/(m ² .mm); ASTM G155	10,080 Min
Ozone Resistance 100 pphm, 168 hrs; ASTM D 1149	No Cracks @ 7% Magnification
Resistance to Roots SIA V280/11	No Root Penetration
Perforation Resistance mm; SIA C280/15 - 500g; height dropped	> 500



Technical Data: GS EJ 2K EP Adhesive

PROPERTY	GS EJ 2K EP
Chemical Base	Solvent Free, 2-part Epoxy resin
Mixing Ratio Part A : Part B	2 : 1 (by Weight)
Service Temperature °C	-30 to +50
Pot life @ 30°C minutes ASTM D2471	40 If larger quantities are mixed, potlife will reduce on account of temp rise due to exothermic reaction
Bond Strength N/mm ² Concrete (dry) Concrete (mat/damp)	> 1.5
Compressive Strength @ 7 days N/mm ² BS 6319 Part 2	50
Tensile Strength @ 7 days N/mm ² BS 6319 Part 7	20
Shear Strength @ 7 days N/mm ² BS 6319 Part 4	10
Flexural Strength @ 7 days N/mm ² BS 6319 Part 3	30



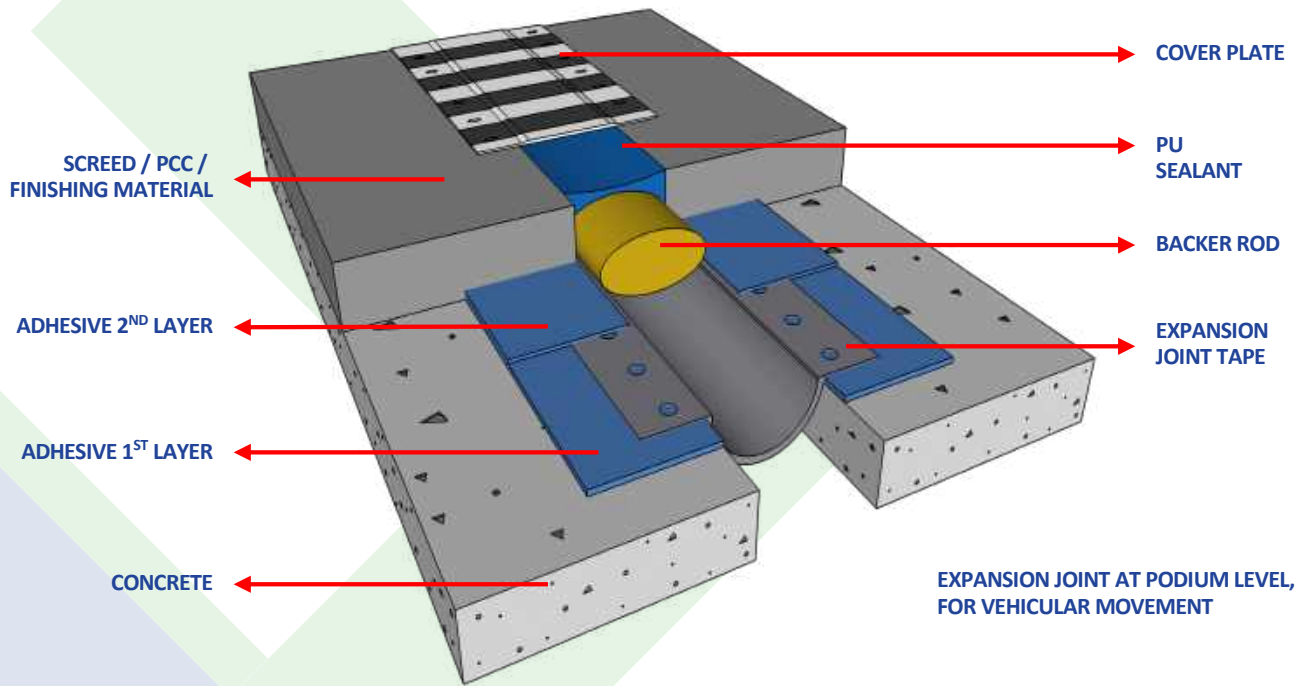
Colour	Part A: White
	Part B: Black
	Part (A+B) Mixture: Grey
Density @ 25°C	Part A: 1.70 – 1.90 Kg/l
	Part B: 1.80 – 1.90 Kg/l
	Mixture: 1.75 – 1.90 Kg/l



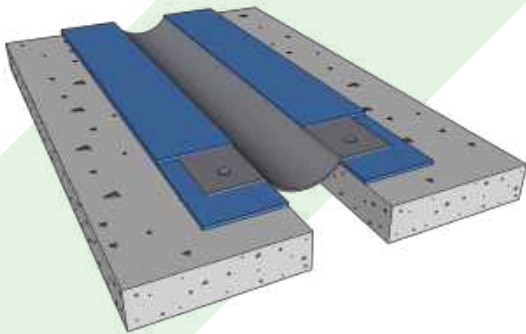
Installation of Expansion Joints

Depending on the location and accessibility, expansion joints are either covered or exposed. For Podiums & Basements, where foot and vehicular movement is expected, a cover plate is used to protect the expansion joint from abrasive deterioration and allow smooth passage over it. Other areas are kept exposed. Vertical joints, may be covered with a grid, anchored on one side for better aesthetics.

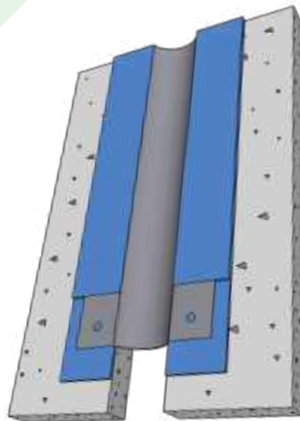
Installation is simple and standardized. Refer our installation guide for more details or talk to our authorized applicators.



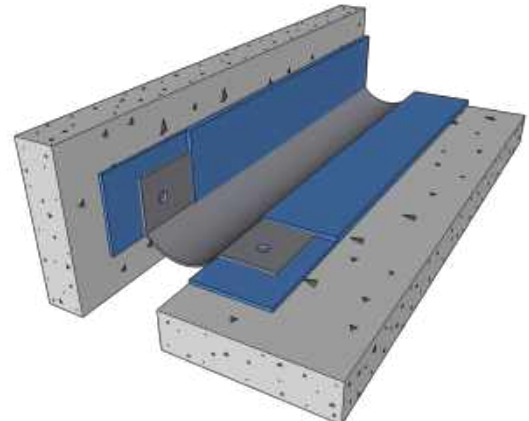
EXPANSION JOINT ON HORIZONTAL SURFACE



EXPANSION JOINT ON VERTICAL SURFACE



EXPANSION JOINT ON PERIMETRAL SURFACE





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