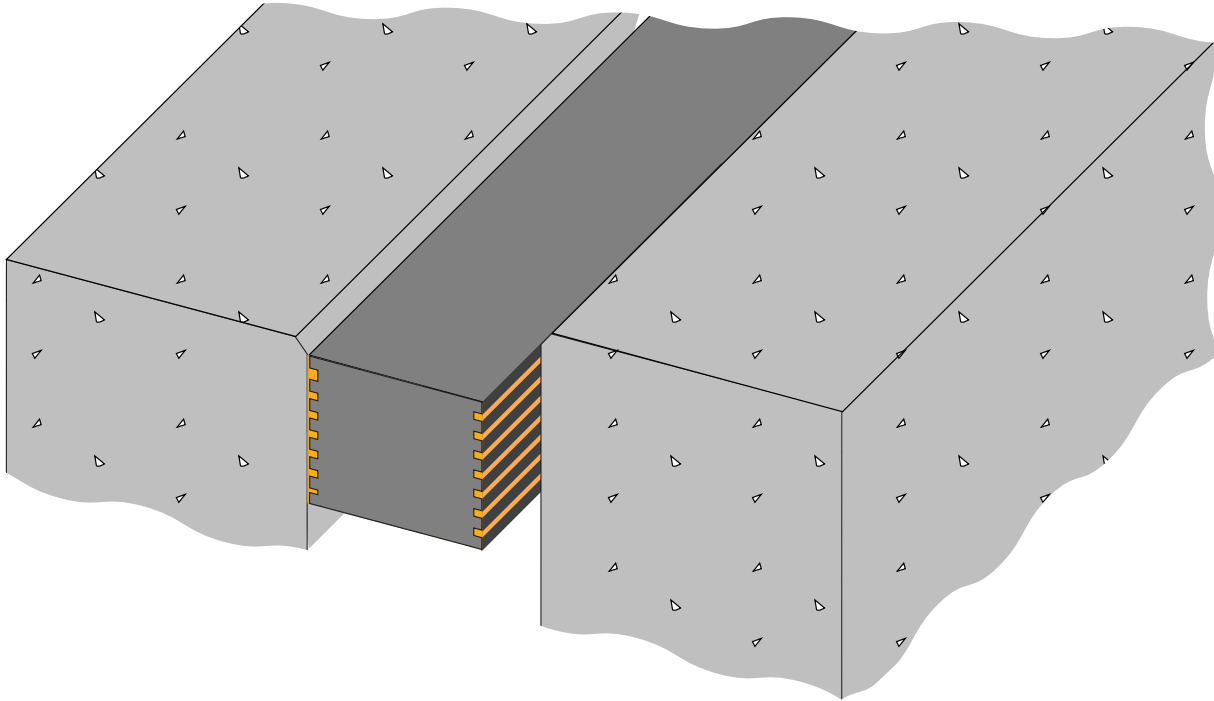


# S100 system



## EPOXY BONDED EXPANSION JOINT



### S100 System

This expansion joint is suitable for installation in exterior applications in floors, decks and walls forming a watertight impenetrable seal that is unaffected by road salts and petroleum products. Its elasticity will reject stones and debris and will sustain pedestrian traffic and repeated loading from wheeled vehicles.

### Applications

External floor to floor, floor to wall and wall to wall applications including podiums, pavements, parking decks and ramps, airport runways, and bridges including steel deck bridges where positive anchoring is not possible. Radflex S100 joints are also suitable for use with potable and processed water applications including reservoirs and wastewater treatment plants.

Radflex S100 will resist hydrostatic pressure based upon the following depths of seal being used:

| Seal     | Head of Water |
|----------|---------------|
| Depth mm | Metres        |
| 50       | 6.7           |
| 64       | 10.0          |
| 76       | 12.0          |
| 89       | 21.0          |

S100 has excellent resistance to a wide range of chemicals including dilute acids and alkalis. For specific applications, please contact our technical department for further assistance.

### Configuration

- Radflex S100 closed cell foam
- Radflex S100 bonding agent

### Materials Performance

Radflex S100 closed cell foam has been produced to be UV stable thus giving the system longevity of joint life.

Installation is straight forward, and with robust materials, this product can meet the exacting demands of the modern construction industry.

### Health and Safety

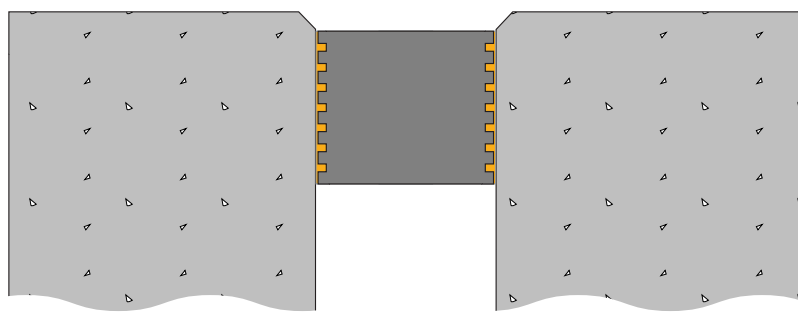
Installation and use causes no 'health and safety at work' hazards, provided that manufacturers' instructions are followed regarding adhesives and sealants.



# S100 system



## EPOXY BONDED EXPANSION JOINT



## Product Description

Radflex S100 series of joints are manufactured from impermeable, closed cell, cross-linked, ethylene vinyl acetate, low-density polyethylene co-polymer which is nitrogen rather than chemically blown. S100 does not use carbon black pigmentation in its formulation as this leads to heat generation and accelerated shrinkage of polymers that contain this compound.

Radflex S100 joints have grooves along the bond surfaces at 6mm to 12mm centres and these are typically 3mm wide x 3mm deep and run the entire length of the joint. These grooves increase the surface area of the bond surfaces and enhance adhesion to substrates.

Radflex S100 joints have a working movement range of 60% compression and 30% extension and are designed to be installed pre compressed by 25% into structural gaps. Table 2 below shows the width of the uncompressed joint, associated gap width and +/- movement capacity from this gap width.

Radflex S100 joints supplied are black or grey in colour. The physical and chemical properties of this joint do not alter significantly over the temperature range -70°C to +70°C and all directional changes in the joint must be carried out using heat welding. This is accomplished by placing the joint material ends against a Teflon coated heating iron at 176°C for 10 to 20 seconds. The ends are then placed tightly together and fusion bonded. Do not test the weld until the material has completely cooled and full strength achieved.

Radflex S100 Bonding Agent should be used to bond the joint to the structure. This bonding agent provides excellent adhesion in various weather conditions and tests indicate that the bond strength is greater than the joint material strength which is 0.8N/mm<sup>2</sup>.

## Reference Installations

Radflex systems are installed in many different traffic conditions in a variety of climates. We are pleased to refer enquirers to relevant applications to confirm satisfaction with the installation and system performance.

## Radflex Design Services

Technical advice and design services are available from our Technical Department, including reviewing requirements of particular applications, ensuring installation of the most appropriate Radflex system to suit specific sites and applications. S100 joint can be adapted to most types of concrete construction.

**Table 1: Physical Properties**

|                                       |  |
|---------------------------------------|--|
| General                               | Tested to EN ISO, BS & DIN standards   |
| Compression Set                       | 50% compression for 72 hours at 23°C<br>0.5 hour recovery – 28% set<br>Tested to EN ISO 1856 1966, BS4443 Pt 1 : 6b 1988<br>DIN 53572 1986                 |
| Density                               | 50kg/m <sup>3</sup> – Tested to EN ISO 845 1995,<br>BS 4443 Pt 1 : 2 1988, DIN 53420 1978  |
| Elongation                            | Elongation at break – 220%   |
| Shore Hardness<br>00 scale (min 10mm) | 44 tested to ISO 868 1985, BS 2782 : Pt 3<br>method 365B : 1992  |
| Surface Deflection                    | When a test specimen is compressed to 60% of its original width with two sides restrained, the amount of extrusion on the surface face does not exceed 6mm |
| Tear Strength                         | 1300 N/m EN ISO 1856 1996, BS 4443 Pt 6 : 16 1991  |
| Tensile Strength                      | 930kPa tested to EN ISO 1798 1983, BS 4443 Pt 1 : 3a<br>1988, DIN 53571 1986   |
| Water Absorption                      | 28 Days <0.6% by volume. DIN 53428 1986  |

**Table 2: Joint Specification**

| Joint Reference | Material Width mm | Material Depth mm | Structural Gap Width mm | Joint Movement ±mm |
|-----------------|-------------------|-------------------|-------------------------|--------------------|
| S100-020        | 25                | 25                | 20                      | 10                 |
| S100-025        | 32                | 50                | 25                      | 12                 |
| S100-030        | 38                | 50                | 30                      | 15                 |
| S100-035        | 44                | 50                | 35                      | 17                 |
| S100-040        | 50                | 50                | 40                      | 20                 |
| S100-045        | 57                | 50                | 45                      | 22                 |
| S100-050        | 63                | 50                | 50                      | 25                 |
| S100-060        | 75                | 76                | 60                      | 30                 |
| S100-070        | 88                | 76                | 70                      | 35                 |
| S100-080        | 100               | 76                | 80                      | 40                 |
| S100-090        | 113               | 76                | 90                      | 45                 |
| S100-100        | 125               | 90                | 100                     | 50                 |

**Notes:**

Due to our programme of continuous improvement, the specification may be subject to updating.