

# **Technical Datasheet**

Last Issued: June 2024

# **Soljoint Bitumen Sealing Strip**

# **Description:**

Soljoint Bitumen Jointing Strip is a user friendly, high performance joint sealant that provides a watertight and flexible seal. Soljoint Bitumen Jointing Strip is used to joint precast concrete box culverts, manholes, inspection chambers, shafts, caissons, tunnels and ogee pipes.

Soljoint Bitumen Jointing Strip is a polymer modified bituminous compound incorporating temperature extenders.

Soljoint Bitumen Jointing Strip is made in various crosssections designed to seal all types and sizes of joints in precast concrete manholes, box culverts, inspection chambers, pipes etc. Plastoelastic properties and high adhesion provide a permanent watertight seal during and after settlement, ground movements, side loadings etc.

Soljoint Bitumen Jointing Strip is resistant to sulphates, acids, alkalis, salts, groundwater, trade effluent, grease, sewage and micro-organism.

Soljoint Bitumen Jointing Strip enables the contractor to install watertight culverts, manholes and other precast concrete structures quickly and economically without the need for in situ concrete surrounds while still meeting full life cycle durability requirements. Soljoint Bitumen Jointing Strip is supplied in rolls with a silicone release plastic.

Soljoint Bitumen Jointing Strip is created after many years of research and development work made together with leading precast concrete manufacturers. Soljoint Bitumen Jointing Strip has been tested in applicable parts based on standards like DIN 4062 and functional needs. Also tests are carried out by concrete manufacturers showing that Soljoint Bitumen Jointing Strip meets the requirements of EN 1917 (new European standard for concrete manholes and joints.) This enables the concrete manufacturer to supply units that meet the new standard.



# **Areas For Application**

- Box Culverts
- Surface Water Drainage and Stream Diversion
- Holding Chambers, trafficked culverts, shafts subways, ducts manholes, Shafts & Soakaways
- Inspection Chambers, tanks, tunnel & shafts
- Main Sewers
- Pumping Station & Access Shafts
- Concrete Pipes
- Surface Water Drainage
- Jacked Sewage & Irrigation Pipe

### Substrate Compatability

Concrete, Steel, Stainless Steel, Ductile Iron, other meals, PE



Solco, Unit 51, Portmanmoor Road Industrial Estate, Ocean Park, Cardiff, CF24 5HB

www.solco.co.uk

1



# **Properties:**

| Composition         | polymer modified bituminous incorporating temperature extenders, elastomer and mineral powder |
|---------------------|---|
| Specific gravity    | 1.46 g/cm3 at 25°C  |
| Specific volume     | 685 cm3/kg  |
| Colour              | black   |
| Temperature range   | application –5° to +40°C  |
| Water tightness     | minimum 0.5 bar / 15 mins at 20°C,<br>tested to 5.0 bar/15 mins at 20°C                       |
| Water absorption    | 0.03% (DIN 4062)  |
| Chemical resistance | very good (acids and alkalis pH 2 to 12)  |
| Microbiological     | excellent   |

## **Box Culvert Joints:**

| Socket Nib<br>Length x                      | Cross-<br>section a x b | Cross -<br>section | Reels per<br>carton | Metres<br>per | Approx<br>carton | Length per<br>1 litre | Primer<br>req'd per |  |
|---|-------------------------|--------------------|---------------------|---------------|------------------|-----------------------|---------------------|--|
| offset L x 0                                | x c/axb                 | area               | no. x               | carton        | weight           | primer (L)            | carton              |  |
| mm  | mm                      | sq mm              | length              | (m)           | (Kg)             |                       |                     |  |
| Trapezoidal Soljoint Bitumen Jointing Strip |                         |                    |                     |               |                  |                       |                     |  |
| 70 x 7                                      | 70 x 32 x 14            | 1610               | 3 x 3m              | 9             | 22               | 17                    | 0.5                 |  |
| 70 x 10                                     | 80 x 32 x 14            | 1840               | 3 x 3m              | 9             | 25               | 15                    | 0.6                 |  |
| 75 x 9                                      | 80 x 32 x 14            | 1840               | 3 x 3m              | 9             | 25               | 15                    | 0.6                 |  |
| 75 x 10                                     | 80 x 32 x 14            | 1840               | 3 x 3m              | 9             | 25               | 15                    | 0.6                 |  |
| Rectangular Soljoint Bitumen Jointing Strip |                         |                    |                     |               |                  |                       |                     |  |
| 70 x 7                                      | 30 x 22                 | 660                | 7 x 3.5m            | 24.5          | 25               | 20                    | 1.2                 |  |
| 70 x 10                                     | 40 x 25                 | 1000               | 5 x 3m              | 15            | 23               | 20                    | 0.8                 |  |
| 75 x 9                                      | 40 x 25                 | 1000               | 5 x 3m              | 15            | 23               | 20                    | 0.8                 |  |



Solco, Unit 51, Portmanmoor Road Industrial Estate, Ocean Park, Cardiff, CF24 5HB

www.solco.co.uk



# **Technical Datasheet**

Last Issued: June 2024

### **Manholes with Tongued & Grooved Joints**

| Manhole<br>Diameter<br>DN | Cross-section<br>a x b mm | Length per<br>joint<br>m | Reels per<br>carton<br>no. x<br>length | Metres<br>per<br>carton<br>(m) | Approx ctn.<br>wt<br>(kg) | Length per<br>1 litre primer<br>(m) | Primer req'd<br>per carton<br>(L) |
|---------------------------|---------------------------|--------------------------|--|--------------------------------|---------------------------|-------------------------------------|-----------------------------------|
| 900                       | 60 x 12                   | 3.1                      | 4 x 6m                                 | 24                             | 27                        | 26                                  | 0.9                               |
| 1050                      | 60 x 12                   | 3.6                      | 4 x 6m                                 | 24                             | 27                        | 23                                  | 1.0                               |
| 1200                      | 80 x 12                   | 4.1                      | 3 x 6m                                 | 18                             | 27                        | 21                                  | 0.9                               |
| 1350                      | 80 x 12                   | 4.6                      | 3 x 6m                                 | 18                             | 27                        | 19                                  | 0.9                               |
| 1500                      | 80 x 12                   | 5.1                      | 3 x 6m                                 | 18                             | 27                        | 18                                  | 1.0                               |
| 1800                      | 80 x 12                   | 6.1                      | 3 x 6m                                 | 18                             | 27                        | 17                                  | 1.1                               |
| 2100                      | 120 x 12                  | 7.0                      | 2 x 6m                                 | 12                             | 27                        | 14                                  | 0.9                               |
| 2400                      | 120 x 12                  | 8.0                      | 2 x 6m                                 | 12                             | 27                        | 13                                  | 0.9                               |
| 2700                      | 120 x 12                  | 9.0                      | 2 x 6m                                 | 12                             | 27                        | 12                                  | 1.0                               |
| 3000                      | 120 x 12                  | 10.0                     | 2 x 6m                                 | 12                             | 27                        | 11                                  | 1.1                               |









### Manholes with Rebated or Ogee Joints

| Manhole<br>Diameter<br>DN | Cross<br>section<br>a x b mm | Length<br>per joint<br>m | Reels per<br>carton<br>no. x<br>length | Metres per<br>carton (m) | Approx ctn. wt<br>(kg) | Length per 1<br>litre primer<br>(m) | Primer req'd<br>per carton<br>(L) |
|---------------------------|------------------------------|--------------------------|--|--------------------------|------------------------|-------------------------------------|-----------------------------------|
| 900                       | 25 x 20                      | 3.1                      | 8x 4m                                  | 32                       | 25                     | 50                                  | 0.6                               |
| 1050                      | 25 x 20                      | 3.6                      | 8 x 4m                                 | 32                       | 25                     | 42                                  | 0.8                               |
| 1200                      | 30 x 22                      | 4.1                      | 7 x 3.5m                               | 24.5                     | 25                     | 38                                  | 0.6                               |
| 1350                      | 30 x 22                      | 4.6                      | 7 x 3.5m                               | 24.5                     | 25                     | 36                                  | 0.7                               |
| 1500                      | 30 x 22                      | 5.1                      | 7 x 3.5m                               | 24.5                     | 25                     | 33                                  | 0.7                               |
| 1800                      | 30 x 22                      | 6.1                      | 7 x 3.5m                               | 24.5                     | 25                     | 31                                  | 0.8                               |
| 2100                      | 40 x 25                      | 7.0                      | 5 x 3m                                 | 15                       | 23                     | 26                                  | 0.6                               |
| 2400                      | 40 x 25                      | 8.0                      | 5 x 3m                                 | 15                       | 23                     | 24                                  | 0.6                               |
| 2700                      | 40 x 25                      | 9.0                      | 5 x 3m                                 | 15                       | 23                     | 23                                  | 0.7                               |
| 3000                      | 40 x 25                      | 10.0                     | 5 x 3m                                 | 15                       | 23                     | 21                                  | 0.7                               |



Solco, Unit 51, Portmanmoor Road Industrial Estate, Ocean Park, ardiff, CF24 5HB

enquiries@Solco.co.uk

www.solco.co.uk

3



# **Application:**

### PRIMING

All joint faces must be clean and dry and any loose material must be removed. Possible surface moisture should be removed with a blow-torch. Then Soljoint Bitumen Jointing Strip Primer is brushed onto both sides of the joint. (Avoid the caulking groove present on some culverts). Primer is allowed to dry before starting the Soljoint Bitumen Jointing Strip installation. Non-disposable brushes can be cleaned in white spirit.

### APPLICATION

After the primer has dried apply Soljoint Bitumen Jointing Strip within 8 hours, ensuring that all joint faces are clean and dry. It may be necessary to warm Soljoint Bitumen Jointing Strip with a blow-torch to increase tack. Apply Soljoint Bitumen Jointing Strip of the correct size to the joint, as shown in the drawings page 2, taking care to discard the interleaving paper. On box culverts and ogee pipes heat the surface of the Soljoint Bitumen Jointing Strip with the flame of a gas torch to obtain initial adhesion if needed. Don't heat more than to get the surface glossy.

### POSITIONING OF SOLJOINT BITUMEN JOINTING STRIP

On box culverts position the trapezoidal section of Soljoint Bitumen Jointing Strip to cover the sloping face of the socket. The traditional rectangular cross-sections which are smaller and should be positioned on the middle of the sloping face of the socket. On ogee pipes position the Soljoint Bitumen Jointing Strip on the sloping face of the spigot.

### JOINING SOLJOINT BITUMEN JOINTING STRIP

On manholes, box culverts and ogee pipes join the ends of the strip in a scarf joint by overlapping the ends then cutting through at 45° with a hot knife, playing a flame on the cut faces and smoothing over. On box culverts cut the strip into the corners with a mitre joint.

#### MANHOLES AND INSPECTION CHAMBERS

On manholes with tongued and grooved joints of DN 1350 to 3000, use a double strip on the base and top joints. On all manholes and inspection chambers trim off any excess compound which extrudes internally. On manholes the imposed loading from the upper units should be sufficient to compress the Soljoint Bitumen Jointing Strip. Ensure that the Soljoint Bitumen Jointing Strip is compressed by at least half its thickness before any water test.

#### **BOX CULVERTS AND OGEE PIPES**

On box culverts and ogee pipes close the joint to an internal gap of 10 mm using a mechanical cable puller. The trapezoidal (wedge shaped) Soljoint Bitumen Jointing Strip will fill the joint in the middle and inside on box culverts and in the middle and outside on ogee pipes. Any squeeze-out should be cut off and smoothed flush to the wall or the back of the caulking groove if there is a secondary sealant.

### LEAKAGE

If a joint should leak, check for the absence of primer, gaps between the ends of the strips or poor fit between the concrete units.

# BEFORE USE, CONSULT THE SAFETY DATA SHEET OF THE PRODUCT.

Solco, Unit 51, Portmanmoor Road Industrial Estate, Ocean Park, Cardiff, CF24 5HB

