

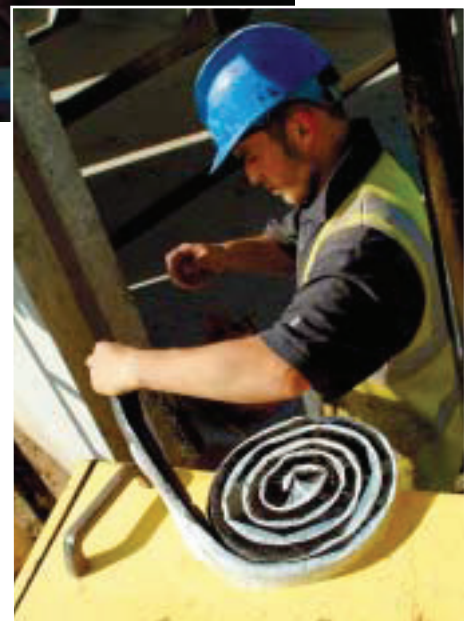
Bitumen Sealings Oy

JouleBitumi



Elastostrip

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



Elastostrip Polymer Modified Bituminous Joint Sealant

Elastostrip is a polymer modified bituminous compound incorporating temperature extenders.

Elastostrip is made in various cross-sections 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.

Elastostrip is resistant to sulphates, acids, alkalis, salts, groundwater, trade effluent, grease, sewage and micro-organism.

Elastostrip 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. Elastostrip is supplied in rolls with siliconized release plastic.

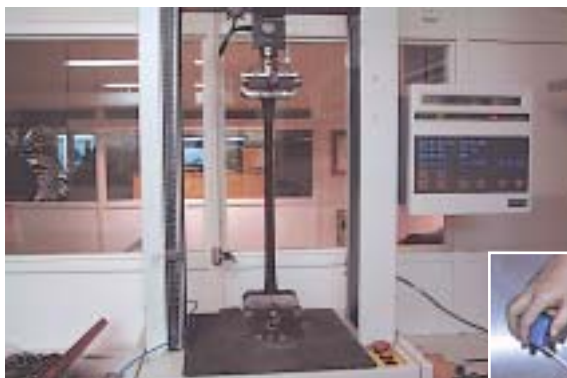
Elastostrip is created after many years of research and development work made together with leading precast concrete manufacturers. Elastostrip has been tested in applicable parts based on standards like DIN 4062 and functional needs. Also tests are carried out by concrete manufacturers showing that Elastostrip 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.

Separate test report is available from the manufacturer.

Properties

Composition	polymer modified bituminous incorporating temperature extenders, elastomer and mineral powder
Specific gravity	1,46 g/cm ³ at 25°C
Specific volume	685 cm ³ /kg
Colour	black
Temperature range	application -5° to +40°C
Water tightness	minimum 0,5 bar / 15 mins at 20°C, 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 resistance	excellent

Determination of elongation at break at 20°C.



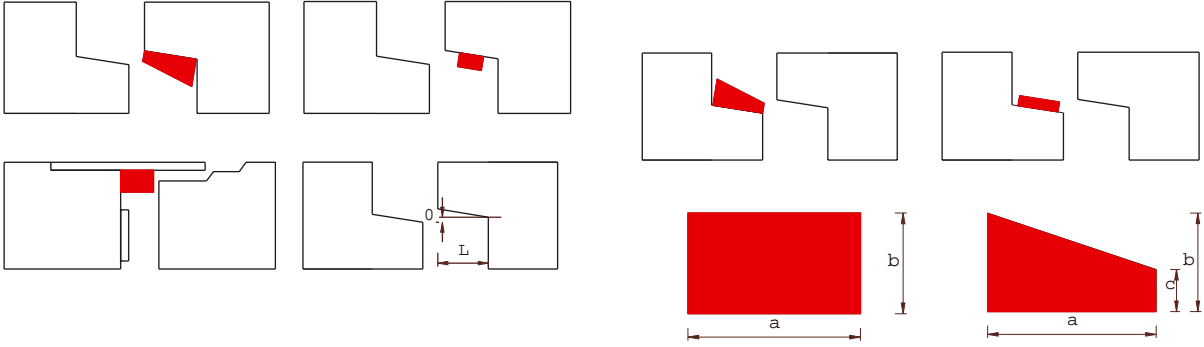
Determination of low temperature flexibility.

Water tightness test showing that the pipe barrel leaks before the joint.



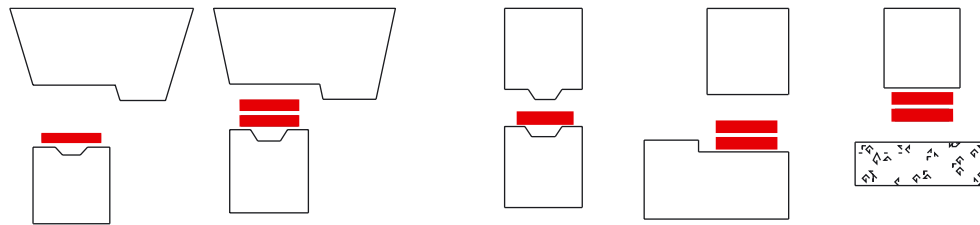
Box culverts joints

Socket Nib Length x offset L x 0 mm	Elastostrip cross-section a x b x c/axb mm	Elastostrip cross-section area sq mm	Reels per carton no. x length	Metres per carton m	Approx weight per carton kg	Elastostrip length per 1 litre primer L	Elastostrip primer req'd per carton
Trapezoidal Elastostrip							
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 Elastostrip							
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
75 x 10	40 x 25	1000	5 x 3m	15	23	20	0,8



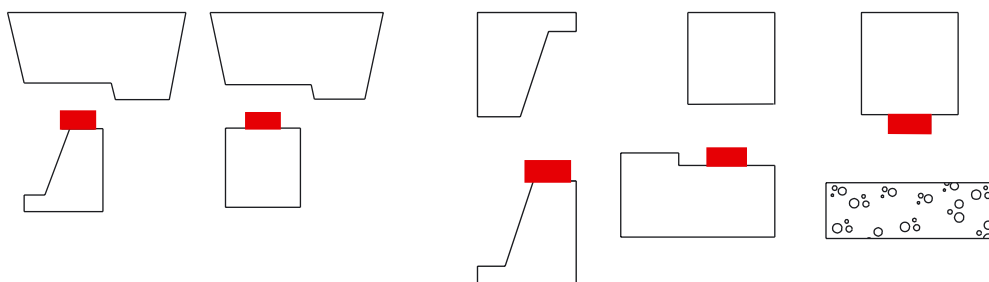
Manholes with tongued and grooved joints

Manhole Diameter DN	Elastostrip cross-section a x b mm	Length per joint m	Reels per carton no. x length	Metres per carton m	Approx ctn. wt kg	Elastostrip length per 1 litre primer m	Elastostrip primer req'd per carton 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 Diameter DN	Elastostrip cross-section a x b mm	Length per joint m	Reels per carton no. x length	Metres per carton m	Approx ctn. wt kg	Elastostrip length per 1 litre primer m	Elastostrip primer req'd per carton L
900	25 x 20	3,1	8 x 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



Elastostrip 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 Elastostrip 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 Elastostrip installation. Non-disposable brushes can be cleaned in white spirit.

Application

After the primer has dried apply Elastostrip within 8 hours, ensuring that all joint faces are clean and dry. It may be necessary to warm Elastostrip with a blow-torch to increase tack.

Apply Elastostrip of the correct size to the joint, as shown in the drawings page 3, taking care to discard the interleaving paper.

On box culverts and ogee pipes heat the surface of the Elastostrip 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 Elastostrip

On box culverts position the trapezoidal section of Elastostrip 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 Elastostrip on the sloping face of the spigot.

Joining Elastostrip

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 Elastostrip. Ensure that the Elastostrip 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) Elastostrip 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 to 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.



Bitumen Sealings Oy

JouleBitumi



Elastostrip sealant for precast concrete box culverts and manholes.

Bitumen Sealings Oy
Joule-Bitumi
Peltopolku 2
03400 Vihti
Finland
Info@BitumenSealings.com
www.BitumenSealings.com