

# AQUASTRIP®

High Performance Sealant for  
Precast Concrete Units



## USES AND DESCRIPTION

AQUASTRIP is an easy to use, high performance and cost-effective sealant for jointing precast concrete manholes, inspection chambers, shafts, caissons, ogee pipes and box culverts. Developed for Aquatecnic Limited and tested to BS, EN, ISO, DIN and ASTM Standards, AQUASTRIP provides

a flexible and watertight seal against pressures in excess of 5,0bar.

AQUASTRIP is a polymer modified bituminous compound incorporating temperature extenders. Used with rapid drying AQUASTRIP Primer for increased adhesion.

## ADVANTAGES

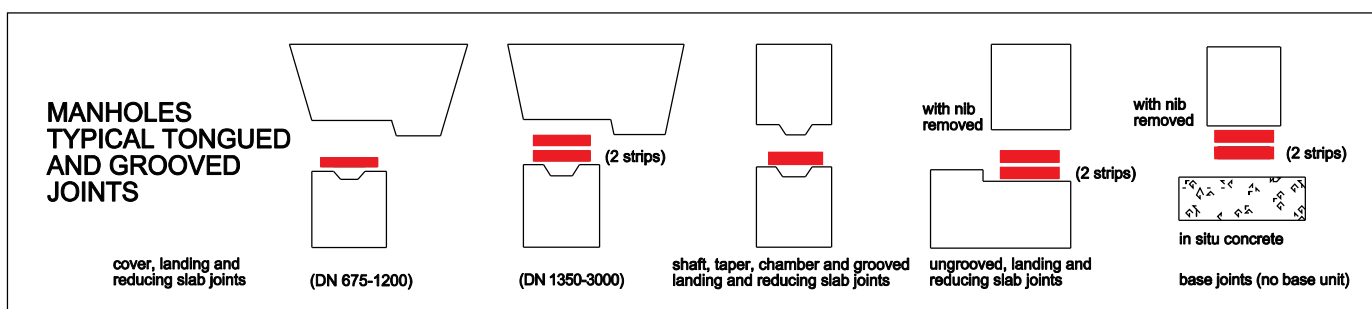
- Composition recommended by BS 6213: 1982 for jointing concrete, culverts, subways, water retaining and water excluding structures.
- Tested to BS EN 1917 – the new UK and European Standard for Concrete Manholes and Joints. Performance easily exceeds the 0,5bar /15 mins water test. Enables the concrete manufacturer to supply units complying with the new Standard. • Made in various cross-sections designed to seal all types and sizes of joints in manholes, inspection chambers, ogee pipes and box culverts.
- In manholes AQUASTRIP meets the joint sealant requirement of FWR Materials Selection Manual 1993, UKWIR "CESWI" 5th Ed 1998 and WRc Sewers for Adoption 5th Ed 2001.
- In box culverts AQUASTRIP meets the joint sealant requirements of CIRIA Culvert Design Guide 1997 and

- Highways Agency Design Standard BD 31 2001.
- AQUASTRIP has a wide temperature range with improved flexibility in cold weather for easier application and jointing.
- Plastoelastic properties and high adhesion provide a permanent watertight seal during and after settlement, ground movement, side loadings, etc. as required by BS EN 752-3: 1997, the UK and European Standard for Drains and Sewers.
- Resistant to sulphates, acids, alkalis, salts, groundwater, trade effluent, grease, sewage and micro-organisms.
- AQUASTRIP enables the contractor to install watertight manholes, inspection chambers, drainage pipelines and culverts quickly and economically without the need for in situ concrete surrounds while still meeting full life cycle durability requirements.

## PROPERTIES

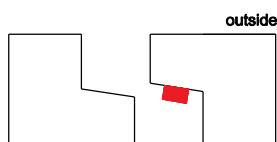
GENERAL	
Composition	polymer modified bituminous compound incorporating temperature extenders, elastomer and mineral powder
Specific gravity	1,46 g/cm <sup>3</sup> at 25° C
Temperature range	application -5° to + 40° C, service -20° to + 50° C
Water tightness	minimum 0,5 bar / 15 mins at 20° C (BS EN 1917), tested to 5,0 bar/15 mins at 20° C
Water absorption	0,025% (DIN 4062)
Chemical resistance	very good (acids and alkalis pH 2 to 12)
Microbiological resistance	excellent
Root resistance	fully resistant (DIN 4062, The Building Regulations)
PACKING	
cartons measure	360 x 360 x 260 (high) mm

## CROSS-SECTIONS



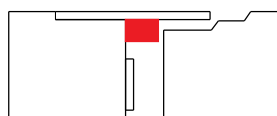
AQUASTrip cross-sections and sizes are designed to fit the tongued and grooved, rebated or ogee joints of all makes and sizes of precast concrete manhole and inspection chamber sections and slabs to BS 5911 Parts 2 & 200, and BS 5911-1, -3 & -4 and BS EN 1917.

### BOX CULVERTS AND OGEE PIPES



AQUASTrip cross-sections and sizes are designed to fit all makes and sizes of precast concrete box culverts made to the Box Culvert Association's Standard Specification 1991. Also all precast concrete rebated and ogee pipes BS 5911:110. 5911

### JACKING PIPES



AQUASTrip is designed to serve as a secondary seal on straight runs of all makes and sizes of precast concrete jacking pipes to BS 5911:120, and BS 5911-1.

### PRIMING

After ensuring that the joint faces are clean and dry and any loose material is removed, brush AQUASTrip Primer onto both sides of the joint. (Avoid the caulking groove present on some culverts). Allow 10 to 20 minutes to dry. Non-disposable brushes can be cleaned in White spirit. Refer to AQUASTrip Primer data on back page of this leaflet.





## APPLICATION

After AQUASTRIP Primer has dried apply AQUASTRIP within 8 hours, ensuring that all joint faces are clean and dry.

Apply AQUASTRIP of the correct size (see following tables) to the joint as shown in the drawings above, taking care to discard the interleaving paper.

On box culverts and ogee pipes heat the surface of the AQUASTRIP with the flame of a gas torch to obtain initial adhesion.

On box culverts position the AQUASTRIP on the middle of the sloping face of the socket.

On ogee pipes position the AQUASTRIP on the sloping face of the spigot.

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.

On manholes with tongued and grooved joints of DN 1350 to 3000, use a double strip on the base and top joints (see drawings above). 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 AQUASTRIP.

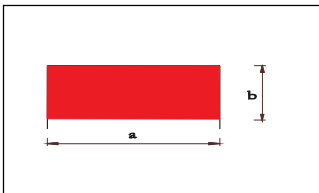
Ensure that the AQUASTRIP is compressed by at least half its thickness before any water test.

On box culverts and ogee pipes close the joint to an internal gap of 10mm using a mechanical cable puller. 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.

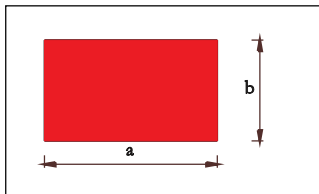
If a joint should leak, check for the absence of primer, gaps between the ends of the strip or poor fit between the concrete units.

## SIZES, QUANTITIES AND PACKING

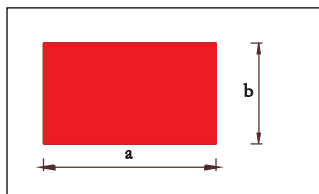
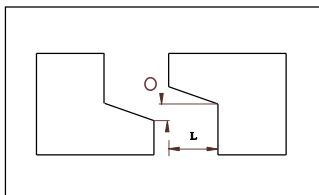
### MANHOLES WITH TONGUED AND GROOVED JOINTS



### MANHOLES WITH REBATED OR OGEE JOINTS



### BOX CULVERT JOINTS



Manhole Diameter DN	Aquastrap cross-section a x b mm	Length per joint m	Reels per carton no. x length	Metres per carton m	Approx ctn. wt kg	Length per 1 litre primer m	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

Manhole Diameter DN	Aquastrap cross-section a x b mm	Length per joint m	Reels per carton no. x length	Metres per carton m	Approx ctn. wt kg	Length per 1 litre primer m	Primer req'd per carton 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	25 x 20	4,1	8 x 4m	32	25	38	0,6
1350	25 x 20	4,6	8 x 4m	32	25	36	0,7
1500	40 x 25	5,1	5 x 3m	15	23	33	0,7
1800	40 x 25	6,1	5 x 3m	15	23	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

Socket Nib Length x offset L x O mm	Aquastrap cross-section a x b x c/axb mm	Cross-section area sq mm	Reels per carton no. x length	Metres per carton m	Approx carton weight kg	Length per 1 litre primer m	Primer req'd per carton L
70 x 7	30 x 22	660	7 x 3,5m	24,5	25	20	1,5
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

Note: Cross-sectional dimensions are only approximate. Strip length : -1% to +3% of nominal dimension. Volume of strip is not less than of the nominal dimensions.

## STORAGE

AQUASTRIP is supplied in cartons on pallets and should have no load placed on top. Storage temperature range -5° C to +35° C.

Storage life 3 years from date of manufacture. In cold weather AQUASTRIP should be kept in the warm prior to use (in very cold weather the strip can be heated during application).

## AQUASTRIP PRIMER

For priming the joints of precast concrete manholes, inspection chambers, box culverts and pipes prior to the applications of AQUASTRIP.

AQUASTRIP Primer is a solution of bitumen in petroleum spirit.

- is a rapid drying primer used in conjunction with AQUASTRIP.
- penetrates the surface of concrete joint faces so as to provide a water barrier.
- dries to form a surface coating which seals the substrate/sealant interface and creates an adhesive bond to AQUASTRIP.



## PRIMER PROPERTIES

Solvent	Petroleum spirit
Boiling range of solvent	130°C
Flash point (DIN 51758)	30°C
Density (DIN 51757)	approx 0,9g/cm <sup>3</sup>
Solids content	approx 52%
Drying time	10 to 20 minutes depending on temperature and air movement
Usage(average)	1 litre/5 sq metres or 1litre / 11 to 50 linear metres of AQUASTRIP depending on size and joint
Hazardous goods class	class 3. flammable
Unit size	5 litre

## APPLICATION

- Application temperature -10°C to 50°C.
- Before use stir thoroughly in original container.
- Before application ensure that joint surfaces are clean and dry.
- Application by brush
- After use close container firmly.
- Clean non-disposable brushes in white spirit.

## HEALTH AND SAFETY (EU DIRECTIVE 91/155/EEC)

Risk and Safety Clauses:

- R10 Flammable
- S7 Keep container tightly closed
- S16 Keep away from sources of ignition – No smoking.
- S29 Do not allow the liquid to get into sewerage system.
- S43 Use powder fire extinguishing agents (not water) for extinguishing.
- S51 If possible, work outdoors or in ventilated rooms (For further information refer to MSDS).

## AVAILABILITY

Aquastrip and Aquastrip Primer are available from Aquatecnic in the UK and from Contech Accessories in Ireland:



**aquatecnic**

Unit 211 Heathall ind.est  
Dumfries, DG1 4PH  
Tel: 0845 2268283 Fax: 08452268293  
info@aquatecnic.net  
www.aquatecnic.net

**Contech**  
ACCESSORIES

Lough Feilim ind.est  
Carlow Road, Tullow, Co.Carlow  
Tel: 05991 51350 Fax: 05991 52793  
sales@contech-accessories.ie  
www.contech-accessories.ie