BUILDING TRUST

PRODUCT DATA SHEET

Sika Waterbar®-940

(formerly MSeal 940)

Centrally and externally placed PVC Waterstops

PRODUCT DESCRIPTION

Sika Waterbar®-940 is a range of centrally placed and externally placed PVC Waterstops extruded from high grade PVC compound.

USES

Sika Waterbar®-940 is designed to provide a complete sealing network for expansion and contraction/ construction joints in water retaining and water excluding in-situ concrete structures. The profiles are supplied in straight lengths to be butt jointed on site. Factory made intersections are available for complex junctions.

- Canals/ culverts
- Water tanks
- Reservoirs
- Dams
- Sewerage Treatment Plants
- Liquid retaining vessels
- All cast in-situ concrete structures to retain or exclude water

CHARACTERISTICS / ADVANTAGES

- Permanent flexibility
- Homogeneous waterbar
- Suitable for low to medium levels of hydrostatic water pressure
- Resistant to all natural mediums in soil and groundwater
- Robust products designed for handling and installation on site
- Suitable for thermal welding on site

APPROVALS / STANDARDS

- ASTM D 638 : 91 (Tensile/ Elongation)
- US Corps of Engineers CRD-C572-74 (Alkali Resistance)
- Instron Tensometer (Extension/ Transverse Shear)

PRODUCT INFORMATION

Chemical Base	PVC-P (plasticized)

Packaging

Standard Profile:	Width (mm)	Roll size
IEJ (Internal Expansion Joints)	150 , 200 and 250	15 m
ICJ (Internal Construction / Contraction Joints)	150 , 200 and 250	15 m
EEJ (External Expansion Joints)	150 , 200 and 250	15 m
ECJ (External Construction / Contraction Joints)	150 , 200 and 250	15 m
Special profile with 10 mm thick:		
ICJ/X	250	10 m
IEJ/X	250	10 m
EEJ/X	250	10 m
ECJ/X	250	10 m

- 320 mm and 350 mm special size available for some profiles, please contact Sika presentative.
- For detailed shape and illustration of waterbar options, please refer to General Method Statement.

Shelf Life	Up to 60 months from date of production.
Storage Conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5°C and +35°C. Protect from direct sunlight, heat and moisture.
Color	Blue or Yellow

TECHNICAL INFORMATION

Shore A Hardness	75 - 80		(DIN 53505)
Tensile Strength	~15 N/mm²		(ASTM D638)
Elongation at break	~350 %		(ASTM D638)
Chemical Resistance	Alkali	Pass	
	Hydrocarbon	Pass	

APPLICATION INFORMATION

Ambient Air Temperature	+5°C min. / +35°C max.

System Structure

Sika Waterbar®-940 IEJ:
Expansion bulb sections principally for expansion joints . With reinforced eyeleted fixing flanges for wiring the waterstop to surrounding rebar.
Sika Waterbar®-940 ICJ:
Plain web sections for construction / contraction joints, also with reinforced eyeleted flanges and grout check fins to prevent grout loss from formwork.With reinforced eyeleted fixing flanges for wiring the waterstop to surrounding rebar.
Sika Waterbar®-940 EEJ:
Sections have a flat top, wedged expansion box for positive anchorage and good seating of joint fillers, The bottom web in the expansion box is thinned to cater for excessive subsidence or seismic movement should it occur.
Sika Waterbar®-940 ECJ:
Sections are plain web incorporating grout check fins to prevent grout loss at formwork.
Sika Waterbar®-940 250 ICJ/X - 250 IEJ/X - 250 EEJ/X - 250 ECJ/X:
10 mm thick web profiles for applications where there is high water pressure or head of water in excess of 70 m. Internal profiles include reinforced eyeleted fixing flanges.
Intersection Pieces / Junctions:
Standard factory produced welded intersections are available for all Sika Waterbar®-940 profiles if needed:

Horizontal – flat miters	Sika Waterbar®-942 IEJ Sika Waterbar®-942 EEJ Sika Waterbar®-942 ICJ Sika Waterbar®-942 ECJ
Vertical – edge miters	Sika Waterbar®-942 IEJ V Sika Waterbar®-942 EEJ V Sika Waterbar®-942 ICJ V Sika Waterbar®-942 ECJ V
Horizontal – flat 3way section	Sika Waterbar®-943 IEJ Sika Waterbar®-943 EEJ Sika Waterbar®-943 ICJ Sika Waterbar®-943 ECJ
Vertical - 3way section	Sika Waterbar®-943 IEJ V Sika Waterbar®-943 EEJ V Sika Waterbar®-943 ICJ V Sika Waterbar®-943 ECJ V
Horizontal - flat 4way joint	Sika MultiSeal®-944 IEJ Sika MultiSeal®-944 EEJ Sika MultiSeal®-944 ICJ Sika MultiSeal®-944 ECJ
Vertical - 4way section	Sika MultiSeal®-944 IEJ V Sika MultiSeal®-944 ICJ V

BASIS OF PRODUCT DATA

- Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.
- Internal Reference - Version: MBS_CC-UAE/ SI_940_11_19/v12/09_21/v13/07_22/v14/01-24

AVAILABILITY/WARRANTY

General Method Statement (GMS)

LIMITATIONS

SIZE OF WATERSTOP

- The choice of width of profile is mainly governed by slab/ wall thickness, position of reinforcing steel and aggregate size.
- As a general rule, the 250mm width profiles are appropriate for slab/ wall thickness over 250mm, allowing good compaction and width of barrier to water penetration.
- For concrete members less than 250 mm the use of a smaller profile approximating to the actual slab or wall thickness will be appropriate.

COMPOSITE INTERSECTIONS

- These are required when a change from horizontal to vertical occurs in the same type of joint i.e. from slab expansion to wall expansion joint or slab contraction to wall contraction joint EEJ to IEJ ECJ to ICJ.
- If a composite edge mitre is needed, simply cut off one of the horizontal legs.

ENVIRONMENTAL, HEALTH AND SAFETY

This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in the product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0,1 % (w/w).

APPLICATION INSTRUCTIONS

EQUIPMENT

- Heat welding equipment is required to enable site jointing to be carried out efficiently.
- Ensure that the mating surfaces of the waterstop are accurately aligned while the heater blade heats the waterstop to the necessary temperature for jointing.

APPLICATION

- Sika Waterbar®-940 ICJ & IEJ profiles must be installed so they are securely held in the correct position whilst the concrete is poured.
- The concrete must be fully and properly compacted around the waterstops.
- Where reinforcement is present, an adequate clearance must be left between this and all waterstops to permit proper compaction of the concrete.
- The eyelets in the reinforced flanges of the ICJ and IEJ profiles allow them to be wired to the surrounding reinforcing steel. The eyelets are an integral part of the profiles and being placed outside the outer valves cannot create a water path around the profile or impair the efficiency in performance in any way. See typical detail below.
- Sika Waterbar®-940 ECJ & EEJ profiles when used on ground slab blinding concrete where a permanent, firm and stable support is given usually require no fixing.
- The profile is simply laid centrally over the line of the joint to be formed.
- Fixing to vertical shuttering is simplified by nailing with double headed nails through the outer reinforced flange to provide a firm fixing as shown below.

HEAT WELDING OF WATERSTOPS

- Make sure that the heater blade is clean, plug it into the correct voltage electricity supply and leave in a safe position to warm up.
- Ensure that the ends of the waterstop to be jointed are of the same width and profile; clean them with water or MasterTop THN 2 and dry them.
- Clamp them in the correct profile slots of the jig provided and cut both ends off square with a sharp knife, flush with the faces of the jig.
- Note: An allowance must be made for waste and for the 5 to 10mm that will be taken up by melting when calculating the length of waterstop required.
- Loosen the jig and slide them back so that approximately 10mm of each waterstop end projects and then clamp the jig tightly in position.
- Position the heater blade on the bars between the jigs and slide them together until the waterstop ends are pressed firmly against the sides of the blade. The PVC should melt without burning or charring. Hold the jig firmly in position until a bead of molten PVC approximately 3mm in diameter appears along either side of the heater blade.
- Slide the jig apart a little and remove the heater blade with an upward movement. This will ensure that it takes as little PVC as possible with it. Quickly joint the molten ends by sliding the jig together and exerting pressure. Approximately 20 seconds to allow the molten PVC to fuse completely. Switch off the heater blade. While it is still hot, clean thoroughly with emery paper or a wire brush ready for the next joint. Unclamp the jig and carefully remove the waterstop. Do not flex the joint until it has cooled. The joint is now complete. When cold, test it by flexing the waterstop several times.

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- **KEEP CONTAINER TIGHTLY CLOSED**
- **KEEP OUT OF REACH OF CHILDREN**
- **NOT FOR INTERNAL CONSUMPTION**
- **FOR INDUSTRIAL USE ONLY**
- **FOR PROFESSIONAL USE ONLY**

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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