

Hydroseal FS

High performance waterproof jointing system (Formerly known as Hydroseal FS Plus)



DESCRIPTION

Hydroseal FS is a highly elastic, hydrophobic and chemically resistant TPO (Thermal-plastic Poly-olefin) material used in conjunction with Quickmast 341/341C/SB as an epoxy adhesive to seal joints and cracks having large movement capability.

Hydroseal FS is designed to provide a high performance and durable seal for construction joints, expansion/contraction joints and cracks, and will remain flexible even at low temperatures. The system maintains a watertight seal, while allowing for variable and high levels of movement in one or more directions.

APPLICATIONS

Sealing all types of joints and cracks in many different structures and applications including:

- » Water retaining structures.
- » Drinking water reservoirs.
- » Tunnels and culverts.
- » Hydroelectric power plants.
- » Sewage treatment plants.
- » Basements.
- » Swimming pools.

Sealing of:

- » Movement joints.
- » Construction joints.
- » Building components where differential settlement is expected.
- » Pipe penetrations.
- » Cracks.

ADVANTAGES

- » Exceptional adhesion on all common building materials.
- » Easy application.
- » Easy repair.
- » Economic solution.
- » Permanently elastic, even at low temperatures.
- » Seals large and small irregular joints, even with high movement.
- » Resists many chemicals.
- » Ozone resistant.
- » Non-toxic, approved for contact with potable water.
- » No priming.

STANDARDS

Hydroseal FS is suitable for use in contact with potable water when tested in accordance to BS 6920.



TECHNICAL PROPERTIES:

Colour:	Grey
Density:	0.93 kg/m ²
Shore A hardness	90 ± 5
Tensile strength: ASTM D412	≥ 12 MPa
Elongation at Break: ASTM D412	≥ 600%
Bond Strength:* ASTM D4541	≥ 4 MPa
Tear Strength: ASTM D624, Die C	≥ 60 N/mm
Resistance to water pressure: DIN EN 1928-B	≥ 4 bars
Service temperature:	-30 to 90°C

** Bond strength achieved using Quickmast 341/341C/SB over C50/60 concrete substrate, other results may be achieved using a different adhesive or concrete grade.*

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METHOD OF USE

JOINTING SYSTEMS

To form a continuous joint of Hydroseal FS, conventional heat welding with hot-air-dryers should be used. It is important to select a low temperature setting (approximately 1500 watt/340°C) so that only the surface of the tape melts in order not to affect the tightness of the product.

Parts to be welded should be roughened or sanded.

SURFACE PREPARATION

To obtain a satisfactory bond, concrete must be structurally sound with a clean surface, free from dust, laitance, oils, paint or other contamination.

Mechanical preparation should be used to remove laitance and surface contamination. Metal surfaces should be thoroughly degreased and grit blasted to reach a bright finish meeting the requirement of swedish standard SA 2 ½.

MIXING

Quickmast 341/341C/SB comprises two components, a resin base and hardener, which is supplied, pre-weighed in the correct proportions. Under no circumstances should part mixing be carried out.

When required for application, the two components should be mixed well until a uniform consistency and colour are obtained, this should ideally be carried out using a mechanical mixer.

In cold weather, mixing will be aided if the containers are stored in a warm environment before use.

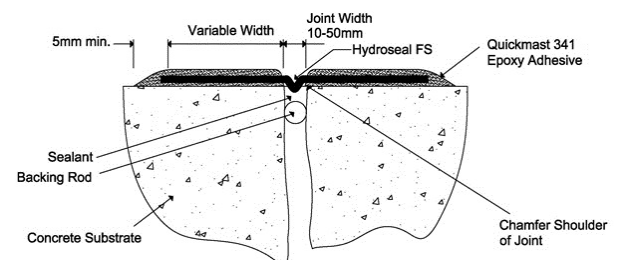
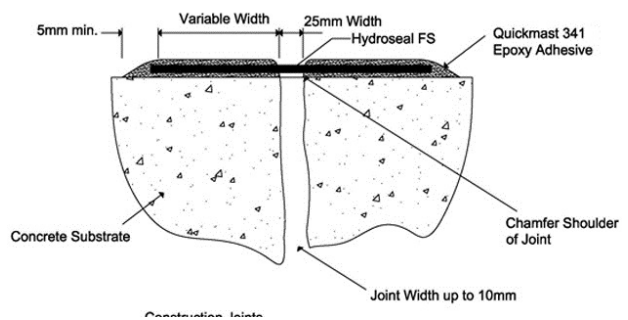
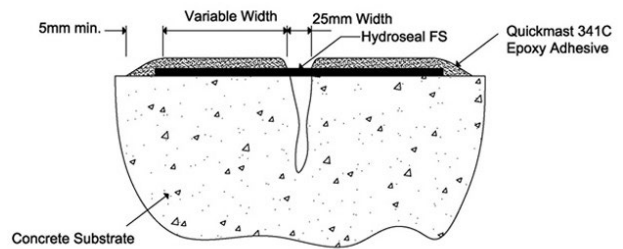
APPLICATION

- » Prepare joint and surrounding surface in excess of the Hydroseal FS to be used.
- » Apply masking tape onto joint/crack and to outer edges of area to receive Hydroseal FS.
- » Apply the epoxy adhesive to the prepared surface on each side of the joint/crack at 1 - 2 mm thickness.
- » Position Hydroseal FS firmly into the coated surface by rolling under pressure, ensuring the epoxy adhesive is forced through edge perforation.
- » Apply a top coat of the epoxy adhesive over membrane width at 1 - 2 mm thick, extending surplus to approximately 20 mm outer the membrane sides.
- » Remove outer masking tapes before curing. Feather the edges if necessary.

CHEMICAL RESISTANCE

Tests were carried out after storage over 28 days @ room temperature:

Hydrochloric Acid 3%	Resistant
Sulphuric Acid 35%	Resistant
Citric Acid 100 g/ltr	Resistant
Lactic Acid 5%	Resistant
Potassium Hydroxide 3%	Resistant
Potassium Hydroxide 20%	Resistant
Sodium Hypochlorite 0.3g/ltr	Resistant
Salt Water (20 g/ltr Sea Water Salt)	Resistant
Domestic sewage	Resistant



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TAPE SIZE SELECTION CHART

WATER PRESSURE	MOVEMENT	JOINT WIDTH		
		Up to 50 mm	50 - 75 mm	75 - 100 mm
Positive water pressure < 1.5 bars	0 mm	FS 1510	FS 2010	FS 2010
	Up to 20 mm	FS 1510	FS 2010	FS 2010
	Up to 50 mm	-	FS 2510	FS 3010
	Up to 50 mm	-	FS 2510	FS 3010
Positive water pressure ≥ 1.5 bars	0 mm	FS 1520	FS 2020	FS 2020
	Up to 20 mm	FS 1520	FS 2020	FS 2520
	Up to 50 mm	-	FS 2520	FS 3020

Note: Consult DCP's Technical Department for the best tape size under negative water pressure conditions.

LIMITATIONS

- › If joints will be subjected to positive water pressure, the tape must be supported in the joint by either a joint sealant or hard foam.
- › If the tape is exposed to negative water pressure it must be supported with a steel plate fixed on one side.
- › For optimum performance, mechanical damage of Hydroseal FS tape must be avoided.

CURING

After the Hydroseal FS application has been carried out, the adhesive should be allowed to cure and harden for 24 hours at 20°C before allowing any trafficking over the joint.

CLEANING

Clean uncured Quickmast 341/341C/SB with DCP Solvent. Cured material can only be removed mechanically.

PACKAGING

Hydroseal FS1510: 150 mm x 1 mm (20 m/Roll).
Hydroseal FS2010: 200 mm x 1 mm (20 m/Roll).
Hydroseal FS2510: 250 mm x 1 mm (20 m/Roll).
Hydroseal FS3010: 300 mm x 1 mm (20 m/Roll).
Hydroseal FS1520: 150 mm x 2 mm (20 m/Roll).
Hydroseal FS2020: 200 mm x 2 mm (20 m/Roll).
Hydroseal FS2520: 250 mm x 2 mm (20 m/Roll).
Hydroseal FS3020: 300 mm x 2 mm (20 m/Roll).

Other sizes are available upon request.

STORAGE

Hydroseal FS has a shelf life of 12 months from date of manufacture if stored away from direct sunlight and in dry conditions.

If these conditions are exceeded, DCP Technical Department should be contacted for advise.

CAUTIONS

Refer to the Material Safety Data Sheet prior using Hydroseal FS.



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A wide range of construction chemical products are manufactured by DCP which include:

- » Concrete admixtures.
- » Surface treatments
- » Grouts and anchors.
- » Concrete repair.
- » Flooring systems.
- » Protective coatings.
- » Sealants.
- » Waterproofing.
- » Adhesives.
- » Tile adhesives and grouts.
- » Building products.
- » Structural strengthening.

Note:

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.