

Diasen WATSTOP

Epoxy-Cement Waterproofing Mortar & Slurry

Rev 5 - 15th January 2023
 Code: 110

INTRODUCTION

Manufactured by Diasen S.R.L. of Sassoferrato, Italy, [Diasen WATstop](#) is a three-component, fibre-reinforced cement/epoxy product that, when mixed, produces a workable mortar suitable for surface repair and surface smoothing. With the addition of up to 40% water, a paint/slurry-like consistency can be achieved that is suitable for numerous applications including the damp proofing of walls and slabs and the waterproofing of concrete structures.

APPLICATION



PROPERTIES*

H - Hardness and Durability; E - Elasticity and Flexibility; V - Vapour Resistivity; C - Curing and Drying; W - Working Time; U - UV Stability



* Green is longer or greater, red is less or lower

PACKAGING



Three-component

COVERAGE

Dependent on use.
 Please see table on page 2.

KEY BENEFITS

- Multipurpose solution
- Resistant to up to 9.5 bar of positive and negative pressure
- Excellent adhesion to the most common surfaces used in construction
- Solvent-free
- If applied by trowel it can be applied in just one coat
- If applied by roller or brush it can be applied in one or two coats depending on the coverage

TYPICAL APPLICATIONS

- Surface repair to concrete
- Smoothing of concrete and mortar
- Damp proofing of slabs and walls
- Waterproofing of concrete structures such as lift pits and swimming pools



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TECHNICAL DATA

Features	Result	Units				
Form	Semi-dense paste					
Colour	Black					
Density/Specific Gravity	1.34					
Packaging – Bucket	5 & 10	kg				
Shelf life	12	Months				
Pot life at 20°C and 40% relative humidity	2	Hours				
Application rate – Mortar (As mixed)	Depends on surface irregularities					
Application rate – Primer (Water added up to 40% of volume)	0.3	kg/m ²				
Application rate – Floor DPM (Water added as above)	1.0	kg/m ²				
Application rate – Wall DPM (Water added as above)	1.0	kg/m ²				
Application rate – Waterproofing (Water added as above)	2.0	kg/m ²				
Application method	Trowel as mortar, roller or brush as liquid					
Application temperature	+5 to +35	°C				
Service temperature	-30 to +60	°C				
Odour	Strong epoxy					
VOC content	None					
pH	10.85					
Curing	5°C	10°C	15°C	20°C	25°C	Units
Ready for next coat	10	8	5	5	5	Hours
To not be adulterated by rain	48	36	24	24	24	Hours
Ready for temporary foot traffic / protection boards	48	36	24	24	24	Hours
Ready for flood / hosepipe test	7	3	2	2	2	Days
Fully cured	7	3	2	2	2	Days
Cured Performance	Result	Units	Test Method			
Colour	Black					
Membrane thickness – Floor DPM	0.75	mm				
Membrane thickness – Wall DPM	0.75	mm				
Membrane thickness – Waterproofing	1.5	mm				
Adhesion to concrete	2.5	N/mm ²	UNI EN ISO 4624			
Tensile strength	Very low		Not tested			
Elongation	Very low		Not tested			
Loading capability	Very high		Not tested			
Hardness	Very high		Not tested			
Impact resistance	Very high		Not tested			
Puncture resistance	Very high		Not tested			
Water vapour diffusion resistance – Sd value	13.3	m	Calculation from μ value			
Water vapour diffusion resistance – 2mm film - μ value	13361	μ	UNI ISO 7783			
Water vapour diffusion resistance	66.8	MNs/g	Calculation from μ value			
Water tightness – Positive side	9.5	atm	UNI EN ISO 12390-8			
Water tightness – Negative side	9.5	bar	See note 1 below			
Reaction to fire classification	Euroclass E		Not tested			
Solvent resistance	None					
Organic acid resistance	None					
UV Resistance – Stable	10	Years	UNI EN ISO 11507			
Freeze / thaw resistance – 50 cycles	Unchanged		UNI EN 202			

¹ Testing was conducted by an independent laboratory. Test report is available on request.

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SUITABLE SUBSTRATES

- Concrete
- Structural masonry
- Ceramic
- Steel
- Screed
- Ferrous metal
- PVC

SUITABLE SURFACES

Waterproofing of:

- Walls - Positive pressure and negative pressure
- Slab/raft - Negative pressure
- Soffit - Negative pressure
- Deck - Positive pressure

METHOD OF APPLICATION

Mortar

- Putty knife
- Trowel

Liquid (after up to 40% water is added)

- Brush
- Roller

SPECIFICATION

Newton Waterproofing Systems work in partnership with RIBA NBS who publish our products on [NBS Source](#). The platform integrates seamlessly into project workflows, providing all product data from Newton's NBS BIM Objects, NBS Plus Clauses and RIBA Product Selector into one single source of product information.

NBS Source also hosts a large selection of Newton [case studies](#), as well as product [literature and certifications](#). A wide range of drawings are available [on our website](#).

TRAINING AND COMPETENCY OF THE USER

The diagnosis of damp and the specification of correct use of Diasen WATstop will, in many cases, require the intervention of a specialist in the field of damp remediation. When used as part of a waterproofing specification, Diasen WATstop should be installed by those with experience of structural waterproofing.

It is recommended that Diasen WATstop and its ancillary products be installed by contractors trained by Newton Waterproofing Systems in the correct use and specification of the product.

LIFE EXPECTANCY

When specified, installed and protected in accordance with the Data Sheet, and fully and permanently isolated from UV light and physical damage or wearing, and only to those substrates confirmed within, Diasen WATstop has a service life that can be equal to the design life of the structure.

Diasen WATstop is guaranteed to resist weathering for up to 10 years but it is not recommended to leave the product exposed.

COATING & PROTECTION

Diasen WATstop should be covered after application:

Protection methods include:

- Plaster or render
- Ceramic tiling
- Newton Epoxy Top Coat
- Coloured sands or grit 100% broadcasted to the still tacky final coat to provide an abrasion and slip resistant finish.
- Water-based emulsion paints

Coatings, paints and finishes can be applied up to 72 hours after the final coat of Diasen WATstop has been applied.

LIMITATIONS

- Do not apply prior to heavy rain - please see information within the curing table on page 2
- Do not apply at temperatures lower than +5°C or higher than +35°C
- Always use the correct preparation and priming of the support substrate as directed within this data sheet
- Is not suitable for application to leaking or weeping substrate. All leaks must be stemmed

PACKAGING

- 10 kg tub - Purchase Code 110

YIELD AS MORTAR

7.5 litres per 10 kg tub.

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APPLICATION RATE

Diasen WATstop is applied in one, or two coats depending on the application:

FLOOR DPM

- Number of coats = 2
- Thickness per coat = 0.22 mm
- Total thickness = 0.44 mm
- Coverage per coat = 0.30 kg/m²
- Coverage rate = 0.60 kg/m²
- Total coverage per 10 litre container = 16 m²

WALL DPM

- Number of coats = 2
- Thickness per coat = 0.38 mm
- Total thickness = 0.75 mm
- Coverage per coat = 0.50 kg/m²
- Coverage rate = 1.0 kg/m²
- Total coverage per 10 litre container = 10 m²

WATERPOOFING

- Number of coats = 2
- Thickness per coat = 0.75 mm
- Total thickness = 1.50 mm
- Coverage per coat = 1.00 kg/m²
- Coverage rate = 2.00 kg/m²
- Total coverage per 10 litre container = 5 m²

SURFACE PREPARATION

- The surface must be clean, and free from water, dust, laitance, or other forms of contamination. This may require wall surface preparation such as grit blasting or scabbling
- Fill holes and any non-structural cracks with the product in mortar consistency
- Remove snots
- In all cases, concrete floors should be ground with floor grinding products to remove laitance. Vacuum clean after grinding. All structural cracks should be repaired and filled

JOINTS & CHANGES OF DIRECTION

- Reinforce static joints with [HydroCoat 912-RT](#)
- With shrinkage joints, stop either side of the joint and use the movement joint detail for the liquid membrane to be used above the WATstop
- With movement joints, lap into the joint and then use our standard [FlexProof 106 System](#) movement joint detail. Please speak to our Technical Department if you require assistance on the correct specification to joints

MIXING

MORTAR

- Open the epoxy paste (part A) and pour it completely into the larger bucket. Scrape out all remnants of the epoxy
- Open the cement (part C) and pour it slowly into the larger bucket whilst slowly mixing. Again, scrape out all remnants
- Open the catalyst (part B) and pour completely into the mixing bucket. Scrape out all remnants,
- Mix for 2 minutes at slow speed using a suitable mixer and paddle (please see below) until a homogenous paste, with no lumps, is achieved
- Do not close the lid - The mixing of Diasen WATstop produces an exothermic reaction
- Use immediately after mixing
- Add water to the mortar mix as required

SLURRY

- Carefully add water at up to 40% of weight to achieve a low viscosity slurry/paint mixture
- Adding too much water will inhibit the effectiveness of the product
- Mix for a minimum of 2 minutes and use without delay

Newton Waterproofing supply the full range of [Collomix Mixing Equipment](#) that includes Hand-Mixers, Stirrers, Mixing Stands, Buckets, Transport Carts and the Mixer Clean mixing bucket. Diasen WATstop can be mixed with the DLX and WK stirrers, matched to the Xo 1 or Xo 4 Hand Mixers which are suitable for quantities of up to 65 litres. For larger quantities the MKD dual action stirrer is matched to the Xo 55 duo Hand-Mixer.

APPLICATION - MORTAR

The mortar can be applied by trowel or putty knife in the same way as a standard mortar.

APPLICATION - SLURRY

The mixed slurry can be applied by brush or roller.

Apply as explained within the APPLICATION RATE section, which begins on page 4.

With two coat applications, the second coat should be applied when the first coat is fully dry to touch and up to 72 hours after the first coat has been applied.

APPLICATION - WALL DPM

Extend the treatment 250mm above the highest sign of rising damp.

CURING

Curing is by exothermic reaction and so the product does not need to be traditionally cured.

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COLOUR

Black.

COATINGS AND FINISHES

Coatings, paints and finishes can be applied up to 72 hours after the final coat of Diasen WATstop has been applied.

STORAGE

Store in dry conditions at temperatures between +5°C and +35°C with containers fully sealed. Do not expose to freezing conditions.

If these conditions are maintained and the product packaging is unopened, a shelf life of up to 12 months can be expected.

CLEANING

Thoroughly clean all tools and equipment with water immediately after use.

POT LIFE & FURTHER USE

Diasen WATstop has an approximate pot life of 120 minutes at +20°C.



Product must be used within this period.

ANCILLARY PRODUCTS

- [HydroCoat 912-RT](#) - Purchase Code 912-RT. Reinforcement Tape for reinforcing changes in direction and static joints

HEALTH & SAFETY

Use appropriate PPE for the environment the system is installed within. Use products only as stated within this Data Sheet and the SDS.

		Newton Waterproofing Systems Newton House 17-19 Sovereign Way Tonbridge Kent TN9 1RH	WATstop UNI EN 1504-2 Products and systems for the protection and restoration of concrete structures – Part 2 : Systems to protect concrete surfaces
Essential characteristics	Declared performance	Test standard	Harmonised Technical Standard
Water vapour permeability	$\mu = 13361$	UNI EN ISO 7783	UNI EN 1504-2
Capillary absorption and water permeability	NPD	UNI EN 1062-3	
Adhesion test of straight traction	NPD	UNI EN 1542	
Reaction to fire	NPD	UNI EN 13501-1	
Thermal resistance	NPD		
Dangerous substances	Consult SDS	EC Regulation No. 1272/2008	

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