HYDROBOND 314 BENONITE GRANUELS

Detailing Bentonite Granules

Rev 5.0 - 16 April 2024
Code - 314BG/20

Newton HydroBond 314 Bentonite Granuela is a naturally occurring sodium bentonite in the form of varying sizes granules, used for detailing to the Newton HydroBond System, specifically where Newton HydroBond 403 terminates to otherwise difficult to detail building elements, such as the base of piled walls, support piles, pile caps and protrusions through the membrane.

Bentonite is an absorbent clay formed millions of years ago from volcanic ash. There are different types of bentonite but all expand to an extent when hydrated. The sodium bentonite in Newton HydroBond 314 Bentonite Granuela can absorb many times its mass in water.

The property of swelling on contact with water makes sodium bentonite useful as a sealant, since it provides a self-sealing, low permeability barrier. When in contact with water, HydroBond 314 Bentonite Granuela swells up to 20 times its initial size to form a dense, water impermeable paste. When confined, the swell is controlled, forming a pressurised, dense waterproofing component that fully seals these otherwise difficult to detail joints against water ingress.

COVERAGE

PACKAGING

TYPICAL APPLICATIONS

Newton HydroBond 314 Bentonite Granuela can be mixed with clean water to seal elements of Type A and Type B waterproofing systems:

- Sealing of pipes, sleeves, columns and posts that penetrate the Newton HydroBond System
- Between the horizontal and vertical application of Newton HydroBond 403 to irregularly shaped interfaces such as piled walls
- Can be poured into an inverted fillet formed within the blinding as a termination detail where horizontal HydroBond 403 terminates at elements that are not to be further waterproofed

SUITABLE SUBSTRATE & MATERIALS

- Newton HydroBond 403
- Plastic and ceramic/clay pipes
- Concrete
- Steel

KEY BENEFITS

- Hydrophilic - swells to 15 times its initial size when contacted by water
- High resistance to water pressure
- Easily applied by hand
- Cost is much less than modern polymer type products
- Naturally occurring product
- Persistently elastic - no embrittlement
- Can be installed in almost any weather condition
- No VOCs
- Has a proven track record of effectiveness on both new and remedial waterproofing projects worldwide over many years

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Opening Hours:
Monday to Thursday 8:00am - 5:30pm
Friday 8:00am - 5:00pm

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TECHNICAL DATA

Features	Result
Material	Bentonite clay granules
Colour	Grey
Specific gravity (in container)	1.05
Granule size	2 - 16 mm
Retained on 16 sieve	1 % maximum
Passing 1 mm sieve	6 % maximum
pH	10.8
Selling volume	10 - 20 ml / g
Installation Temperature	5ºC to 40ºC

COLOUR & CONSISTENCY

Bentonite is a naturally occurring material and the colour can range from silver to light tan to dark brown, whilst the granules will range from 0.5 mm to 16 mm.

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 & COMPETENCY OF USER

Newton HydroBond 314 Bentonite Granuela should be used by those with an understanding of the requirement to waterproof retained structures and the knowledge and training to use the product with Newton HydroBond 403 as part of a coordinated approach to the waterproofing of the structure, which in many cases will require further waterproofing products so as to achieve the required habitable grade as defined by BS 8102:2009.

CONSTRUCTION

The construction should conform with current Building Regulations, British Standards and relevant Codes of Practice. Please see the Newton HydroBond 403 Data Sheet and Installation Manual for further information.

CONSUMPTION

20kg of product will create a 40mm x 40mm fillet of about 20 metres in length.

TOOLS REQUIRED

No special tools are required.

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SURFACE PREPARATION

All surfaces must be thoroughly cleaned and free from standing water, laitance, loose material, dust, dirt, oil, grease, general grime, mould, oil, and all other contaminants. Please refer to the Newton HydroBond 403 data sheet and Installation Manual for further information.

INSTALLATION

Pour the granules into a bucket containing clean fresh water. Mix with a suitable implement to form a stiff, semi-dry putty. Differing ratios of water/powder can be tried depending on weather conditions and the type of application.

Using gloved hands form a 40mm sausage and apply to the required area. Push home with knuckles and smooth off with edging trowel.

For inverted fillets, carefully pour the dry powder directly into the recess within the blinding.

CURING

Once installed, Newton HydroBond 314 Bentonite Granuela can dry out in warm, dry and windy conditions and will crack as moisture evaporates from the bentonite. In such conditions it is important to maintain hydration of the Newton HydroBond 314 Bentonite Granuela by spraying water over the bentonite to prevent it from excessive desiccation.

STORAGE

Store in dry conditions between 5˚C and 45˚C.

SHELF LIFE

12 months.

PACKAGING

Sacks of 20kg.

LIMITATIONS

- Is not suitable for use as a swelling waterbar or as an expansion joint sealant
- Do not use in any unconfined situations

HEALTH & SAFETY

Product should only be used as directed. We always recommend that the Safety Data Sheet (SDS) is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal protection. The SDS is available upon request from Newton Waterproofing Systems or online via our website. Please see contact details below.

Newton Waterproofing Systems reserve the right to update product literature at any time. Please always refer to our website for the latest versions.

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