

HydroTank 309 Flexible Adhesive

Elastic Adhesive Mastic

Revision: 4.5 - 26th April 2022
Code: 309-M

INTRODUCTION

HydroTank 309 Flexible Adhesive is an MS-polymer based, durable and fast curing elastic adhesive. The adhesive has a very high initial strength and bonds without primer on almost all materials used in the construction industry, such as aluminium, galvanized and stainless steel, zinc, copper, natural stone, concrete, brick, cement based cover sheeting, HPL panels, treated wood, gypsum, glass, glazing, and various synthetic materials.



KEY BENEFITS

- Rapid increase of internal strength
- Excellent bonding on most building materials
- Solvent and isocyanate free
- Extremely strong
- Permanently elastic
- Does not cause any corrosion in metal joints
- For interior and exterior use
- UV and weather-resistant
- Suitable for use with natural stone
- Suitable for rooms with high humidity
- Paintable with most water and solvent based paints. Can be painted wet on wet. After 48 hours, the surface must be cleaned first before it can be painted. Pre-testing is necessary. Alkyd paints require an extended drying time

STORAGE

Keep in a cool place in the sealed packing.

PACKAGING

12 cartridges of 290ml per box.

TOOLS

- Stopping knife
- Rubber hammer

TYPICAL APPLICATIONS

- As an adhesive for fixing [CDM Baseboard](#)
- For installing [HydroTank Waterbars](#) to concrete and/or steel surfaces
- Wall cladding elements and ceiling panels (interior)
- Sound isolation panels (mineral wool, wood-wool cement & plastic foams)
- Thermal isolation panels (PUR, PIR, PS)
- Casings and frames in building construction
- Wooden and plastic laths, ornaments and frames
- Doorsteps, window sills, skirting boards and cover plates
- Complete construction elements (such as roofing and other elements) in frames

LIMITATIONS

- Not suitable for joints that are exposed to constant submersion under water
- Not suitable for joints with a width or depth less than 5mm
- Not suitable for use in swimming pools containing chlorine, where the product will be subject to constant submersion under water
- Not suitable for gluing PE, PP, PA and Teflon®
- Not suitable for use on bitumen
- Not suitable for use on polycarbonate and polyacrylate

COLOUR

White. Other colours available on request.

SHELF LIFE

Shelf life is 12 months in the sealed packing between +5°C and +25°C.

Shelf life in opened packing is limited.

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TECHNICAL DATA

Features	Result	Units
Material	Modified-silane polymer	
Colour	White	
Packaging – Cartridge	290	ml
Density	1.56	
Installation temperature	+5 to +40	°C
Service temperature	-40 to +90	°C
Shelf life	12	Months

Cured Performance	Result	Units	Test Method
Open time	10	Minutes	
Skin formation at 23°C and 50% RH	10 – 15	Minutes	
Initial bond strength / m2	150	kg	
Bond strength after 60 minutes / m2	450	kg	
Tensile strength	1.5	N/mm ²	
Shear strength	2 – 4	N/mm ²	
Hardness (shore A)	55		ISO 868
Flexibility within joint	+/- 20	%	
Modulus at 100% elongation	1.30	N/mm ²	ISO 8339-40
Modulus at break	1.50	N/mm ²	ISO 8339-40
Elongation at break	230	%	ISO 8339-40
Solvent content	0	%	
Isocyanate content	0	%	

SURFACE PREPARATION

BASE COMPONENT

The support must be fixed, rigid, and dry.

PRE-TREATMENT

The materials to be joined must be clean and free from dust and grease. If necessary, degrease using MEK, alcohol, or ethanol. It is advisable to do bonding tests. It is the user's responsibility to check whether the product is suitable for the application. Consult the Newton Technical department if necessary on the number below.

APPLICATION

Apply HydroTank 309 Flexible Adhesive with the supplied nozzle in strips or dots to the base or on the element to be bonded. If applying the product in strips, do so in vertical rows. The parts can at this stage still be adjusted, before pushing one part down well onto the other.

For information regarding the mutual distances between the adhesive strips, see the 'Adhesive Requirements' section on page 3.

It is advisable to have a gap of 3mm between the parts to be bonded, to allow the adhesive to smooth out any distortions (especially important in exterior use or under humid conditions). To achieve this space, spacer blocks or pieces of foam tape with a thickness of 3mm may be used. If the adhesive layer does not have to take up any, or only has to take up a slight mutual distortion between the joining parts, a thinner adhesive layer (at least 1.5mm) will suffice (for example in interior applications).

EXPOSURE TIME

Bring together the parts to be joined as quickly as possible, at least within 10 minutes (although this depends on the temperature and relative humidity level). At this stage, the parts can still be adjusted. Finally one part should be pushed down well over the other, or tapped with a rubber hammer.

REMOVAL OF SURPLUS ADHESIVE

Any adhesive that may protrude along the edges can be removed using a stopping knife. Adhesive residue that has not yet dried, can be removed relatively easily, however dried adhesive must be removed mechanically.

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DESIGN

- IKI-report for the use in hospitals as glue and adhesive for wall panels
- Leeds certificate for low VOC

CURING

After drying under the influence of humidity, HydroTank 309 Flexible Adhesive cures into a permanently elastic and extremely strong bond.

COVERAGE

Thickness of the adhesive is 1.5mm (on smooth base - width after applying pressure is 13mm)

Thickness of the adhesive is 3mm (on smooth support - width after applying pressure is 26mm)

When determining the number of strips, ensure that:

- The internal cohesive forces of the parts to be joined are not exceeded (e.g. ceiling tiles based on mineral wool. With such materials, it is advisable to apply adhesive to the largest possible surface)
- Distribute the adhesive strips evenly over the surface to be joined

INSTALLATION

- HydroTank 309 Flexible Adhesive is extremely suitable as an adhesive for BaseBoard and the installation of Newton Waterbars to concrete/steel
- It is extremely suitable for the gluing and fitting of safety glass, cable ducts, mitres in aluminium windows, and mirrors, and it is also suitable for use as a universal glue
- It is extremely suitable for the structural gluing of panels and elements in the professional interior and ceiling construction
- Welding or stamping is not necessary in most cases

Proper ventilation during processing and hardening is important.

HydroTank 309 Flexible Adhesive combines the benefits of a tape with a reactive adhesive system:

- During assembly, HydroTank 309 Flexible Adhesive has a high bonding capacity and internal strength. Thus it is possible to work without temporary supports. Joined parts can be moved directly or processed further

INSTANTANEOUS STRENGTH

The internal strength of HydroTank 309 Flexible Adhesive immediately after application is such that bonding is possible without clamping or temporary support, as follows.

Internal strength (immediately) > 0.0015 N/mm²

Strength per m² adhesive surface > 1500 N (> 150 kg)

After one hour, the strength has increased threefold:

Internal strength (after 60 minutes) > 0.0045 N/mm²

Strength per m² adhesive surface > 4500 N (> 450 kg)

AFTER DRYING

HydroTank 309 Flexible Adhesive dries into a durable, elastic and strong adhesive under the influence of humidity. The maximum tensile stress is >1.5 N/mm², and the shearing force amounts to 2-4 N/mm² depending on the adhesive formation. Refer to page 2.

ADHESIVE REQUIREMENTS

HydroTank 309 Flexible Adhesive is applied in adhesive strips or dots. By placing the component to be joined, the adhesive distributes between the elements. The eventual surface of the adhesive layer determines the strength of the connection, both initially as well as after drying. The dimensions of the adhesive strips and the final adhesive surface is determined by the surface structure of the parts to be joined and the final thickness of the adhesive. Triangular adhesive strip of 9mm wide and 9mm high (approx. 40mm² in area) provides an adhesive width of 13mm at a thickness of 3mm on smooth materials. On an uneven base, the adhesive width at a minimum thickness of 3mm will correspond with approx. 10mm. At an adhesive thickness of 1.5mm, the widths are respectively 26 and 20mm approx.

Apply the strips parallel to each other, to allow the humidity to reach the adhesive between the strips. Assuming a standard triangular strip of 9mm wide and 9mm high and after pressing together to adhesive thickness of 1.5 and 3mm, the relationship can be established between strip distance and weight of the parts to be joined. Level base surfaces are assumed. It is advised to carry out tests beforehand. With the bonding of bigger wall or ceiling elements, possible additional gravitational forces should be considered (e.g. in the event of bends in the panels).

HEALTH AND SAFETY

Please refer to the safety data sheet (SDS).

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](#).

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