



Technical Datasheet

H2O Glue® Epoxy: Two Component Epoxy Adhesive

Product Description: H2O Glue® Epoxy is a two-component, room temperature curing paste adhesive giving a resilient bond. This unique epoxy formulation has the ability to cure in the presence of moisture and even underwater. It is thixotropic and non-sagging up to 10mm thickness. Because of these features, the H2O Glue® Epoxy can be used for pool repairs underwater including concrete crack repair and replacing tiles without the costly step of draining the pool. The H2O Glue® Epoxy can also be used to bond the H2O Glue® Slip Grip strips to concrete and gunite pools in order to add texture and enhance the safety of slippery steps. The H2O Glue® Epoxy is also suitable for repairs in other damp and wet environments including boats, docks, marine, spas, fountains, and water features.

The long open time makes this adhesive a unique offering versus other underwater solutions that cure very quickly. Unlike the original H2O Glue® Aquabonder, the H2O Glue® Epoxy bonds well to concrete, masonry, stone, and other porous materials. For this reason, the H2O Glue® Epoxy is the preferred solution for applications involving those materials. For applications on metal, porcelain plastic, and other non-porous substrates, the original H2O Glue® Aquabonder can be used. Please consult and defer to the opinion of a qualified pool repair specialist to determine the fitness for any particular application.

Key Features

- Bonds in wet and damp environments
- Long open time (45-55 min @ 25°C)
- Toughened Paste
- Gap filling, non-sagging up to 10mm thickness
- Good resistance to weathering

Typical Properties

Property	H2O Epoxy A (Resin)	H2O Epoxy B (Hardener)	A/B Mixed	Test Method
Color	Gray soft paste	Beige soft paste	Gray paste	Visual
Specific Gravity	1.4	1.4	1.4	ASTM D-1475
Viscosity at 77F, cP	thixotropic	thixotropic	thixotropic	ASTM D-2196
Pot Life (100g at 25°C), minutes			45-55	--
Mix Ratio by volume	100	100		--
Mix Ratio by weight	100	100		--

Typical Cured Properties

Unless otherwise stated, the figures given below were all determined by testing standard specimens made by lap-bonding 5" x 1"x 0.003" strips of primed aluminum panel. The joint area was 1" x 0.5" in each case.

The figures were determined with typical production batches using standard testing methods. They are provided solely as technical information and do not constitute a production specification.

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Flexural Properties (ISO 178) (typical average values)

Cure 16 hours at 40°C, tested at 23°C

Flexural Strength: 43 MPa

Flexural Modulus: 1800 MPa

Tensile Properties (ISO 527) (typical average values)

Cure 16 hours at 40°C, tested at 23°C

Tensile Strength: 31 MPa

Tensile Modulus: 1600 MPa

Elongation at break: 4.2%

Processing

Pre-treatment

The strength and durability of the adhesive bond are dependent on proper treatment of the surfaces to be bonded. At the very least, the surfaces should be cleaned with an effective degreasing agent such as acetone or other proprietary degreasing agents in order to remove all traces of oil, grease, dirt and other surface contaminants.

Low Grade alcohol, gasoline (petrol) or paint thinners must never be used.

The strongest and most durable bonded assemblies are obtained by either mechanically abrading or chemically etching (“pickling”) the degreased surfaces. Mechanical abrading should be followed by a second degreasing treatment.

Application of adhesive

The resin/hardener mix is applied manually or robotically to the pre-treated and dry joint surfaces. Our technical support group can assist the user in the selection of a suitable application method as well as suggest a variety of reputable companies that manufacture and service adhesive dispensing equipment.

A layer of adhesive 0.002 to 0.004-inches (0.05 to 0.10-mm) thick will normally impart the greatest lap shear strength to a joint. It should also be noted that bonded assembly design also critical in providing a durable bond. The components to be bonded together should be assembled and maintained in a fixed position as soon as the adhesive has been applied. For more detailed explanations regarding surface preparations and pre-treatment, assembly design, and the twin cartridge dispensing system, visit www.chemical-concepts.com

Equipment maintenance

All tools should be cleaned with hot soapy water before the adhesive has cured. If solvents such as acetone are used for cleaning, operators should take all the necessary precautions in order to prevent eyes or skin contact.

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Storage

H2O Glue® Epoxy A & B Adhesives must be stored at room temperature and the components must be stored in sealed containers. The expiry date is indicated on the label.

Precautionary Statement

Our products are generally quite harmless to handle provided that certain precautions normally taken when handling chemicals are observed. The uncured materials must not, for instance, be allowed to come in contact with foodstuffs or food utensils, and measures should be taken to prevent the uncured materials from coming in contact with the skin, since people with particularly sensitive skin may be affected. The wearing of impervious rubber or plastic gloves will normally be necessary; likewise, the use of eye protection. The skin should be thoroughly cleansed at the end of each working period by washing with soap and warm water. The use of solvents is to be avoided. Disposable paper- not cloth towels- should be used to dry the skin. Adequate ventilation of the working area is recommended. These precautions are described in greater detail in the Safety Data sheets for the individual products and should be referred to for fuller information.

First Aid!

Refer to SDS as mentioned above.

KEEP OUT OF REACH OF CHILDREN

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chemical-concepts.com

800.220.1966

410 Pike Road • Huntingdon Valley, PA 19006