



Technical Datasheet

H2O Glue® Fast-Set Structural Bonder is a two component, methacrylate general purpose adhesive for rapid assembly operations on a wide range of substrates. This adhesive provides excellent strength even when used at very low temperature and in moist conditions. It is the perfect choice for repair jobs in very difficult conditions and can be used for assembly/repair for almost anything in and around pools and spas.

Key Features

- Ultra-fast curing
- Application and curing under water (including salt water) and humid areas
- Usage in low temperatures and even freezing conditions from 4°F to 75°F (-20°C to 25°C)
- Excellent bond to a wide range of plastics, composites and metals
- Minimum substrate pretreatment needed
- Suitable for service at temperatures up to 120°C (250°F)
- Excellent aging and weathering resistance
- Bonds fiberglass, PVC, stainless steel, acrylics, aluminum and more
- Paintable and sandable

Typical Properties*

Property	Part A	Part B	Mixed System
	H2O Glue® Fast-Set	H2O Glue® Fast-Set	
Appearance	Off white	Greenish Yellow	Pale Yellow
Density, g/cm ³	1.0	1.0	1.0
Viscosity at 25°C (77°F), cP (Brookfield, spindle #7 at 10 rpm)	35,000-60,000	15,000-30,000	non-sag
Pot Life at 25°C (77°F), 100 g, min	--	--	1-2
Time to peak exotherm, 20g, min	--	--	5-8

*Properties are based on test methods. Copies are available upon request

Processing

Mix Ratio

Product	Parts by weight	Parts by volume
H2O Glue® Fast-Set (A)	100	100
H2O Glue® Fast-Set (B)	100	100

Pretreatment: The strength and durability of a bonded joint are dependent on proper treatment of the surfaces to be bonded. At the very least, joint surfaces should be cleaned with a good degreasing agent such as acetone, isopropanol (for plastics) or other proprietary degreasing agents in order to remove all traces of oil, grease and dirt. Low-grade alcohol, gasoline, or paint thinners should never be used. The strongest and most durable joints are obtained by either mechanically abrading or chemically etching (“pickling”) the degreased surfaces. Abrading should be followed by a second degreasing treatment.

H2O Glue Fast-Set Structural Bonder is available in cartridges incorporating mixers and can be applied as ready to use adhesive with the aid of the tool recommended by Chemical Concepts.

Applications:

- Repair pumps, pipes, pool filters and skimmers
- Use to re-attach or replace pool tiles made of various materials: ceramic, glass and mosaic
- Conduct repairs on vinyl liner pool steps
- Secure anchors for pool covers on pool decks
- Assemble and mount signage
- Make emergency repairs to many parts in and around pools and spas!

Application of adhesive: This system is available in cartridges incorporating mixers and can be applied as ready to use adhesive with the aid of the tool recommended by Chemical Concepts. The resin/hardener mix may be applied manually or robotically to the pretreated and dry joint surfaces. Chemical Concepts' 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 0.25 mm thick will normally impart the greatest lap shear strength to the joint. The joint components should be assembled and secured in a fixed position as soon as the adhesive has been applied. For more detailed explanations regarding surface preparation and pretreatment, adhesive joint design, and the dual cartridge dispensing system.

Temperature of application: the recommended temperature application range is -20°C to 25°C (-4°F to 77°F). If the adhesive is used at a temperature above 25°C (77°F), because of the fact reaction, the viscosity will increase so rapidly that a good wetting of the substrate will be difficult to achieve. Therefore above 25°C (77°F), the performance of the bond may be limited.

WARNING! The cure reaction can generate a high amount of heat, it is not recommended to mix large amounts of material at room temperature

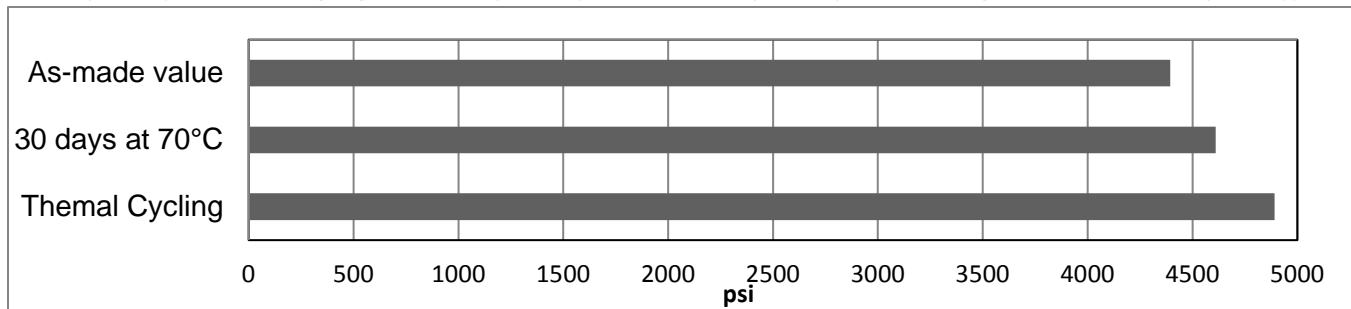
Cure times to reach minimum shear strength (sandblasted aluminum)

Temperature	-20°C (-4°F)	-10°C (14°F)	0°C (32°F)	10°C (50°F)	23°C (73°F)
>1MPa (145 psi)	4 h	90 min	40 min	12 min	9 min
>10MPa (1,450 psi)	8 h	3 h	1 h	20 min	13 min

Equipment Maintenance

All tools should be cleaned with hot water and soap before adhesives residues have had time to cure. The removal of cured residues is a difficult and time-consuming operation. If solvents such as acetone are used for cleaning, operatives should take the appropriate precautions and, in addition, avoid skin and eye contact.

Lap shear strength (ASTM D1002) versus heat ageing and thermal cycling (typical average values). Cured 24 hours at 23°C (73°F). Tested at 23°C (73°F). Thermal cycling 100 cycles (2h at -30°C (-22°F) → 1 h ramp up to 70°C (158°F) → 2h 70°C (158°F) → 1h ramp down to -30°C (-22°F))



Additional properties

Property	Value	Test Method
Tg by DMA Onset Storage Modulus Midpoint Storage Modulus	96°C 127°C	ASTM E1640
Tensile Properties Strength, psi Modulus, psi Elongation, %	5,800 246,000 ~10%	ASTM D638

Storage: H2O Glue Fast-Set Structural Bonder should be stored in a dry place, in the original sealed containers, at temperatures between 2°C to 8°C (36°F to 46°F). Under these storage conditions, the product has a shelf life of **18 months**. The product should not be exposed to direct sunlight. The product may be placed at room temperature before use, the total time at room temperature should not exceed 6 months. Long term exposure above 25°C will reduce the shelf life of the product. The product should be never frozen.

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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