THE ORIGINAL
Hang Your Glass™
PRECISE VERSATILE STURDY
Est. 2004

PO Box 2551
Morgan Hill, CA 95038
650-353-4642
info@HangYourGlass.com

Technical Data Sheet
HYG adhesive

Worldwide Version, January 2018

PRODUCT DESCRIPTION

Hang Your Glass adhesive is a single component high viscosity structural adhesive for bonding rigid assemblies. The product cures in the absence of air, hence needing flat surfaces.

TYPICAL APPLICATIONS

Typical applications include bonding ferrites to plated metals, glass and glazed ceramics where a fast fixturing is required.

PROPERTIES OF UNCURED MATERIAL

	Typical Value	Range
Appearance	Clear Amber	
Specific Gravity @ 25°C	1.10	
Viscosity @ 25°C, mPa.s (cP)		
Brookfield RVT		
Spindle 6 @ 20 rpm	18,000	13,500 to 22,000
DIN 54453, MV		
D = 36 s^{-1} after t=180secs	15,000	10,000 to 20,000
Flash Point (TCC), °C	>93	

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Coefficient of thermal expansion, ASTM D696, K^{-1}	80 x10^{-6}
Coefficient of thermal conductivity, ASTM C177, $W.m^{-1}K^{-1}$	0.1
Specific Heat , $kJ.kg^{-1}K^{-1}$	0.3
Tensile Strength, ASTM D412, N/mm^2	34
(psi)	(4930)
% Elongation to break, ASTM D412	135
Modulus, ASTM D638, Nmm^2	300
(psi)	(44,000)

Electrical Properties

Dielectric constant & loss, 25°C, ASTM D150:

	Constant	Loss
measured at 100Hz	5.6	0.03
1kHz	5.3	0.03
1MHz	4.6	0.04
Volume resistivity, ASTM D257, Ω.cm		2 x 10^{13}
Surface resistivity, ASTM D149, Ω		2 x 10^{17}
Dielectric strength, ASTM D149, kV/mm		30

PERFORMANCE OF CURED MATERIAL

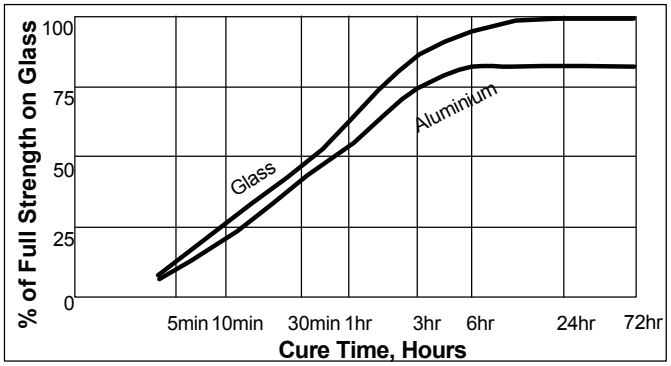
(After 24 hr at 22°C, Act.N on grit blasted mild steel (GBMS), 1 side)

	Typical Value	Range
Shear Strength, ASTM D1002, N/mm^2	18.5	12 to 25
(psi)	(2700)	(1700 to 3625)
Shear Strength, DIN 53283, N/mm^2	19	15 to 23
(psi)	(2800)	(2200 to 3300)
Tensile Strength, DIN 53288, N/mm^2	24	18 to 30
(psi)	(3500)	(2600 to 4400)

TYPICAL CURING PERFORMANCE

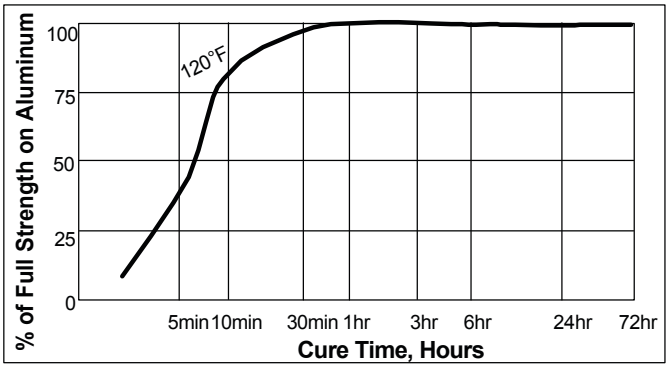
Cure speed vs substrate

The rate of cure will depend on substrate used. The graph below shows the shear strength developed with time on flat glass (polished or matte) comparted to aluminum tested according to ASTM D1002.



Cure speed vs. temperature

The rate of cure will depend on the ambient temperature. The graph below show's shear strength developed with time at 120˚ F with activator on aluminum to glass and tested according to ASTM D1002.



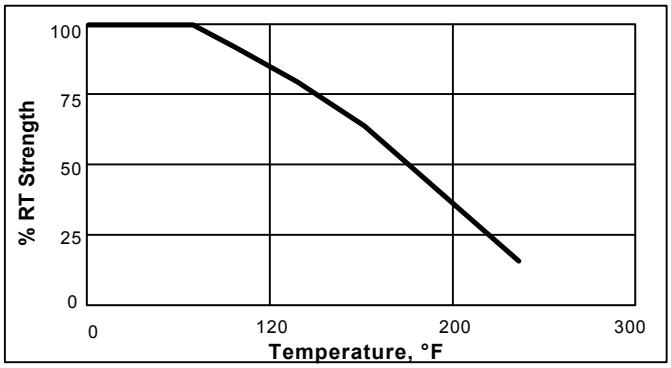
TYPICAL ENVIRONMENTAL RESISTANCE

TDS HYG January 2018

Test Procedure: Shear strength ASTM D1002
Substrate: Aluminum & Glass laps
Cure procedure: 1 week at 72˚F/Activator

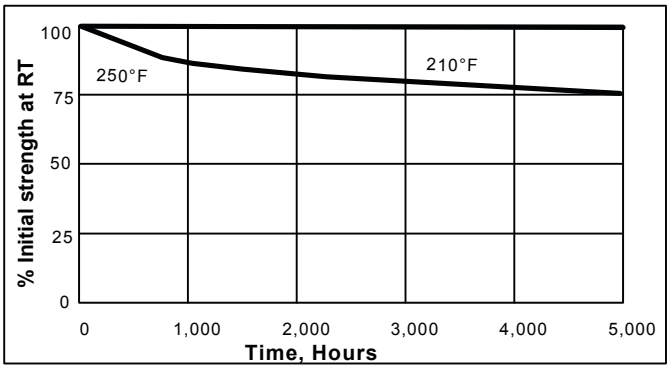
Hot Strength

Tested at temperature.



Heat Ageing

Aged at temperature indicated and tested at 72˚F



Directions for use

For the best performance bond surfaces should be clean and free of grease. To ensure a fast and reliable cure, Activator should be applied to the Hang Your Glass stand-off and then the adhesive should also be applied to the stand-off. For extra strength and/or a faster cure apply activator to both surfaces. Parts should be assembled after the activator is set in 5-10 min (no more than 15 minutes). Excess adhesive should be wiped away with 100% Acetone as soon as the bond has set. Joint should be allowed to develop full strength before subjecting to any service loads, (typically 24-72 hours after assembly). The shelf life is listed on the adhesive bottle as well as the back lower right hand corner of the Hang Your Glass adhesive insert, do not use the adhesive for weight bearing and/or wall installations after it has expired.

Storage

Product shall be ideally stored in a cool, dry location and out of direct sunlight. Storage temperatures between 46˚ to 82˚F are best. Optimal storage is at the lower half of this temperature range.

Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others who use methods we have no control. It is the user's responsibility for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling of use therof. In light of the foregoing Hang Your Glass specifically disclaims all warranties of merchantability or fitness for a particular purpose, arising from sale of use of Hang Your Glass products. Hang Your Glass specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide.

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials. Although we have recommendations for this environment but the user should test for their particular application.

For safe handling information on this product, consult the Safety Data Sheets (SDS).

We only recommend 100% Acetone for cleaning both the glass and the Hang Your Glass stand-offs. Raw materials such as steel and aluminum should be cleaned more intensely to ensure all the rust and oxidize is removed to ensure a bond that is stronger than the glass.

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