

XB 5032 A/B and XB 5032 A / XB 5319 LNG Structural Adhesives

Product Description

XB 5032 A/B is a lightly thixotropic adhesive for lamination of Triplex/Triplex or plywood/Triplex. XB 5032A/XB 5319 is a highly thixotropic adhesive for lamination of corners and complex shaped areas. Full test reports are available from Huntsman to support G.T.T. approvals. Structural adhesive system approved by G.T.T. to Technigaz GNL MH1006 and M3006 specifications

Features

- Epoxy adhesive for bonding of Technigaz insulation panels with Triplex
- Long working time
- Color coded for easy identification and mixing
- Easy to mix and apply by machine

Typical Properties*

Property	XB 5032 A	XB 5032 B	Mixed System
Appearance (A112)	Smooth yellow bit free paste	Smooth blue paste	Smooth brick red thixotropic bit free paste
Density, g/cm ³ (A16)	1.35 - 1.45	1.05 - 1.15	1.41 - 1.51
Viscosity at 25°C, cP (A191)	40,000 - 60,000	25,000 - 50,000	140,000 - 200,000
Gel Time at 25°C, min (A8)	--	--	120 - 300

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

Processing

Mix Ratio

Product	Parts by weight		Parts by volume	
XB 5032 A Resin	100	100	100	100
XB 5032 B Hardener	55		70	
XB 5319 Hardener		55		70

Tolerance: +/- 10% of hardener addition

Mix Ratio

Viscosity, cP	15°C	25°C	40°C
XB 5032 A + B	140,000	85,000	45,000
XB 5032 A + XB 5319	320,000	190,000	105,000

Typical Open Time

Substrate: Aluminum alloy, Anticorodal 100B. Pretreatment: degreased, surfaces abraded.

Curing condition: 14 days at 23°C

Temperature, °C	Open Time (tolerance)
30	3 hours
23	4 hours
10	2-3 days

Typical Minimum Cure Time

Substrate: Aluminum alloy, Anticorodal 100B. Pretreatment: degreased, surfaces abraded.

Curing condition: 14 days at 23°C

Cure Temperature, °C	Minimum Cure Time
30	4 hours
23	10 hours
10	2-3 days

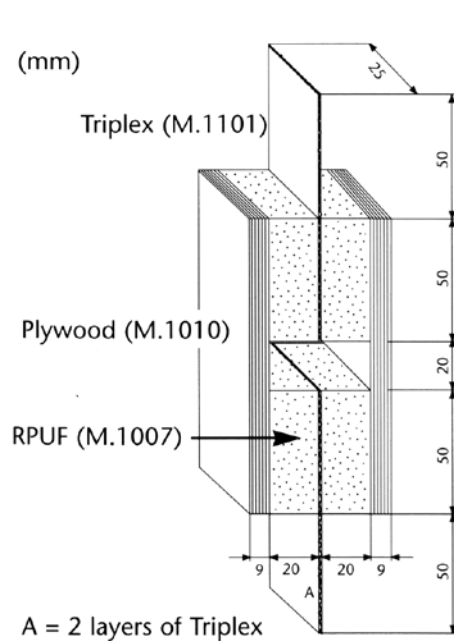
Typical Mechanical Properties

Unless otherwise stated, the data were determined with typical production batches using standard test methods. They are typical values only, and do not constitute a product specification.

Typical Lap Shear Strength on Various Substrates (A501)

Pretreatment: Surfaces degreased and abraded. Curing condition: 14 days at 23°C

Substrate	Lap Shear Strength, psi (N/mm ²)
Aluminum	2610 (18)
Mild Steel	2760 (19)
Stainless Steel	3340 (23)
Glass reinforced epoxy	1890 (13)



Shear test

Substrate: Rigid cellular materials / Plywood / Triplex

Curing conditions: 7 days at 25°C

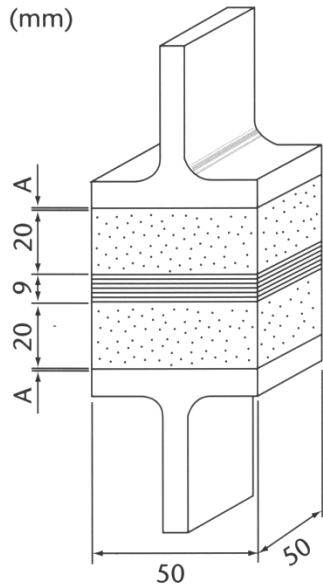
Thermal shock (3 cycles): -160°C/1 hour + 25°C/1 hour

Water immersion (3 cycles): H₂O/1 hour + 60% RH air/2 hours

Condition	Shear Strength, N/mm ²	
	XB 5032A + B	XB 5032A + XB 5319
At 25°C	1.1 (RPUF failure)	0.7 (RPUF failure)
Thermal shock	1.3 (RPUF failure)	1.1 (RPUF failure)
Water immersion	1.0 (RPUF failure)	0.8 (RPUF failure)

Flatwise Tensile Strength

Curing condition 7 days at 25°C



Condition	Flatwise Tensile Strength, N/mm ²	
	XB 5032A + B	XB 5032A + XB 5319
At 25°C	1.0 (RPUF failure)	1.1 (RPUF failure)

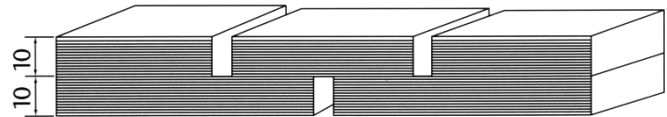
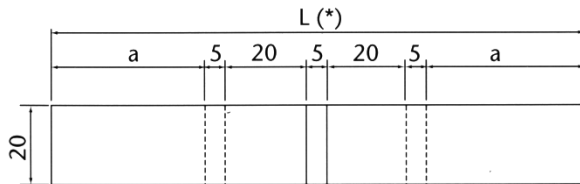
- Steel previously sand blasted or machined
- Triplex
- RPUF
- Plywood
- A = 1 layer of Triplex

Tensile shear testing

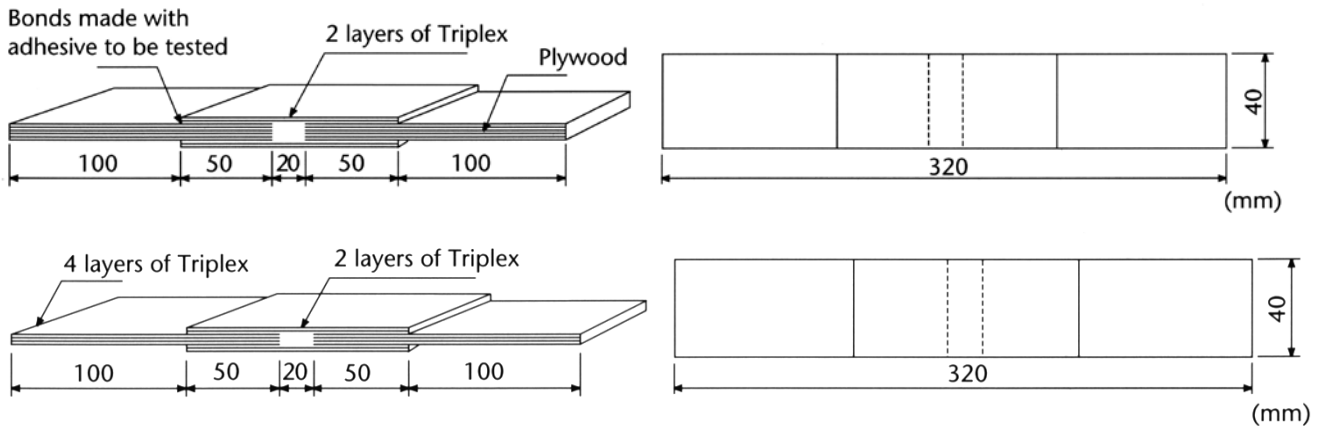
Curing conditions: 7 days at 25°C

Thermal shock (3 cycles): 1 hour at -160°C + 1 hour at 25°C

Water immersion (3 cycles): 1 hour immersed in H₂O + 2 hours at 60% RH air



Assembly Type	Condition	XB 5032A + B	XB 5032A + XB 5319	Specification (N/mm ²)	Failure Mode
Plywood-Plywood	At 25°C	4.1	4.4	>3.0	Plywood failure
	Thermal cycles	4.0	4.0	>3.0	Plywood failure
	Water immersion	2.9	2.9	>2.4	Plywood failure
Plywood-Triplex	At 25°C	3.3	3.9	>3.0	Plywood failure
Rigid Triplex – Flexible Triplex	At 25°C	3.51	3.52	> 3.5	Cohesive failure



Note: The full approval testing also includes resistance of Triplex-Triplex bonds to thermal shock, and immersion testing in liquid methane, nitrogen/ammonia mixture and sea water.

Storage

XB 5032 A/B and XB 5032 A / XB 5319 Structural Adhesives should be stored in a dry place, in the original sealed containers, at temperatures between 5°C and 40°C (41°F and 104°F). Under these storage conditions, the product has a shelf life of **3 years** (from date of manufacture). The product should not be exposed to direct sunlight.

Precautionary Statement

Huntsman Advanced Materials Americas LLC maintains up-to-date Safety Data Sheets (SDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.

First Aid!

Refer to SDS as mentioned above.

KEEP OUT OF REACH OF CHILDREN

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