

Advanced Materials**Araldite[®] LY 1568
Aradur[®] 3489 / Aradur[®] 3492**

STRUCTURAL COMPOSITES

Provisional Technical Data Sheet

APPLICATIONS	Industrial composites		
PROPERTIES	Laminating system with low viscosity and high flexibility. The reactivity of this system can be adjusted on demand.		
PROCESSING	<ul style="list-style-type: none">• Infusion• Resin Transfer Moulding• Wet Lay-up• Filament Winding		
KEY DATA	Araldite[®] LY 1568		
	Aspect (visual)	clear liquid	
	Viscosity at 25 °C (ISO 12058-1)	1300 - 1500	[cps]
	Density at 25 °C (ISO 1675)	1.1-1.2	[g/cm ³]
	Aradur[®] 3489		
	Aspect (visual)	clear liquid	
	Viscosity at 25 °C (ISO 12058-1)	5 – 20	[cps]
	Density at 25 °C (ISO 1675)	0.92-0.93	[g/cm ³]
	Aradur[®] 3492		
	Aspect (visual)	Yellow liquid	
	Viscosity at 25 °C (ISO 12058-1)	5 - 20	[cps]
	Density at 25 °C (ISO 1675)	0.92-0.93	[g/cm ³]

PROCESSING DATA

MIX RATIO	Components	Parts by weight	Parts by volume
	Araldite® LY 1568	100	100
	Aradur® 3489	28	35
	Araldite® LY 1568	100	100
	Aradur® 3492	28	35

We recommend that the components are weighed with an accurate balance to prevent mixing inaccuracies which can affect the properties of the matrix system. The components should be mixed thoroughly to ensure homogeneity. It is important that the side and the bottom of the vessel are incorporated into the mixing process.

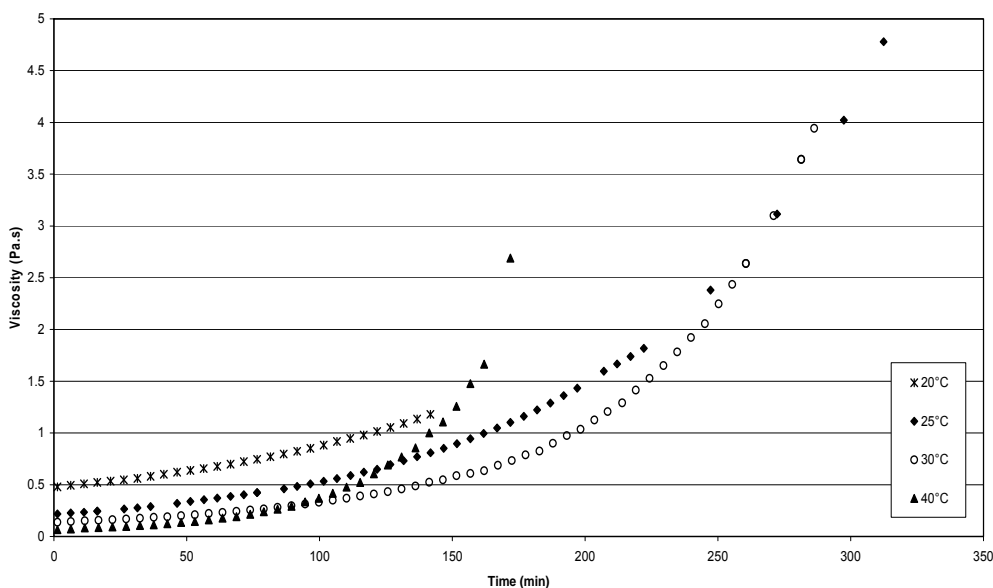
When processing large quantities of mixture the pot life will decrease due to exothermic reaction. It is advisable to divide large mixes into several smaller containers.

INITIAL MIX VISCOSITY (ISO 12058-1)		[°F]	[cps]
	Araldite® LY 1568 / Aradur® 3489	at 78	200 - 300
	Araldite® LY 1568 / Aradur® 3492	at 78	200 - 350

VISCOSITY BUILT UP

(Rhemoeter AGR2,
plate/plate 25 mm,
100 rpm)

Araldite® LY 1568 / Aradur® 3489



POT LIFE		[g]	[min]
(Tecam, 73°F, 65 % RH)	Araldite® LY 1568 / Aradur® 3489	100	850 - 950
	Araldite® LY 1568 / Aradur® 3492	100	300 - 350

GEL TIME (Hot plate)		[°F]	[min]
Araldite® LY 1568 / Aradur® 3489		at 176	43-46
		at 212	15-16
		at 248	7-8
Araldite® LY 1568 / Aradur® 3492		at 176	23-25

The values shown are for small amounts of pure resin/hardener mix. In composite structures the gel time can differ significantly from the given values depending on the fibre content and the laminate thickness.

PROPERTIES OF THE CURED, NEAT FORMULATION

GLASS TRANSITION TEMPERATURE (T_G) (IEC 1006,10 K/min)	<i>Cure:</i>	T _G [°F]	Araldite® LY1568/ Aradur® 3489	Araldite® LY1568/ Aradur® 3492
	15 h 122 °F		142-149	
	6 h 158 °F		167-172	174-185
	4 h 176 °F		169 -174	
	8 h 176°F		171-176	176-185
	5 h 212°F		174-181	

TENSILE TEST (ISO 527)			Araldite® LY1568/ Aradur® 3489	Araldite® LY1568/ Aradur® 3492
	<i>Cure : 8 h 176 °F</i>			
	Tensile strength	[Kpsi]	9.7 - 10.3	9.4 – 10.1
	Elongation at tensile strength	[%]	4.4 - 5.0	2.5-4.0
	Ultimate strength	[Kpsi]	7.8 – 8.0	8.4 - 9.3
	Ultimate elongation	[%]	10.5 – 11.0	4.0-6.0
	Tensile modulus	[Kpsi]	413 - 435	449 - 478

FLEXURAL TEST (ISO 178)			Araldite® LY1568/ Aradur® 3489	Araldite® LY1568/ Aradur® 3492
	<i>Cure : 8 h 176 °F</i>			
	Flexural strength	[Kpsi]	17.4 – 18.8	18.1 – 19.6
	Elongation at flexural strength	[%]	5.5-6.5	5.8-6.4
	Ultimate strength	[Kpsi]	14.5 – 16.6	17.4-18.9
	Ultimate elongation	[%]	9-10	7.0-8.0
	Flexural modulus	[Kpsi]	422 - 437	421-450

FRACTURE PROPERTIES BEND NOTCH TEST (PM 258-0/90)	<i>Cure : 8 h 176 °F</i>	Araldite LY1568/ Aradur® 3489		Araldite LY 1568/ Aradur® 3492	
	Fracture toughness K_{1C}	$[\sqrt{\text{in} \cdot \text{lb}/\text{in}^2}]$	636 – 727	769 – 879	
	Fracture energy G_{1C}	$[\text{In} \cdot \text{lb}/\text{in}^2]$	0.84 – 1.06	1.2 – 1.31	

STORAGE

Araldite® LY 1568 should be stored in a dry place, in the sealed original container, away from heat and humidity, at temperatures between +2°C and +40°C (+35.6°F and +104°F). Under these storage conditions, the shelf life is 5 years. The product should not be exposed to direct sunlight. Partly emptied containers should be closed immediately after use.

Aradur® 3489 and Aradur® 3492 should be stored in a dry place, in the sealed original container, away from heat and humidity, at temperatures between +2°C and +40°C (+35.6°F and +104°F). Under these storage conditions, the shelf life is 3 years. The product should not be exposed to direct sunlight.

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First Aid!

Refer to MSDS as mentioned above.

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