Advanced Materials
Structural Composites

Araldite® LY 556
Aradur HY 951

Araldite® LY 556 is medium viscosity, unmodified liquid epoxy resin based on Bisphenol – A .
Aradur HY 951 is a low viscosity, unmodified , aliphatic polyamine.
Araldite® LY 556 with Aradur HY 951 provides a low – viscosity , solvent free room temperature curing laminating system . By varying the contents of hardener Aradur HY 951 from 10 to 12 parts , the reactivity of the system can be adapted to suit the processing & curing conditions.

Applications

Industrial Composites
Structural Composites

Properties

- Low – viscosity system
- Glass fibre laminates are dimensionally stable
- Glass fibre laminates are practically free from internal stress
- Excellent water resistance

Key properties **Specified key data**

Property	**Specification**	**Unit**	**Araldite® LY 556**	**Aradur HY 951**
Viscosity at 25° C	ISO 12058	mPa.s	10,000 – 12,000	10 - 20
Density at 25° C	ISO 1675	gm/cc	1.15 – 1.20	0.97 – 0.99
Flash point	ISO 2719	° C	> 200	>180

Processing
Mixing Ratio

	Parts by weight
Araldite® LY 556	100
Aradur HY 951	10 – 12

Resin & Hardener should be mixed uniformly until they form a Homogenous mixture.

Properties of the Mix

Viscosity	**@ 25°C**	: 1,700 mPa.s
	@ 40°C	: 650 mPa.s
Usable Life	**upto 1,500 mPa.s**	: 10 minutes (1 kg. mix @ 40°C)
Gel Time	**@ 25°C**	: 120 – 180 minutes
	@ 40°C	: 30 minutes

Curing Schedule

Temperature (^{0}C)	25	60*	80*	100*
Duration (hrs)	24 – 49	4 – 8	2 – 4	1 – 4
Martens HDT (^{0}C)	35 – 40	75	75	75

* after gelling at room temperature

Properties of Cured Casting and Laminate

Properties	Specification	Units	Casting	Laminate**
Tensile strength	ISO / R 527	kg / mm^2	6 – 7	35 – 38
Flexural strength	ISO / R 178	kg / mm^2	12 – 14	45 - 50
Impact strength	VSM 77105	kg cm / cm^2	10 – 11	115 - 125
Water absorption	(specimen 60 * 10 * 4 mm)			
10 days @ 20^{0}C		%	0.2	0.2 – 0.3
1 hour @ 98^{0}C		%	0.2	0.3 – 0.4

** 50 % glass (10 layers of 300 GSM glass fabric with Volan – A finish)

Handling Precautions:

Caution

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 into 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 wering 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 descirbed in greater detial in the Material Safety Data sheets for the individual products and should be referred to for fuller information

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