

Laminating resin **LG 160** Hardeners **HG 351, HG 353, HG 356**

1. Description

Laminating resin LG 160 is a standard epoxy resin based on modified resin of A-bisphenol type and bi-functional reactive diluent.

Hardener HG 351 is a hardener of 15-minute pot-life based on accelerated mixture of polyamines.

Hardener HG 353 is a hardener of 50-minute pot-life based on accelerated mixture of polyamines.

Hardener HG 356 is a hardener of 2 up to 3-hour pot-life based on mixture of polyamines.

2. Use

The system is used for lamination at elevated, but also at room temperature to produce composite parts of good heat resistance and excellent mechanical properties. The system has been designed for production of high performance composite parts with a simple technology, such as, for example, hand lamination at room temperature.

The systems can be used for all commonly used reinforcements, such as, for example, glass, carbon or aramid fibres, core materials etc.

The system is compatible with all common polyester gelcoats and paints. Though, we still recommend trying out the individual combinations ahead.

2.1 Working instructions

The system is recommended to be processed at temperatures between 10 up to 30°C using common methods of composite production.

This system has been designed so that it gets cured sufficiently also at room temperature of 15 – 30°C, therefore it can be processed also at room temperature and used without a consequent post-curing at heat. The processing time is approx. 50 minutes.

If cured at room temperature (approx. 23°C) for 24 hours, temperature resistance up to 55°C can be achieved. If cured at heat a heat resistance of up to 90 °C can be achieved (see the chart of temperature resistance).

Gel time: (building-up a layer of 1 mm at different temperature)

LG 160	HG 351	HG 353	HG 356
at 25°C	under 1 hour	2 hours	approx. 5 – 6 hours
at 50°C	15 minutes	30 minutes	1 hour

2.2 Technical parameters

Laminating resin LG 160 + Hardeners HG 351, HG 353, HG 356

Properties:

LG 160		
Density	g/cm ³ (25°C)	1,18 - 1,23
Viscosity	mPa.s (25°C)	900 - 1100
Epoxy equivalent	mol/kg	170 - 180
Epoxy index	-	0,56 – 0,58
Colour	Gardner	max 3

		HG 351	HG 353	HG 356
Density	g/cm ³ (25°C)	0,98	0,96	0,97
Viscosity	mPa.s (25°C)	480-520	120 - 160	50 - 80
Amine number	Mg KOH/g	644	644	644
Hydrogen equivalent	-	62	62	62
Colour	Gardner	max 3	max 3	max 3

Heat resistance (Tg):

LG 160	HG 351, HG 353, HG 356
at 23°C (5 - 7 days)	up to 55°C
at 50°C (3 hours)	65°C
at 60°C (> 3 hours)	75°C
at 80°C (> 2 hours)	80°C
at 120°C (2 hours)	85°C

Mixing ratio, resins + hardeners:

LG 160 + HG 351/HG 353/HG 356	
Parts by weight	100 : 35
Parts by volume	100 : 43

Details for processing:

	LG 160	HG 351	HG 353	HG 356
Average epoxy value	0,56	-	-	-
Average amine equivalent	-	62	62	62
Storage	24 months (epoxy resin), 12 months (hardeners) in original package			

3. Storage and package

Resins can be stored for a period of at least 24 months, hardeners 12 months in carefully sealed drums. At temperatures below + 15°C resins and hardeners can get crystallized. Crystallisation is visible as misting-up or modification of liquid contents into a solid. Before processing crystallisation has to be eliminated. Slowly warm up to approx. 50 – 60°C into a water bath or oven and by stirring or shaking you will get the contents into its initial appearance without any negative effect on its quality. Process only products of totally unified colour. Before warming-up slightly open the drum so that the pressure inside gets stabilised. Be careful during the warming-up. Do not warm up above open fire! During stirring use safety utilities (gloves, goggles, breathing device).

4. Contact details**Manufacturer/Supplier:**

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Note

This technical datasheet has been created based on our latest knowledge and according to the best information and knowledge available. As we are unable to check if our products are used in a correct way, we cannot guarantee results. In spite of this, we will be glad to give you advice.