

## **Data Sheet**

Glassfibre-reinforced epoxy resin system containing mineral filler.

### **Applications**

The construction of jigs and fixtures, foundry patterns and foam moulds.

The stiffening and jointing of spotting aids.

### **Method of application**

Manual

### **Features**

Laminated shell structures up to 20 mm thick can be built up in a single operation that is both simpler and takes less time than the laying up of glasscloth or glassfibre matting poses only a low skin irritation hazard.

Cures at room temperature.

### **Properties when cured**

Consistently high quality.

Very good dimensional stability.

High rigidity coupled with low weight.

RenLam LSH 69-3 A with Ren HY 2959 is a glassfibre reinforced two-component system curing at room temperature. It is particularly suitable for the construction of large parts. A single, simple manual operation suffices to produce layers up to 20 mm thick or to apply backing to tooling aids. Its use eliminates the time-consuming laying up of numerous sheets of glasscloth. For details of the techniques used in laminating please consult Applications Brochure No. 36, "The construction of copy-milling models and jigs" (Publication No. 24085/e).

### Product Characteristics

#### LSH 69-3 A

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As-supplied form		grey, dry and fibrous paste
Bulk density	g/cm <sup>3</sup>	0.3
Density (compressed)	g/cm <sup>3</sup>	1.1
Flash point (Pensky-Martens)	°C	> 200
Shelf life at 18-25°C		1 year

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#### HY 2959

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As-supplied form		blue	liquid
Viscosity at 25°C	mPas	600-900	
Density at 25°C	g/cm <sup>3</sup>	0.95-1.0	
Flash point (Pensky-Martens)	°C	147	
Shelf life at 18-25°C		1 year	

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## Processing

### Mixing Ratio

		Parts by Weight
RenLam	LSH 69-3 A	100
Ren	HY 2959	10

After adding the hardener to the resin, the two components should be blended thoroughly to produce a homogeneous mix. The blue colour of the hardener allows quick and reliable visual assessment of mix homogeneity. Small batches can be prepared either manually by operatives wearing gloves or with light electric paddle mixers. Large batches weighing up to 10 kg should be mixed using agitators or kneaders.

Depending on the type of mixer used, an unnecessarily prolonged mixing operation may induce temperature rise curtailing the potlife of the mix and resulting in a fibrous, dry paste.

We recommend applying a coupling layer, formulated as shown below, by brush or spatula to the gelcoat resin in order to improve adhesion of the paste and to prevent the formulation of voids.

Coupling layer	Parts by Weight
RenLam M-1	100
Ren HY 956	20
Chopped glass fibres QT 58	20

The laminating paste is applied as evenly as possible by hand and then smoothed and compacted with a roller.

## Properties

Resin / hardener mix at 25°C

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RenLam LSH 69-3 A with Ren HY 2959		
Potlife of batches up to 3 kg	min	45 - 60
Demouldable after	h	20 - 24
Minimum cure time prior to use	h	24 - 36

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After curing for 7 days at 20-25°C

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RenLam LSH 69-3 A with Ren HY 2959		
Density	g/cm <sup>3</sup>	1.1
Flexural strength ISO 178	N/mm <sup>2</sup>	30 - 35
Deflection	mm	1.2 - 1.5
Dimensional stability under heat (Martens) ISO 75	°C	40 - 45
Shrinkage (900x75x30 mm sample)	‰	0.2 - 0.4

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## Storage

The products described above will show storage lives shown if they are in a dry place at 18-25°C in sealed containers, preferably those in which they were supplied.

## Handling precautions

Epoxy resins and hardeners are chemicals. The mandated and/or recommended industrial hygiene procedures should always be followed when they are being handled. For details, please consult “Hygienic precautions for handling plastics products of Huntsman Advanced Materials” (Publication NO. 24264/e).

## First aid

Contamination of the **eyes** by resin, hardener or ready-to-use paste should be treated immediately by flushing continuously with clean, running water for 10 to 15 minutes. A doctor should then be consulted.

Material smeared or splashed on the **skin** should be dabbed off, and the contaminated area then washed and treated with a cleansing cream. A doctor should be consulted in the event of severe irritation or burns. Soiled clothing should be taken off immediately.

Anyone taken ill after **inhaling** vapours should be moved out of doors immediately and a doctor summoned.

In all cases of doubt call for medical assistance

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### Registered trademark

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