

## Key Features

The **LR 30** Resin System with the range of four hardeners offers a complete solution for manufacturing of composite parts. The LR 30 system in combination with epoxy gel coat is ideally suited for composite tools. With the addition of fillers this system can be used as casting resin for small moulds, foundry patterns and fixtures.

The **LR 30** system is designed to give excellent mechanical and thermal properties. Medium and Slow hardeners have Minimal Irritation Potential (MIP).

## Physical Properties

LR 30 Resin	LH30 Extra Fast	LH30 Fast	LH30 Medium	LH30 Slow
Mix Ratio by Weight (p.b.w) Mix Ratio by Volume (p.b.v.) (Volume calculated @ 25°C)	100:16 100:17	100:25 100:28	100:20 100:23	100:25 100:30
Pot Life (300gram @ 25°C)	15 Minutes	20 Minutes	25 Minutes	65 Minutes
Mixed Viscosity (MPa's)	800-900	800-900	900-950	900-950
Colour	Semi Transparent	Yellow Transparent	Brown/Blue	Brown/Blue

## Mechanical and Thermal Properties

LR 30 Resin	LH 30 Extra Fast	LH 30 Fast	LH 30 Medium	LH 30 Slow
TG (Glass Transition Temperature)	75°C	80°C	98°C	102°C
Final Hardness (MPa)	85	85	87	87
Compressive Strength (MPa)	95 ± 5	105 ± 5	118 ± 5	120 ± 5
Tensile Strength (MPa)	52 ± 5	40 ± 5	64 ± 5	65 ± 5
Flexural Strength (MPa)	105 ± 5	80 ± 5	131 ± 5	131 ± 5
Flexural Modulus of Elasticity (MPa)	2800 ± 200	2800 ± 200	3500 ± 200	3500 ± 200
Elongation at break %	3.3%	3.2%	5%	5%

## Type Cure Schedule

Typical Cure Schedule	LH 30 Extra Fast	LH 30 Fast	LH 30 Medium	LH 30 Slow
Complete hardening at room temperature (25°C)	12-24 hours	20-24 hours	24-36 hours	24-38 hours
Typical Cure Schedules continued	48 hours @ Room temperature. Or 10 hours @ 50°C Or 4 hours @ 60°C	48 hours @ Room temperature. Or 10 hours @ 50°C Or 4 hours @ 60°C	18 hours @ 40°C Or 16 hours @ 65°C Or 8 hours @ 90°C	18 hours @ 40°C Or 16 hours @ 65°C Or 8 hours @ 90°C

## Applications and uses:

<p><b>LR 30 Resin/ LH 30 Hardener Extra Fast (LH 137)</b> Excellent mechanical properties, Fast setting, general laminating and ideal for composite repair and bonding.</p>	<p>Relatively fast setting for laminating smaller components. Ideal for bonding by addition of cotton flocks. Can be used as a casting resin maximum 10mm with the addition of RZ209/8 aluminum filler or RZ 30150. High toughness, good mechanical properties and good chemical resistance. Cold and warm curing.</p>
<p><b>LR 30 resin/ LH 30 Hardener Fast (LH 244)</b> Most economical and versatile laminating and tooling resin system.</p>	<p>Composite components, foundry patterns and repair systems. Excellent fibre wetting properties, low shrinkage, low viscosity, good mechanical properties. Cold or warm curing. Can be used as a casting resin system up to 10mm as follows: RZ320 – for abrasion resistance. RZ209/8 – for good heat transfer (vacuum forming) RZ 30150 – for negative moulds and patterns.</p>
<p><b>LR 30 Resin LH 30 Hardener Medium (SLC 30)</b> A high performance, low toxicity (MIP), good temperature resistant laminating resin system.</p>	<p>Typically for composite component manufacture. Ideal for hand lamination, vacuum infusion and filament winding. Excellent for moulds requiring temperature resistance up to 90°C. Very high toughness with excellent mechanical properties.</p>
<p><b>LR 30 Resin LH 30 Hardener Slow (SLC 60)</b> High toughness, general purpose laminating resin system for composite parts and mould making. Low toxicity (MIP).</p>	<p>Hand laminating, vacuum infusion and filament winding. For mould making applications with a temperature resistance of 100°C. Excellent toughness and mechanical properties after post curing.</p>

### Disclaimer

*Any information, data, advice or recommendation's for processing materials or products supplied by AMT Composites is given in good faith. It remains at all time the responsibility of the customer to ensure that the products and materials recommended are suitable for the production method used, and purpose intended.*

### Copyright

*All rights reserved, including intellectual property rights. Changes to technical data reserved. Delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.*

©2018 AMT Composites