Carbon Resin
Technical Information

Thermosetting laminating resin with low shrinkage compared to polyester resins.

Application: For the production of fibre-reinforced parts.

Information on Components:

Density: 1.05g/cm³

Storage: Temperature: 10-27°C
Keep container tightly closed.

Sizes: 4.9Kg & 900g

Product Features:

- For hardening (polyaddition) a hardener is necessary Hardening Paste Red or White or Hardening Powder 50).
- Good wetting of the reinforcement fibres.
- High endurance to dynamic strain.
- High heat resistance.
- Good chemical resistance.
- Best aging resistance.
- Excellent bonding with wood and many other metals and plastics.
- Slow reaction process.
- The hardened parts are not thermoplastic.
- Due to the low Bispenol-A content the Epoxide Polymer is less irritable to skin than other expoxy resins.

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Process While Laminating:

1. Weigh out the required amount of resin.
2. The hardener should be weighed out precisely and then thoroughly mixed with the resin.
   Note: Differing hardener quanities will result in a disturbance of the reaction process and consequently in poor production results.
3. If required, 1-2% colour paste is added and stirred thoroughly.
4. Within a short space of time any mixed air will escape automatically. Now the mixture can be processed.
5. The hardening process begins, starting at the points of the highest resin concentration (thickest part). The thickness of the resin will have an effect on heat production (the thicker the resin the higher the heat produced).
6. Before demoulding, check that the laminate is completely cured.

The times given in the table below can be reduced considerably with a temperature increase of the resin or mixture with the already mixed-in hardener.

	Aortha Epoxide Polymer
Size	4.9Kg (TK1222) 900g (TK1220)
Characterisation	Hard lamination resin
Application	Solid lamination
Viscosity in mPas	370
Hardener addition (Hardener Powder 50)	on 100g Epoxide Polymer 2g
Pot life*	30 min
Gelification after*	37 min
Hardened after*	50 min
Laminate demoulding possible after**	1 hour
Final strength reached after**	1 day

*at 20°C, resin mixture 100g cup sample.
The hardening times for a laminate increase for thinner layer thicknesses due to the low resin concentration.

**at 20°C, laminate thickness 2mm

By storing the demoulded laminate in a heated cabinet at 60°C for 12 hours the strength is increased by 3-5%. After this time the hardening is completed and the final strength is reached.