

1 - DEFINITION

RM 5000 is a polyester resin specially formulated for the production of moulds according to infusion method.

2 - CHARACTERISTICS

- Polyester resin which cures at ambient temperature with the addition of MEKP (e.g. **Butanox M50 from Akzo**).
- A pre accelerated and promoted resin.
- No shrinkage, good surface appearance.
- The product is ready to use.
- Good curing.

3 – SPECIFIC CHARACTERISTICS

- High rate glass.
- Good flowing.
- Good mechanical properties of the laminate achieved according to infusion method.

4 – PROPERTIES OF THE LIQUID RESIN

Flamability	Inflammable
Brookfield Viscosity (ISO 2555 – 20°C – sp2)	5 rpm 680+/-40 mPa.s 50 rpm 330+/-20 mPa.s
Density (ICON 012)	1.25 – 1.27 g/cm ³
Non volatile content (ICON 003)	64 +/- 1%
Gel time (ICON 002) (20°C – 1 ml MEKP on 100 g)	130 +/- 10 minutes

Peak time (20°C – 1 ml MEKP on 100 g)	150 +/-10 minutes
Peak temperature (20°C – 1 ml MEKP on 100 g)	150 – 170 °C
Aspect / color	beige

5 – MECHANICAL PROPERTIES OF THE CURED RESIN

Tensile strength* (ISO 527)	72.3 MPa
Tensile modulus* (ISO 527)	1 GPa
Elongation at break* (ISO 527)	6.3%

Flexural strength* (ISO 178)	131.4 MPa
Flexural modulus* (ISO 178)	3.7 GPa
Barcol Hardness after 24 hours*	30

*Test made on a laminate made of **GC 206** (600 microns), **Norester® R 842** (1 mat 100 + 2 mats 300), **Norester® RM 5000** (1 multimat S450G500S450 + 1 Unifilo 450 g + 1 multimat S450G500S450 + 1 Unifilo 450 g + 1 multimat S450G500S450 + 1 Unifilo 450 g) realised according to the infusion process.

The laminate has been post cured during 3 hours at 80°C. Glass content = 36%.

IMPORTANT

Information contained in this publication is given in good faith without warranty or guarantee. No liability can be accepted for claims, losses or demands arising out of the contents of this publication. We cannot be responsible for moulds made with RM 5000 if the application conditions specified are not respected. The user must also ensure that his application is appropriate for this product to be used. We assert that the product will meet the specification set out in this data sheet, however, we cannot be responsible for any damage caused by misuse of this product.

6 – RECOMMENDATIONS BEFORE USE

As the **Norester® RM 5000** resin is a filled product, the user must absolutely well mix the resin for each new application before using it to have a homogenous product.

7 – PROCEDURE FOR MOULD PRODUCTION

• Application of the gel coat

Apply 800µ of tooling vinyl ester gel coat **GC 206/GC 207** with several thin layers from 150 to 200µ. The gel coat must be applied at a temperature between 18 and 25°C and catalysed with Butanox M50 at a level between 1,5% and 2%.

• Application of the barriercoat

When the gel coat is well cured (for optimum conditions, wait at least 4 hours before starting lamination), laminate with vinyl ester resin **Norester® R 842** as follows :

- 1 mat 100 g/m² and 2 mats 300 g/m² with a level of catalyst Butanox M50 between 1% and 2%, wet on wet. Before laminating, check that the temperature of the resin **Norester® R 842** is between 18°C and 25°C.

• Application of the tooling resin

Make the infusion of the tooling resin **RM 5000** on the following day. Before infusion, make sure that the temperature of the resin, the mould and the room is between 18°C and 25°C.

Before every application it is important to mix the resin well for several minutes to ensure complete homogeneity. To obtain optimum properties with the tooling resin **RM 5000**, we recommend a use in a workshop at a temperature between 18 and 25°C. A too low temperature would not allow the anti shrink additives in the resin to be activated. As well as a too high temperature would cause a significant reduction in the gel time leading to application problems with the **RM 5000**.

The percentage of catalyst must be between 1 and 1,5% (e.g. Butanox M50) in accordance with the weight of the resin **RM 5000** in order to achieve optimum curing of the resin.

• Structure of laminate recommended for realization of infusion mould :

- 1 multimat S450G500S450
- 1 Unifilo 450 g
- 1 multimat S450G500S450
- 1 Unifilo 450 g
- 1 multimat S450G500S450
- 1 Unifilo 450 g

Then we obtain a maximum thickness of nearly 18 mm (gel coat and vinyl ester layer included).

NOTE : The regular and homogeneous whitening of the laminate ensures that the product is being used correctly.

IMPORTANT

Information contained in this publication is given in good faith without warranty or guarantee. No liability can be accepted for claims, losses or demands arising out of the contents of this publication. We cannot be responsible for moulds made with RM 5000 if the application conditions specified are not respected. The user must also ensure that his application is appropriate for this product to be used. We assert that the product will meet the specification set out in this data sheet, however, we cannot be responsible for any damage caused by misuse of this product.

8 – RECOMMENDATION FOR DEMOULDING

It is recommended to wait at least 24 hours before demoulding the part.

9 - PACKAGING

Available in cans of 25Kg or in drums of 250Kg.

10 – STORAGE CONDITIONS AND HANDLING

Storage life : the resin **Norester® RM 5000** is stable for 3 months from date of production when stored in original closed packaging away from direct sunlight at a temperature between 15°C and 25°C.

It is the responsibility of the customer to assure that the production is used in good conditions overall before the date limitation mentioned on the keg.

This resin is subject to the Highly Flammable Liquids Legislations.

IMPORTANT

Information contained in this publication is given in good faith without warranty or guarantee. No liability can be accepted for claims, losses or demands arising out of the contents of this publication. We cannot be responsible for moulds made with RM 5000 if the application conditions specified are not respected. The user must also ensure that his application is appropriate for this product to be used. We assert that the product will meet the specification set out in this data sheet, however, we cannot be responsible for any damage caused by misuse of this product.

ZA – route d'Amiens – 80890 Condé-Folie – Tél : 03.22.31.57.57 – Fax : 03.22.31.86.97