1. CHARACTERISTICS

RM 6000 is a vinyl ester resin without any shrinkage especially formulated for producing mould by infusion.

- Vinyl ester resin which cures at ambient temperature with the addition of catalyst hydro peroxide of cumene (**e.g. Trigonox T239 from AKZO**).
- Pre accelerated and promoted resin designed for infusion applications.
- No shrinkage. Good surface appearance.
- Ready to use product.
- Good curing.
- High rate glass.
- Good flowing.
- Good mechanical properties of the laminate made by infusion.
- Clear and no filled resin.

2. PROPERTIES OF LIQUID RESIN

Appearance / color	Translucent purple
Flammability	Inflammable
Brookfield viscosity (20°C – sp2 – ISO 2555)	50 rpm : 280 - 320 cP
Geltime (ICON 002) (20°C – 1 mL T239 on 100 g)	75 - 105 minutes
Peak time (20°C – 1 mL T239 on 100g)	100 minutes
Peak temperature (20°C – 1 mL T239 on 100g)	190°C
Non volatile content (ICON 003)	50 - 52%

3. MECHANICAL PROPERTIES OF THE CURED RESIN ON LAMINATE

Flexural strength * (ISO 178)	212.4 MPa
Flexural modulus * (ISO 178)	6.017 GPa
Tensile strength * (ISO 527)	125.1 MPa
Elongation at break * (ISO 527)	8.13%
Barcol hardness* (ASTM 2583)	50 after 24 hours

*Test made on a laminate made of **GC 207** (600 microns), **NORESTER® RM 6000** (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.

IMPORTANT
*All of the results obtained according to trials in our laboratory. However, we don't be responsible of manufactured parts with the resin **NORESTER® RM 6000**, if the application conditions specified are not respected.*
It is imperative that the user must also ensure that his application and his process are appropriate for this product to be used. We hereby the conformity of our products with the above specifications. We cannot be responsible for any damage caused by misuse of this product or use of the product for an application not covered in the design.

The mechanicals tests were realized without skincoat **NORESTER® R842** to obtain the mechanicals properties only for the resin **NORESTER® RM 6000**.
However, to obtain a good surface appearance, we recommend the application with skincoat **NORESTER® R842**.

4. MECHANICAL PROPERTIES OF THE CURED RESIN

Flexural strength * (ISO 178)	46.50 MPa
Flexural modulus * (ISO 178)	2.97 GPa
Tensile strength * (ISO 527)	21.86 MPa
Elongation at break * (ISO 527)	2.14%
Temperature of deflection under load* (HDT) (ISO 75-3)	100°C
Barcol hardness* (ASTM 2583)	40 after 24 hours

*tests realized on cast resin post cured 24 hours at ambient temperature and 3 hours at 80°C

5. PROCEDURE FOR MOULD PRODUCTION BY INFUSION WITH RM 6000

- **Application of the gel coat**

Apply 800µ of tooling vinyl ester gel coat **GC 206 / GC 207** with several thin layers from 150µ to 200µ. We recommend to wait a few minutes between each layer. The gel coat must be applied at a temperature between 18°C and 25°C and catalysed with Butanox M50 at a rate between 1.5% and 2%.

- **Application of the skin coat**

On well polymerized gel coat (wait 4 hours before the beginning of the curing in optimal conditions of use), laminate with the vinyl ester resin **NORESTER® R 842** in the following way:
- 2 powder mats 100 g/m² or 1 powder mat 200 g/m² with a rate of catalyst between 1% and 2% of Butanox M50 wet on wet. Before laminating, check that the resin **NORESTER® R 842** is between 18°C and 25°C.

- **Application of tooling resin**

The day following the application of the skin coat, make the infusion of the tooling resin **RM 6000**. Before the infusion, make sure that the temperature of the resin, of the mould and of the room is between 18°C and 25°C.
Before every use, it is important to mix well the resin during few minutes in order to obtain a well homogenized product.
To obtain some optimum properties of the mould resin **RM 6000**, we advise to use it at a temperature between 18°C and 25°C. A too low temperature would not enable to the anti shrink additive of the resin to be activated. As well, a too high temperature would decrease the gel time in an important way and so to develop some bad application conditions of the **RM 6000**.

The catalyst rate must be between 1% and 1,50% (**e.g. Trigonox T239**) in accordance with the weight of the resin **RM 6000** in order to achieve an optimum curing.

- **Structure of the laminate recommended for realisation of infusion mould:**
  - 1 multimat S450G500S450
  - 1 Unifilo 450 g
  - 1 multimat S450G500S450
  - 1 Unifilo 450 g
  - 1 multimat S450G500S450
  - 1 Unifilo 450 g

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

6. RECOMMANDATION FOR DEMOULDING

According to the size, and application of the mould, it is strongly recommended to reinforce the mould with ribs and to demould between 2 and 5 days after laminating, to avoid any marks from the ribs.

If the installation of ribs is not necessary, it is recommended to wait at least 24 hours before demoulding the part.

7. PACKAGING

Available in 25 kg kegs or in 225 kg drums.

8. STORAGE CONDITIONS

Storage life: Resin **NORESTER® RM 6000** 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 product is used in good conditions overall before the date limitation mentioned on the keg.

This resin is subject to the Highly Flammable Liquids Regulation.

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