



## 1 CHARACTERISTICS

The resin **MFE 711** is based on Bisphenol-A- Epoxy Resin diluted in styrene. The resin provides resistance to a wide range of acids, alkalis, bleaches and solvents used in many chemical processing industry applications.

- The resin polymerise at room temperature following addition of Cobalt solution and catalyst like Methyl Ethyl Ketone peroxide.
- The resin is developed for FRP storage tanks, vessels, ducts, and on-site maintenance projects, particularly in chemical processing and pulp and paper operations.
- The resin has shorter gel-to-cure interval so can reduced stress cracking.
- The resin has longer shelf life so provides additional flexibility to fabricators in storage and handling.
- When properly formulated and cured, complies with FDA regulation 21 CFR 177.2420, covering materials intended for repeated use in contact with food.

## 2 PROPERTIES OF THE LIQUID RESIN

Appearance	Clear liquid
Brookfield viscosity (ISO 2555 - 20°C - sp3)	750 - 850 mPa.s
Non volatile content (ICON 003)	56 - 62 %
Gel time (ICON 002) (20°C – 0.15% Co 12% - 2% MEKP on 100 g)	15 - 19 minutes
Peak time (20°C – 0.15% Co 12% - 2% MEKP on 100 g)	22 - 32 minutes
Exothermic peak* (20°C – 0.15% Co 12% - 2% MEKP on 100 g)	150 - 180°C

\*Measure realised at free air.

## 3 MECHANICAL PROPERTIES ON BASIS RESIN

Tensile strength (ASTM D 638)	80 - 95 MPa
Tensile modulus (ASTM D 638)	3,2 - 3,7 GPa
Flexural modulus (ASTM D 790)	3,3 GPa
Flexural Strength (ASTM D 790)	120 - 150 MPa
Elongation at break (ASTM D 638)	5,0 - 6,0 %
Heat distortion temperature*** (ASTM D 648 Method A)	100 - 106 °C
Barcol hardness* (ASTM 2583)	38 - 42

(\*) Typical property values only, not to be construed as specifications.

(\*\*) Cure schedule: 24 hours at room temperature; 2 hours at 120 °C

(\*\*\*) Maximum stress: 1.8 MPa

Catalysis: 100 g Resin + 1,8 ml of Cobalt 1 % + 1,2 ml MEKP 50 (Butanox M 50)

### **IMPORTANT**

*All of the results obtained according to trials in our laboratory. However, we don't be responsible of manufactured parts with the resin **RVI MFE 711 NPA**, 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.*



#### **4 VERSIONS**

This resin is available in version (**shel life: 6 months**):

- Infusion: **RVIMFE711VNPA**, with a viscosity at 50 rpm: 100 - 160 cP (20°C - sp3) and a gel time of 45 - 55 min (20°C - 0.05% Co 12% - 1.5% LPT on 100 g).
- Low viscosity: **RVIMFE711NPABV**, with a viscosity at 50 rpm: 400 - 600 cP (20°C - sp3) and a gel time of 15 - 19 min (20°C - 0.15% Co 12% - 2% MEKP M50 on 100 g).

This resin is available in version (**shel life: 3 months**):

- Pre-accelerated: **RVIMFE711PA**, with a gel time of 15 - 19 min (20°C – 2% MEKP M50 on 100 g).
- Pre-accelerated and long gel time: **RVIMFE711PALGT**, with a viscosité at 50 rpm: 220 - 280 cP (20°C - sp3) and a gel time of 35 - 45 min (20°C - 1.5% MEKP M50 on 100 g).
- Thixo pre-accelerated: **RVIMFE711TPA**, with a viscosity at 5 rpm: 2200 - 2600 cP and at 50 rpm: 800 - 1000 cP (20°C - sp3) and a gel time of 27 - 33 min (20°C - 2% MEKP M50 on 100 g).
- Thixo pre-accelerated, promoted and low viscosity: **RVIMFE711TPAPRBV**, with a viscosity at 5 rpm: 1500 - 2000 cP and at 50 rpm: 750 - 850 cP (20°C - sp3) and a gel time of 16 - 20 min (20°C - 2% MEKP M50 on 100 g).
- Pre-accelerated, with a special polymeric amine and the peroxide must be PBO at 40 %: **RVIMFE711PBO** with a viscosity at 50 rpm: 325 - 375 cP (20°C - sp3) and a gel time of 20 - 30 min (20°C - 2% of PBO 40% on 100 g).

#### **5 RECOMMENDATIONS BEFORE USE**

- Mix the **MFE 711** well before use.
- Mix the peroxide very well, never put less than 1% and more than 3% of MEKP.
- Before use, check that the temperature of the product and the room is between 18°C and 25°C.
- **Do not mix together the accelerator and the catalyst.**
- To obtain a homogeneous polymerization, mix the cobalt well for 10 minutes after add and mix the catalyst well before use.

#### **6 PACKAGING**

Available in kegs of 25 kg and in drums of 225 kg.

#### **7 CONDITIONS DE STOCKAGE**

Storage life: **RVI MFE 711** resin is stable for 6 months from date of production. The product must be stored in original closed packaging at a temperature between 15°C and 25°C, away from direct sunlight.

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 Regulations.

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