

## Nanocyl EPOCYL™ NC R1MY-04 Master Batch Liquid tetrafunctional epoxy Resin for solvent based Formulation Purposes: Dilution Factor 6

Category : Polymer , Thermoset , Epoxy , Epoxy/Carbon Fiber Composite

### Material Notes:

EPOCYL™ NC R1MY-04 is a Master Batch based on liquid tetrafunctional epoxy resin containing high concentration of Carbon Nanotubes (CNT) produced by Nanocyl with a suggested dilution factor of 6. It is specifically developed to enhance the mechanical properties of the final fiber reinforced composite materials. Special features include easy integration and great flexibility in design of new multifunctional materials. Applications: High performance structural composite parts Automotive (bumpers and other structural parts) Marine, especially sailing boats (structural outer shell in carbon fiber composite, masts and other generic structural parts) Industrial parts (rollers, doctor-blades and wind-mill blades) Sporting equipments (bike frames, hockey sticks, tennis rackets, skis and golf shafts) Aerospace (structural parts and interiors) Main direct advantages Improved fracture toughness (G1C) of over 100% = higher crack propagation/delamination resistance Improved failure strength: transverse and off-axis (+/- 45°) by over 15% = higher shear resistance Reduced CTE of over 15% = less distorted parts produced No reduction in the Tg = possible to be used in any formulation Additional advantages in general Electrical properties: induces antistatic properties in the composite parts; excellent for electrostatic painting application Flame resistance: higher resistance to flammability up to UL 94 level on the final fiber reinforced composite Better thermal dissipation: avoids hot-spots during curing, more homogenous temperature Curing agents EPOCYL™ NC R1MY-04 can be cured or cross-linked with different types of curing agents depending on the properties desired in the final composite like any conventional tetrafunctional based formulations. **IMPORTANT:** EPOCYL™ NC R1MY-04 is not an additive in your formulation, it is a substitution product for the equivalent parts of your conventional TGMDA liquid resin. Also, avoid addition of any solvent directly in the EPOCYL™ NC R1MY-04.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Nanocyl-EPOCYL-NC-R1MY-04-Master-Batch-Liquid-tetrafunctional-epoxy-Resin-for-solvent-based-Formulation-Purposes-Dilution-Factor-6.php](http://www.lookpolymers.com/polymer_Nanocyl-EPOCYL-NC-R1MY-04-Master-Batch-Liquid-tetrafunctional-epoxy-Resin-for-solvent-based-Formulation-Purposes-Dilution-Factor-6.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.15 - 1.18 g/cc	1.15 - 1.18 g/cc	
Viscosity	5000 - 35000 cP @Temperature 60.0 °C	5000 - 35000 cP @Temperature 140 °F	Measured with parallel plate in dynamic mode at 10 rad/s and a strain of 1%.

Descriptive Properties	Value	Comments
Aspect	Paste, black (Master Batch)	
Epoxy Equivalent	118.81 g- 126.44 /eq	
Epoxy Value	7.9 - 8.42 eq/kg	
Storage Temperature	5°C	

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