

## VINILGRAPH 901 PLUS PREMIUM

### 1. DESCRIPTION

Bisphenol A type epoxy vinyl ester resin with graphene, of medium viscosity and reactivity. It provides excellent corrosion resistance to a broad range of organic and inorganic acids, alkalis, oxidizing chemicals and salt solutions etc. It also provides very good mechanical strength such as tensile and flexura[ while incorporated with reinforcement such as glass fibre, carbon fibre, etc.

### 2. PROPERTIES

- High mechanical properties.
- High chemical resistance.
- Excellent corrosion resistance.
- Improvement of thermal conductivities.

### 3. APPLICATIONS

- Specially designed as a base resin reinforcement, such as glass fibre, carbon fibre, etc.
- Excellent intercoat adhesion and very low linear and volumetric shrinkage.
- The percentage of MEK peroxide to be added is between 0.6 % and 1 %, although it can be increased to 2 % to reduce the gel time.
- The application can be manual or by machine.
- May be used in pultrusion, hand lay-up, BMC and SMC processes.

## 4. TECHNICAL CHARACTERISTICS

<b>APPEARANCE</b>	Dark liquid
<b>DENSITY (kg / cm<sup>3</sup>)</b>	1.40 – 1.50
<b>GEL TIME [25°C] (min)<sup>1</sup></b>	18 – 20
<b>VISCOSITY BROOKFIELD [H3, 25°C] (cP)</b>	1000 - 2500

(1) 100/0.3 Co/0.6 PMEK

## 5. MECHANICAL CHARACTERISTICS

	<b>APPLY STANDARD</b>	<b>VALUE</b>
<b>FLEXURAL MODULUS (MPa)</b>	UN 14125	7 000 – 9 500
<b>FLEXURAL STRENGTH (MPa)</b>	UN 14125	40 – 70
<b>MAXIMUM DEFLECTION (mm)</b>	UN 14125	0.50 – 1.10
<b>TENSILE MODULUS (MPa)</b>	UN 527	5 500 – 6 500
<b>TENSILE STRENGTH (MPa)</b>	UN 527	30 – 50
<b>ELONGATION AT BREAK (mm)</b>	UN 527	0.50 – 0.70

*Mechanical properties of catalyzed resin*

	APPLY STANDARD	VALUE
<b>FLEXURAL MODULUS (MPa)</b>	UN 14125	~ 155 000
<b>FLEXURAL STRENGTH (MPa)</b>	UN 14125	~ 880
<b>MAXIMUM DEFLECTION (mm)</b>	UN 14125	~ 3.0
<b>TENSILE MODULUS (MPa)</b>	UN 527	~ 26 000
<b>TENSILE STRENGTH (MPa)</b>	UN 527	~ 1000
<b>ELONGATION AT BREAK (mm)</b>	UN 527	~ 5.0

*Mechanical properties of glass fibre reinforced resin (60%)*

	APPLY STANDARD	VALUE
<b>FLEXURAL MODULUS (MPa)</b>	UN 14125	~ 67 000
<b>FLEXURAL STRENGTH (MPa)</b>	UN 14125	~ 1200
<b>MAXIMUM DEFLECTION (mm)</b>	UN 14125	~ 10.0
<b>TENSILE MODULUS (MPa)</b>	UN 527	~ 22 000
<b>TENSILE STRENGTH (MPa)</b>	UN 527	~ 800
<b>ELONGATION AT BREAK (mm)</b>	UN 527	~ 6.0

*Mechanical properties of glass fibre reinforced resin (72%)*

## 6. STORAGE AND PACKAGING

- The product should be stored in a dry place at a temperature not exceeding **25°C**.
- The expiry date is **6 months** under the conditions mentioned above.
- Generally, the products will be supplied in drum format.
- For other quantities and/or packaging: contact Graphenano Composites Sales Department.