

### PRODUCT CODE: C260036

Vipel F010-ACT 45 is a pre-promoted, thixotropic bisphenol-A epoxy-based vinyl ester laminating resin dissolved in styrene. The Vipel F010 series is suitable for use in hand lay-up, spray-up and filament winding applications where outstanding mechanical properties and excellent chemical & heat resistance properties are required.

### FEATURES

- Tough and versatile
- Corrosion resistant

### BENEFITS

- Excellent crack and craze resistance
- Well cured, properly constructed laminates are resistant to a wide range of chemicals

### SUGGESTED USE

Vipel F010 is ideally suited for construction of barrier laminates/tie layers directly behind the Gelcoat in Marine composites, Moulds and chemical resistant tank constructions. Its unique composition produces a tough and versatile resin with excellent crack and craze resistance in moulded parts. Vipel F010 is suitable for mouldings that are subjected to particularly high static or dynamic loads and have excellent resistance to sustained heat. Vipel F010 is highly resistant to hydrogen peroxide, and alkalis, and performs well in various stages of hypochlorite and chlorine production.

### RELATED PRODUCTS

PRODUCT CODE	PRODUCT NAME	GELTIME
C260035	VIPEL F010-ACT-30	28-32 minutes
C260037	VIPEL F010-ACT-60	58-63 minutes

GT determined at 25 deg C, on 100 g resin mass, using 1.76% MEKP-NR20.

### RECOMMENDED CATALYST

Vipel F010 can be used with a variety of MEKP initiators, however MEKP types with high Dimer content, such as Norox MEKP 925H are the preferred catalysts for optimum curing. Norox MEKP 925H also features a very low hydrogen peroxide content which reduces the amount of catalyst fizzing on catalyzation. Typical recommended level for Norox MEKP 925H is 1.5%. When using standard 'Polyester grade' MEKP catalysts, with lower Dimer / Monomer ratios – such as Curox M200, MEKP-NR20, Norox MEKP 9 or Butanox M50, higher levels must be used to ensure satisfactory curing. Advice on other catalysts can be given on request to your Allnex Composites representative.

### TYPICAL LIQUID RESIN PROPERTIES

PROPERTY	TYPICAL VALUE	TEST DETAILS
Appearance	Hazy blue/pink	TP202.8
Viscosity - 25°C cP		
5 RPM spindle 3 - Summer	2300 – 4000	201.8_0
50 RPM spindle 3 - Summer	750 – 850	
5 RPM spindle 3 - Winter	1600 – 3000	201.8_0
50 RPM spindle 3 - Winter	600 - 700	
Geltime / minutes	42 - 47	228.31_1
1.76% MEKP-NR20		
Density @ 25°C kg/m <sup>3</sup>	1070	TP204.3
Flash Point °C	31	Tag Closed Cup
Volatile Content %	39 - 43	TP 200.25
Shelf Life (when stored in original closed container in the shade)	4 Months	

Typical values: Based on materials tested in our laboratories, but varies from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items. Using 100g + 1.76% MEKP-NR20.

### TYPICAL CAST RESINS PROPERTIES

(FULLY POSTCURED CASTINGS)

PROPERTY	TYPICAL VALUE	TEST DETAILS
Barcol 934 Hardness	39	ASTM 2583/ EN 59
Tensile Strength MPa	88	ISO 527-1
Tensile Modulus MPa	3200	ISO 527-1
Tensile Elongation %	6.2	ISO 527-1
Flexural Strength MPa	153	ISO 178
Flexural Modulus MPa	3500	ISO 178
Heat Deflection Temperature °C	120	ISO 75-A

- These properties refer to castings produced from non-thixotropic Vipel F010 base resin
- Typical properties not to be considered as specifications

## POST CURING

Post curing is recommended for maximum chemical and heat resistance.

For a service temperature below 100°C: Postcure may extend the service life if the operating temperature is within 20°C of the present CR guide maximum temperature for the service. This means that a postcure can be beneficial for solvent applications with a temperature limit of 25°-40°C.

For service temperature above 100°C: Postcure in service may be sufficient, provided the resin specific minimum Barcol hardness values are reached before start up.

For service in pure and neutral salt solutions: In general postcure may not be required, provided the resin specific minimum Barcol hardness values are reached and no acetone sensitivity is shown before start up. When using a BPO / Amine cure system, postcure is strongly recommended and should be done within two weeks of construction. Postcure conditions as outlined in EN 13121-2 are recommended. Minimum recommended postcure conditions are 80°C for four hours.

## STORAGE AND HANDLING

To ensure maximum stability and maintain optimum resin handling properties, polyester resins should be stored in closed containers, away from heat sources and sunlight. The resin should be stored away from all sources of ignition. Stored resin quantities should be kept to a reasonable minimum and used on a first in/first out stock rotation basis. Prolonged storage, or unfavourable storing conditions, may cause separation, therefore agitation of the resin before use is recommended.

## STANDARD PACKAGING

Mild steel drums (220 kg)

Always refer to the MSDS before use