

## PRODUCT DESCRIPTION

The NVER™900 is a Novolac-Epoxy Vinyl Ester Resin that is epoxy vinyl resin novolac-epoxy base resin. NVER™900 produced to provide chemical resistance at high temperatures and suitable for protecting concrete surfaces against various chemical agents such as high concentrations of acids, alkalis and solvents. NVER™900 has higher chemical resistance than other epoxy coatings and serves well at higher temperatures.

## PRODUCT FEATURES

- Excellent chemical resistance to acids and alkalis
- High mechanical strength and wear resistance
- Excellent adhesion to surfaces
- Increase the durability and longevity of surfaces
- Protect surfaces at high temperatures
- It is insoluble and does not dissolve in water, so It doesn't harm the environment
- Fast and easy implementation
- Increases the strength and adhesion of FRP fibers at high temperatures

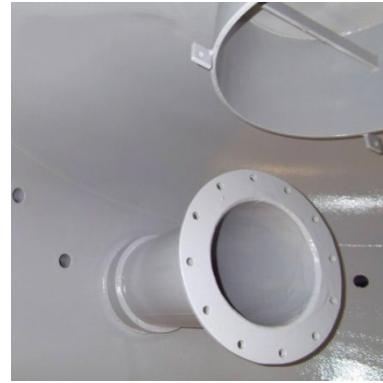
## PRODUCT USES

The NVER™900 resin is suitable for use in hand lay-up, spray-up, and filament winding processes where a high resistance to solvents and chemicals and good retention of strength and toughness at elevated temperatures are required.

Physical Properties - NVER™900	
Chemical Base	Novolac epoxy based vinyl ester resin
Color	Clear amber liquid
Specific Gravity (ISO 2811)	1.06 +/- 0.02
Viscosity (ISO 2555)	450 +/- 50 cps
Solid Content (ISO 3251)	65 +/- 2 %
Exothermic Peak Temperature (ASTM D 2471)	160-170 °C
Gel Time (ASTM D 2471)	20 – 25 minute
Application Methods	Filament Winding
	Hand Lay-Up
	Spray-Up
	Pultrusion Process
Shelf Time	6 months 25°C
Storage Condition	Store dry and away from direct sunlight below 25° C

## CAUTION

All components of resin systems may cause skin irritation and sensitization. Use of chemical resistant gloves is recommended. Avoid breathing vapors and dust. Get medical attention if you are breathing with difficulty. Resin products can cause strong eye



Novolac-Epoxy Vinyl Ester Resin - NVER™900

irritation. Avoiding eye contact and using safety goggles is necessary.

## Typical Casted Resin Properties - NVER™900

Tensile Strength (ASTM D638)	Min 85 MPa
Tensile Modulus (ASTM D638)	Min 3.5
Tensile Elongation (ASTM D638)	Min 4 %
Flexural Strength (ASTM D 790)	Min 125 MPa
Flexural Modulus (ASTM D 790)	Min 3 GPa
Heat Deflection Temperature (HDT) (ISO 75-2 Test Method A)	Min 135 °C
Glass Transition Temperature (Tg) (ASTM E 1640)	Min 140 °C
Barcol Hardness	Min 45 Barcol

## Gel Time Behavior of Resin - NVER™900

Temperature (°C)	18	25	30
Gel Time (minute)	28-33	20-25	12-16
Mix ratio for measuring Gel Time: 1.0 phr Cobalt Octoate (1.0%), 0.7 phr DMA (10%) - Catalyst: 1.3 phr Akperox (A60)			

## STORAGE

NVER™900 must be stored at stable temperature below 25°C. Avoid freezing the product and keep it away from direct sunlight, flame or other hazards. It must be stored in its original packaging. Lid of the container should be kept closed. Moisture can decrease shelf life of resins. with proper storage, resin and hardeners remain usable for 6 months 25°C.

## CLEANUP

Dispose of material in accordance with local disposal regulations. Uncured material can be removed with approved solvents. Cured materials can only be removed mechanically.

## FIRST AID

**Eye:** Flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. Remove contact lenses as needed. If you experience redness, burning, blurred vision, or swelling, seek medical advice.

**Skin:** Wash affected area with soap and water. If rash or irritation occurs, seek medical advice.

**Inhalation:** Remove affected individual to fresh air. Give oxygen or artificial respiration if needed. If individual continues to experience difficulty breathing, seek medical advice.

**Ingestion:** Ingestion is unlikely. If swallowed, rinse mouth immediately. DO NOT INDUCE VOMITING. Seek medical advice.

## DISCLAIMER OF LIABILITY

AFZIR, LLC warrants its products to be free from manufacturing defects. Buyer determines suitability of product for use and assumes all risks. Buyer's sole remedy shall be limited to replacement of product. Any claim for breach of this warranty must be brought within six months of the date of purchase.

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The Buyer, by accepting the products described herein, agrees to be responsible for thoroughly testing any application to determine its suitability before committing to production.