



Ancamine 2904 Curing Agent

Description

Ancamine 2904 curing agent is a cycloaliphatic amine designed to cure liquid epoxy resins at elevated ~125 °C temperatures, lower than typical cycloaliphatic amine. Ancamine 2904 curing agent exhibits moderate pot life with rapid cures ability at elevated temperature. The cure product exhibit excellent chemical resistance, high mechanical strength, and high temperature tolerance.

Applications

- Laminates and Composites
- Filament Wound Pipe /tanks / Fittings

Recommended Processing

- Filament Winding
- Resin Transfer Molding
- Fiber Impregnation in a Controlled Environment

Advantages

- Excellent mechanical properties
- High heat deflection temperature
- Good pot life
- Excellent chemical resistance

Typical Cure Schedule to achieve optimum performance

- 4 hours at 204 °F
 - 4 hours at 100 °C
- Post cure can be done at 125 °C (257 °F) for 2 hrs to achieve higher thermal and mechanical properties

Storage Life

At least 36 months from the date of manufacture in the original sealed container at ambient temperature. Store away from excessive heat and humidity in tightly closed containers.

Handling Precautions

Refer To The Material Safety Data Sheet For Ancamine 2904 Curing Agent.

Typical Properties	SI	English
Appearance	Clear	
Color (Gardner)	1	
Viscosity @ 77 °F / 25 °C	40 –50 cPs	
Specific Gravity @ 77 °F / 25 °C	0.99	
Equivalent Wt/{H}	42	
Use Level (PHR)	23	

Typical Handling Properties (1)

Mixed Viscosity @ 104 °F / 40 °C	800-1100 cPs
Gel Time (150g mix @ 77 °F / 25 °C)	140 min
Time to 10,000 cPs @ 104 °F / 40 °C	90 min

Thermal Performance (1)

Glass Transition Temperature (DSC second scan)	150 °C	302 °F
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Mechanical Performance - Cast Panel (1)

Flexural Strength	150 MPa	21.7 ksi
Flexural Modulus	3.0 GPa	0.46 Msi
Tensile Strength	81 MPa	11.7 ksi
Tensile Modulus	2.1 GPa	0.30 Msi
Tensile Elongation @ Break	6.0%	
Compressive Strength	111 MPa	16.1 ksi
Compressive Modulus	2.0 GPa	0.29 Msi

Mechanical Performance - Composite Panel (1)

ILSS 0° Longitude	65 MPa	9.4 ksi
Flexural Strength - Composite 0° Longitude	1150MPa	170 Ksi
Flexural Modulus - Composite 0° Longitude	45 GPa	6.65 Msi

Composite Panel Fabrication:

Method: Vacuum Assisted Resin Transfer Molding
 Fiber Type: E-glass (275g/m²) Unidirectional
 Fiber Volume: 60± 3%
 Cure Schedule: 4 hrs @ 100°C

(1) Ancamine 2904 curing agent formulated with standard Bisphenol-A based (DGEBA, EEW=180) epoxy resin

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