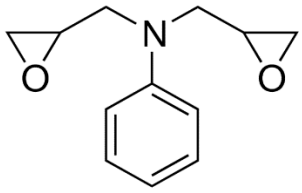
Technical Data

Technirez® GAN

CAS # 2095-06-9

Description:

Technirez® GAN is a low viscosity difunctional liquid epoxy resin that can be used as the sole epoxy resin or as a diluent/modifier for other diglycidyl ether of bisphenol A (DGEBA) resins or multifunctional epoxy resins. Its unique structure offers excellent thermal and physical properties. As a tertiary amine epoxide, GAN can also accelerate anhydride epoxy reaction, requiring no additional accelerator with anhydride.



N,N-diglycidylaniline

Advantages:

- Very low viscosity
- High crosslink density
- Excellent diluent for other epoxy resins without decreasing thermal and physical properties

Typical Applications:

- Filament winding
- Resin transfer molding

Typical Properties:

Appearance:	Yellow to brown liquid
EEW:	105-125
Viscosity @ 25°C:	90-150 cPs
Specific gravity @ 25°C:	1.15

Handling Precautions:

Refer to the product Safety Data Sheet

A&C Catalysts, Inc.
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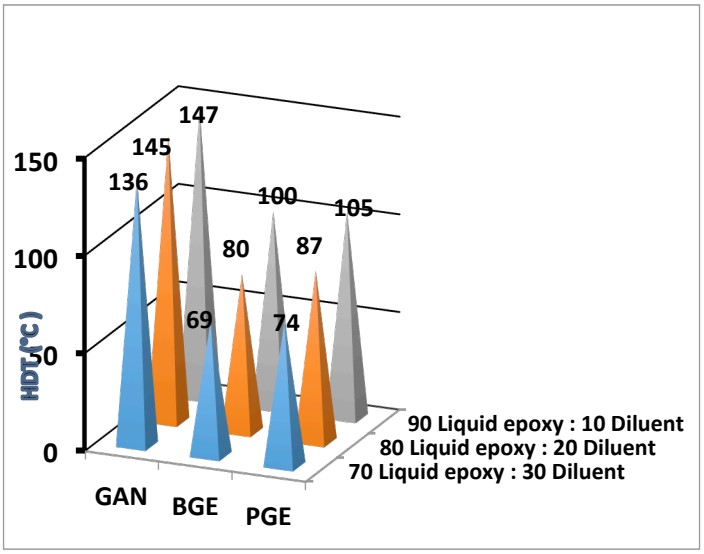
Technirez GAN/liquid epoxy resin cured with acid anhydrides:

	Methyl nadic anhydride		Tetrahydrophthalic anhydride	
Technirez GAN	50	100	50	100
Liquid epoxy resin (EEW=190)	50	0	50	0
Curing agent	112	138	95	110
Gel Time (50 gm.) @100°C, hrs.	3.8	3.0	1.0	0.7
Physical Properties after cure	**100°C/2 hrs. + 150°C /3 hrs.**			
Tensile Strength (kg/cm^2)	610	680	560	620
Flexural Strength (kg/cm^2)	1,120	1,080	1,360	1,420
Charpy Impact Strength ($kg\text{-}cm/cm^2$)	5.2	5.1	6.9	5.6
HDT (°C)	126	125	122	123
Chemical Resistance	**% wt. gain after 7 days immersion @ 25°C**			
Toluene	0.13	1.15	1.52	1.64
Sodium hydroxide	0.08	0.17	0.11	0.07
Hydrochloric acid (10%)	0.17	0.22	0.15	0.24
Water (after 24 hrs.)	0.06	0.09	0.08	0.08
Shrinkage %	1.18	1.15	1.52	1.64

HDT (°C) comparison of Technirez GAN, Butyl Glycidyl ether (BGE) and Phenyl Glycidyl Ether (PGE) as reactive diluents containing formulations

Curing agent: NMA (Methyl Nadic Anhydride)

Cure Cycle: 2 hrs. @ 80 °C + 4 hrs. @ 150 °C



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