

**An Emerald Performance Materials Company****HyPox<sup>®</sup> RF1320**  
**Epoxy Phenol Novolac Resin Modified**  
**with a CTBN Elastomer****DESCRIPTION**

HyPox RF1320 is a Bisphenol F epoxy resin modified with a butadiene-acrylonitrile elastomer. The CTBN elastomer is adducted to the epoxy resin. The adduct has epoxy functionality and provides improved toughness and impact resistance. Unlike Bisphenol A modified elastomers, HyPox RF1320 exhibits superior chemical resistance, particularly to 98% sulfuric acid, MEK, toluene, alcohols and other aggressive solvents. HyPox RF1320 is suggested for use in 100% solids civil engineering and chemical resistant coatings applications. Blends of HyPox RF1320 with most standard epoxy resins are possible. Cures can be accomplished with all standard curing agents suitable for epoxy resins. Cure speed is comparable to standard liquid Bisphenol F epoxy resin.

**APPLICATIONS**

- ❑ Crack Bridging in Secondary Containment Coatings
- ❑ Impact Resistance Coatings
- ❑ Thermocycling Modifier for High Chemical Resistance Coatings
- ❑ Toughener for Epoxy Novolacs
- ❑ Toughening of Prepregs and Composites
- ❑ Adhesives

**TYPICAL PROPERTIES**

Appearance	Clear, Clean
Viscosity @ 25°C, cps	25,000 - 50,000
Epoxy Equivalent Weight, g/eq	210 - 220
Gardner Color, max	6
Weight per Gallon, @ 25°C, lbs.	9.0 ± 0.2
Flash Point, COC, °C (°F)	>250 (>482)

**HEALTH & SAFETY PRECAUTIONS**

HyPox RF1320 is not a primary skin irritant or sensitizer. However, as with any epoxy material, irritation can result from repeated or prolonged contact. The symptoms of this irritation may appear as a mild reddening or a more pronounced rash. It is, therefore, important to avoid skin contact where possible. Butyl rubber gloves, full eye protection and protective clothing are recommended.

Refer to **CVC Thermoset Specialties** Material Safety Data Sheet on HyPox RF1320 for additional safety & handling information. The MSDS is revised as new data becomes available.

**PACKAGING & AVAILABILITY**

HyPox RF1320 is available in 55 gal. non-returnable open head steel drums (net weight 450 lbs.) and 5 gal. plastic pails (45 lbs. net). Bulk shipments are available with adequate lead-time. Drum inventory is available at most CVC regional warehouses. Check with your local sales representative for the shipping location nearest you.

**PERFORMANCE DATA**

FORMULATION, pbw	1	2	3	4	5 <sup>®</sup>	6
Part A: ERISYS EMRF-1320	100	—————>				
Part B: HYCAR ATBN 1300 X 45	--	50	100	--	50	100
ANCAMINE 2072	47	44	41	--	--	--
ANCAMINE 2280	--	--	--	51	48	45

**RESULTS**

Mixed Viscosity at 25°C (77°F), cps	4,370	22,850	52,000	6,810	28,450	70,600
Gel time at 20°C (68°F), minutes	41	73	64	--	78	37
Tensile properties <sup>(1) (2)</sup>						
at 20°C (68°F)						
strength, psi	3,310	1,860	1,230	2,940	1,200	1,150
elongation, %	55	99	110	22	47	97
at -20°C (-4°F)						
strength, psi	4,220	4,200	3,920	7,120	3,530	3,540
elongation, %	1	31	120	5	51	110
Chemical resistance <sup>(1) (3)</sup>						
weight change after immersion						
in 25% acetic acid						
1 day, %	+7	+6	+5	+2	+2	+3
2 days, %	+9	+8	+7	+3	+3	+4
3 days, %	+11	+10	+9	+4	+4	+5
7 days, %	+16	+14	+13	+6	+6	+7
in 45% nitric acid						
1 day, %	+8	+6	+6	+5	+4	+5
2 days, %	+13	+11	+11	+8	+7	+9
3 days, %	+18	+16	+18	+11	+9	+11
7 days, %	D <sup>(4)</sup>	D	D	+19	+14	+19
in 98% sulfuric acid						
1 day, %	+3	+16	+19	+2	+12	+17
2 days, %	-5	D	D	-1	D	D
3 days, %	-8	--	--	-2	--	--
7 days, %	-16	--	--	-3	--	--

<sup>(1)</sup> Cure: 7 days at room temperature

<sup>(2)</sup> ASTM D638-91

<sup>(3)</sup> ASTM D543

<sup>(4)</sup> D - Destroyed

## **DISCLAIMER**

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