

## ERISYS™ GE-36

Propoxylated Glycerin Triglycidyl Ether  
Aliphatic Trifunctional Flexibilizing Epoxy  
Reactive Diluent

CAS NO. 37237-76-6

EINECS - Polymer (Monomers Listed)

### DESCRIPTION

ERISYS GE-36, the triglycidyl ether of propoxylated glycerin, is a flexibilizing diluent for epoxy resins. GE-36 is universally compatible with standard Bisphenol A, Bisphenol F and Epoxy Phenol Novolac Resins. GE-36 improves surface wetting properties of uncured resin/hardener formulations. With use of GE-36, formulators will see increased tensile elongation, improved impact, thermal shock and peel adhesion.

### TYPICAL PROPERTIES

Appearance	Clear, Clean
Viscosity @ 25°C, cps	200 - 320
Epoxide Equivalent Weight, g/eq	620 - 680
Gardner Color, max	2
Residual Epichlorohydrin, max ppm	20
Hydrolyzable Chloride, max %	0.10
Weight per Gallon, @ 25°C lbs.	8.6 ± 0.2
Flash Point, °C (°F)	>93 (>200)

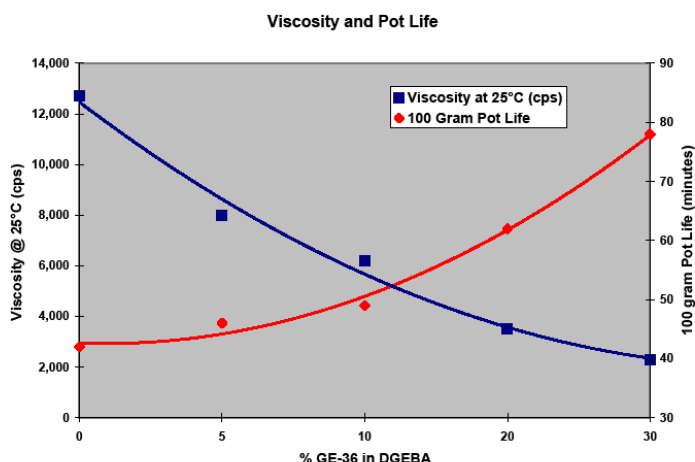
### APPLICATIONS

- ☐ Concrete Patching Compounds
- ☐ Flexible Coatings
- ☐ Adhesives
- ☐ Bridge Decking Compounds
- ☐ Joint Sealants

### HANDLING PROPERTIES

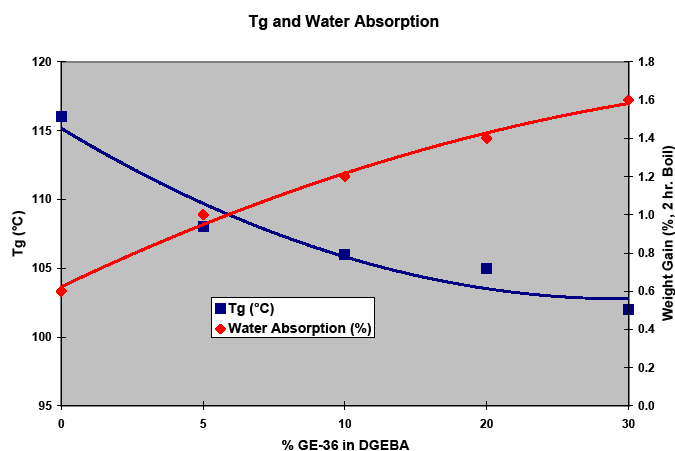
The use of ERISYS GE-36 will effect the handling and cured properties of resin formulations. The effects of these changes are shown below.

#### VISCOSITY AND POT LIFE

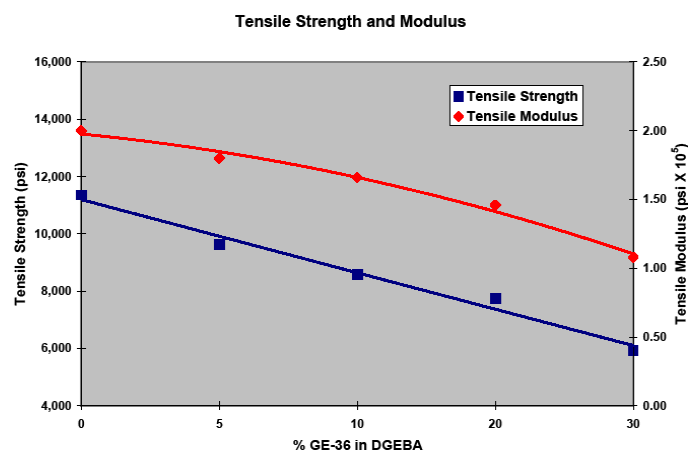


## THE EFFECT OF ERISYS GE-36 ON THE CURED PROPERTIES OF LIQUID EPOXY RESIN (EEW 188) CURED WITH TETA

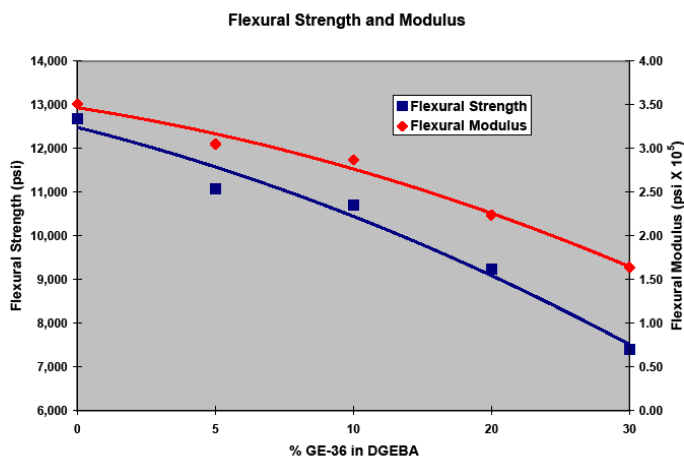
### Tg and WATER ABSORPTION



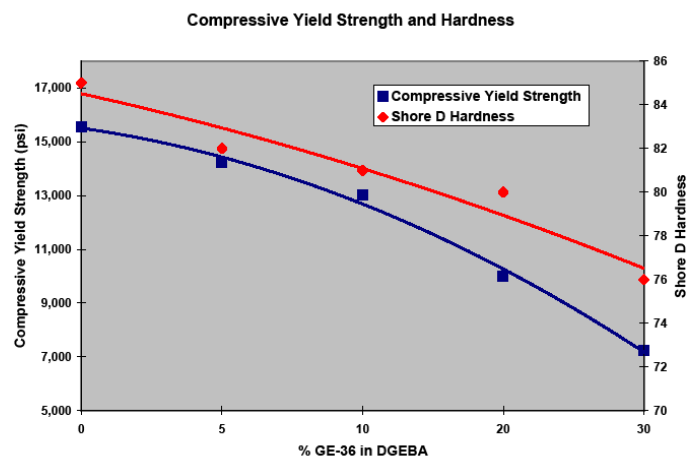
### TENSILE PROPERTIES



### FLEXURAL PROPERTIES



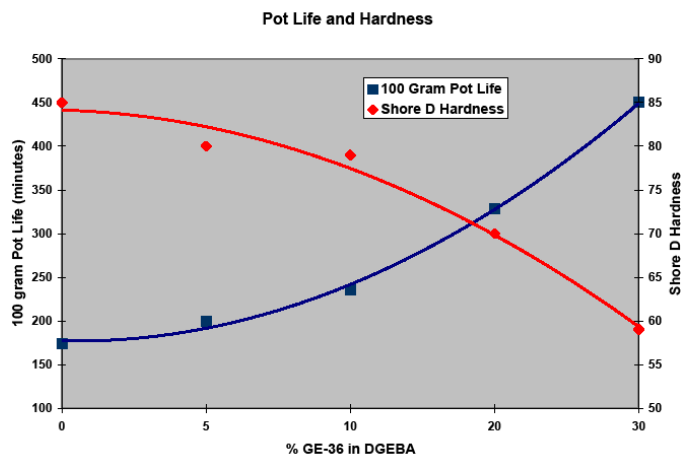
### COMPRESSIVE STRENGTH and HARDNESS



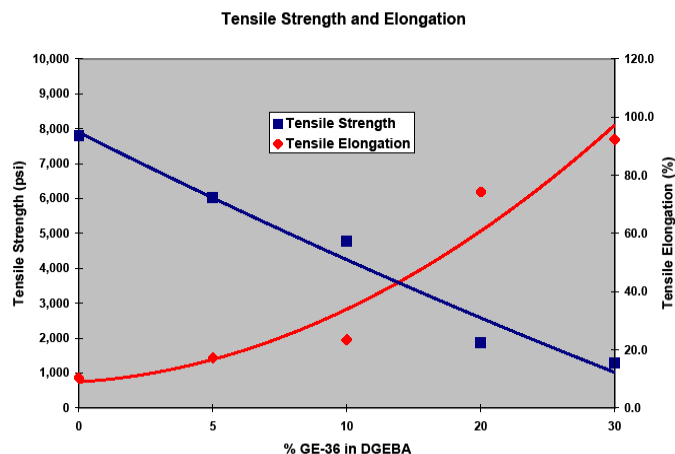
Physical Properties Report		ERISYS GE-36 in Epalloy 7190			
Epalloy 7190	100	95	90	80	70
Erisys GE-36	0	5	10	20	30
TETA	13.0	12.5	12.1	11.1	10.2
Resin Viscosity @ 25°C (cps)	12,700	8,000	6,200	3,500	2,300
100 gram gel time (mins)	42	46	49	62	78
Tensile Strength (psi)	11,357	9,622	8,570	7,759	5,917
Tensile Elongation (%)	8.1	8.0	7.1	9.5	10.2
Tensile Modulus (psi x 10 <sup>5</sup> )	2.00	1.80	1.66	1.46	1.08
Flexural Strength (psi)	12,687	11,089	10,707	9,237	7,396
Flexural Modulus (psi x 10 <sup>5</sup> )	3.51	3.05	2.87	2.24	1.64
Compressive Yield Strength	15,552	14,230	13,040	10,000	7,252
Compressive Modulus (psi x 10 <sup>5</sup> )	2.29	2.36	2.20	1.81	1.51
Shore D Hardness	85	82	81	80	76
Tg (°C)	116	108	106	105	102
Water Absorption (28 days @ RT)	0.4	0.6	0.6	0.8	1.0
Water Absorption (2 hour boil)	0.6	1.0	1.2	1.4	1.6

## THE EFFECT OF ERISYS GE-36 ON THE CURED PROPERTIES OF LIQUID EPOXY RESIN (EEW 188) CURED WITH ANCAMIDE 502 FOR A FLEXIBILIZED FORMULATION

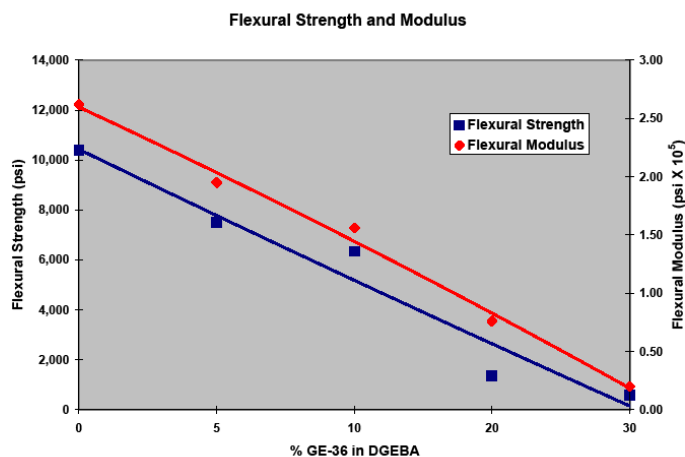
### POT LIFE and HARDNESS



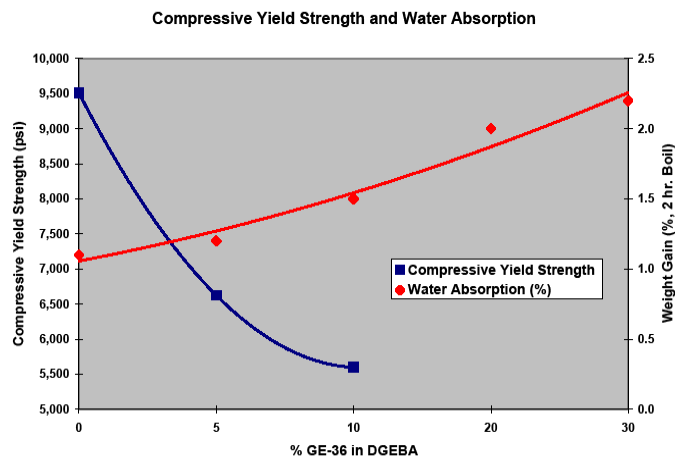
### TENSILE PROPERTIES



### FLEXURAL PROPERTIES



### COMPRESSIVE STRENGTH and WATER ABSORPTION



Physical Properties Report		ERISYS GE-36 with Ancamide 502			
Epalloy 7190	100	95	90	80	70
Erisys GE-36	0	5	10	20	30
Ancamide 502	49.5	47.7	45.9	42.3	38.7
Resin Viscosity @ 25°C (cps)	12,700	8,000	6,200	3,500	2,300
100 gram gel time (mins)	174	200	235	328	450
Tensile Strength (psi)	7,803	6,023	4,767	1,879	1,283
Tensile Elongation (%)	10.4	17.3	23.4	74.3	92.3
Tensile Modulus (psi x 10 <sup>5</sup> )	1.41	1.19	0.97	0.32	0.12
Flexural Strength (psi)	10,370	7,512	6,341	1,367	597
Flexural Modulus (psi x 10 <sup>5</sup> )	2.62	1.95	1.56	0.76	0.20
Compressive Yield Strength	9,511	6,626	5,598	x	x
Compressive Modulus (psi x 10 <sup>5</sup> )	1.91	1.22	1.12	0.13	0.18
Shore D Hardness	85	80	79	70	59
Water Absorption (28 days @ RT)	0.9	0.7	1.1	1.7	1.8
Water Absorption (2 hour boil)	1.1	1.2	1.5	2	2.2



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**ERISYS™ GE-36**

## **HEALTH & SAFETY PRECAUTIONS**

ERISYS GE-36 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. Chemical resistant gloves, full eye protection and protective clothing are recommended.

Refer to **CVC Thermoset Specialties** Material Safety Data Sheet on ERISYS GE-36 for additional safety and health information. The MSDS is revised as new data becomes available.

## **PACKAGING & AVAILABILITY**

ERISYS GE-36 is available in 55 gal. non-returnable steel drums (net weight 450 lbs.) and 5 gal. plastic pails (40 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.

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