

## ERISYS™ GE-30

Trimethylolpropane Triglycidyl Ether  
CAS NO. 30499-70-8

### DESCRIPTION

ERISYS GE-30, is a low viscosity high epoxy functional resin. Based on trimethylol propane, ERISYS GE-30 provides excellent crosslinking with good reactivity making it ideal for 100% solids, adhesives and coatings. Blends of ERISYS GE-30 with most standard epoxy resins are possible and it can be cured with all standard curing agents suitable for epoxy resins. Cure speed is comparable to standard liquid Bisphenol A epoxy resins.

### APPLICATIONS

- ☐ High Temperature Encapsulants/Adhesives
- ☐ High Temperature Sealants
- ☐ 100% Solids Epoxy Coatings

### TYPICAL PROPERTIES

Appearance	Clear, Clean
Viscosity @ 25°C, cps	100 - 200
Epoxide Equivalent Weight, g/eq	135 - 150
APHA Color, max	100
Residual Epichlorohydrin, max ppm	10
Hydrolyzable Chloride, max %	0.10
Weight per Gallon, @ 25°C, lbs.	9.6 ± 0.1
Flash Point, °C (°F)	>94(>200)

### HEALTH & SAFETY PRECAUTIONS

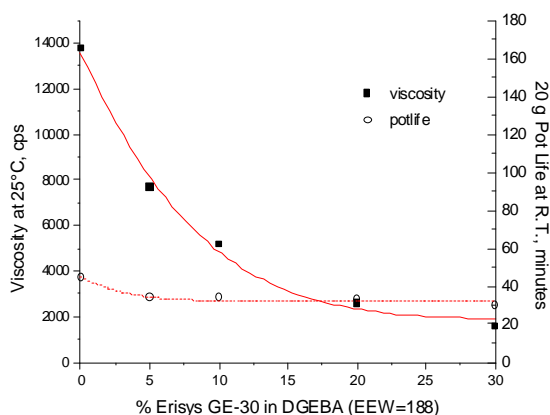
ERISYS GE-30 is not a primary skin irritant and sensitizer. However, as with any epoxy material, irritation can result from repeated or prolonged contact. The symptoms of this irritation may appear as a mild reddening or a more pronounced rash. It is, therefore, important to avoid skin contact where possible. Rubber gloves, full eye protection, and protective clothing are recommended.

Refer to the **CVC Thermoset Specialties** Material Safety Data Sheet on ERISYS GE-30 for additional safety & handling information. The MSDS is revised as new data becomes available.

### HANDLING PROPERTIES

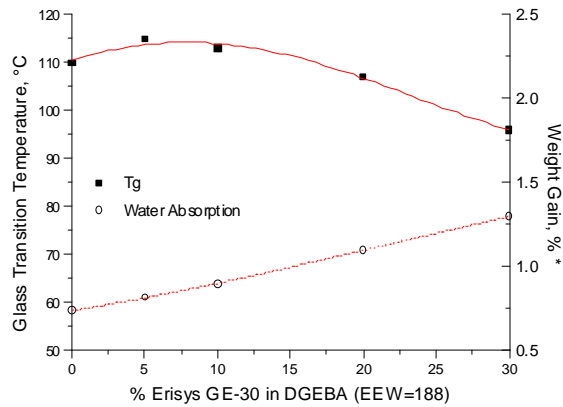
The use of ERISYS GE-30 will effect the handling and cured properties of resin formulations. The effects of these changes are shown below.

#### VISCOSITY AND POT LIFE



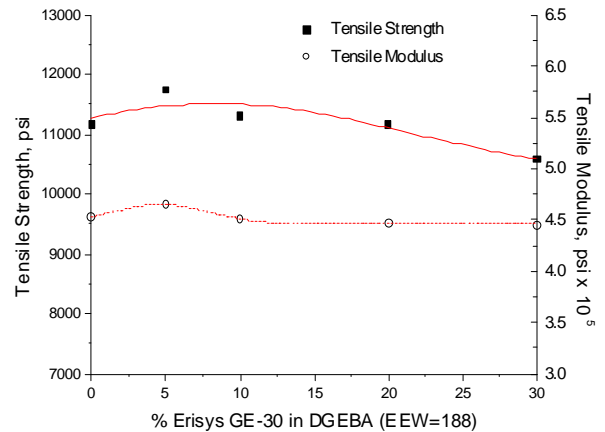
## HANDLING PROPERTIES (Continued)

### T<sub>g</sub> and MOISTURE PICKUP



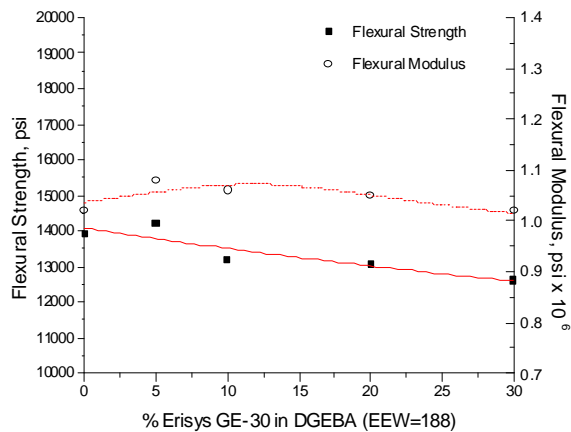
\*After 2 hours in boiling water

### TENSILE PROPERTIES

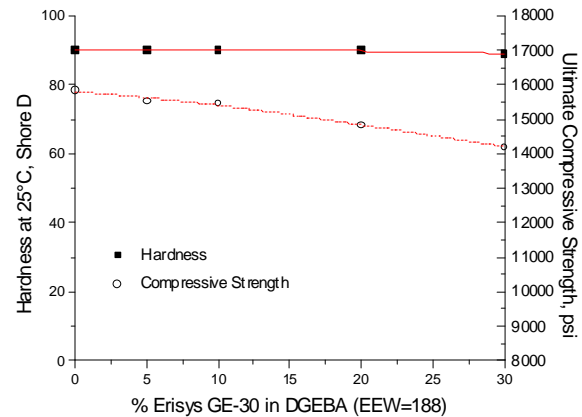


## THE EFFECT OF ERISYS GE-30 ON THE CURED PROPERTIES OF LIQUID EPOXY RESIN (EEW 188) CURED WITH TETA

### FLEXURAL PROPERTIES



### HARDNESS and COMPRESSIVE STRENGTH



**PROPERTIES OF DGEBA/GE-30TETA SYSTEMS**

FORMULATION, pbw	A	B	C	D	E
DGEBA (EEW-188)	100.0	95.0	90.0	80.0	70.0
ERISYS GE-30	0	5.0	10.0	20.0	30.0
Triethylenetetramine	13.0	13.2	13.3	13.6	14
<b>RESULTS</b>					
<b>HANDLING PROPERTIES</b>					
Viscosity @ 25° C of resin					
portion only, cps	13,800	7,700	5,200	2,596	1,588
20 g Pot Life, hours:minutes	0:45	0:34	0:34	0:33	0:30
<b>CURED PROPERTIES*</b>					
<b>TENSILE</b>					
Strength, psi	11,165	11,745	11,310	11,165	10,585
MPa	77	81	78	77	73
Elongation, %	4.2	5.1	5.2	5.9	5.0
Modulus, psi	4.53E + 05	4.65E + 05	4.51E + 05	4.47E + 05	4.45E + 05
MPa	3,127	3,207	3,110	3,083	3,069
<b>FLEXURAL</b>					
Strength, psi	13,920	14,210	13,195	13,050	12,615
MPa	96	98	91	90	87
Modulus, psi	1.02E + 06	1.08E + 06	1.06E + 06	1.05E+06	1.02E + 05
MPa	7,063	7,419	7,303	7,215	7,034
<b>COMPRESSIVE</b>					
Strength at yield, psi	7,067	6,815	6,525	6,350	6,033
MPa	49	47	45	44	42
Ultimate strength, psi	15,833	15,533	15,467	14,833	14,200
MPa	109	107	107	102	98
<b>HARDNESS @ 25°C,</b>					
D durometer	90	90	90	90	89
<b>GLASS TRANSITION TEMPERATURE,</b>					
° C	110	115	113	107	96
° F	230	239	235	225	205
<b>WATER ABSORPTION, WEIGHT GAIN AFTER:</b>					
28 Days in 25°C water, %	0.77	0.78	0.85	0.97	1.1
2 Hours in boiling water, %	0.74	0.82	0.90	1.1	1.3

\*Cure: gel at R.T. + 2 hours at 100°C

## **PACKAGING & AVAILABILITY**

ERISYS GE-30 is available in 55 gallon steel non-returnable drums (480 lbs. net) and 5 gallon plastic pails (45 lbs. net). Bulk deliveries are available on special request.

## **DISCLAIMER**

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