



**ERISYS® GE-8**  
**C12-C14 Glycidyl Ether**  
**Aliphatic Monofunctional Epoxy**  
**Reactive Diluent**  
**CAS NO. 68609-97-2**

**DESCRIPTION**

ERISYS GE-8 is the monoglycidyl ether of a naturally occurring C12-C14 aliphatic alcohol. The primary use of GE-8 is as a reactive diluent for high viscosity epoxy resin. GE-8 is compatible at all concentrations with those resins and the blends can be cured using any epoxy resin curing agent.

GE-8 poses relatively low health risks due to its low vapor pressure and exceptionally low residual epichlorohydrin level. Formulations containing GE-8 are therefore recommended for use in poorly ventilated areas. A typical application of GE-8 would be as a diluent in the Part A of an 100% solids floor coating formulation. GE-8 is approved, under CFR 175-105, for potable water applications.

As with all monofunctional aliphatic epoxides, increasing levels of GE-8 in epoxy resins will lengthen gel times and modify cured properties. See the following table and graphs for the extent of the modifications.

**APPLICATIONS**

- Flooring
- Decorative Gravel Surfaces/Structures
- Potting & Encapsulation
- General Purpose Adhesives

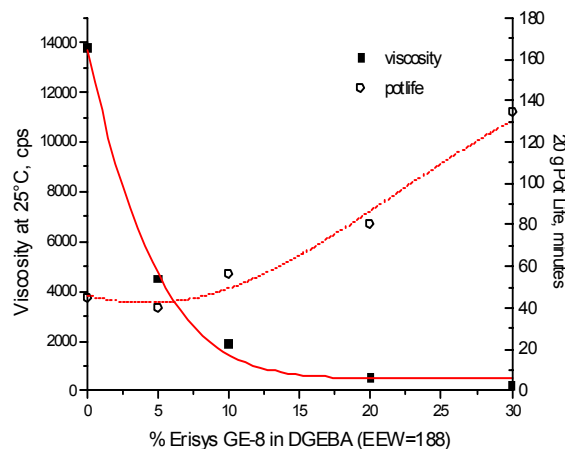
**TYPICAL PROPERTIES**

Appearance	Clear, Clean
Viscosity @ 25° C, cps	5 – 10
Epoxide Equivalent Weight, g/eq	275 – 300
APHA Color, max	100
Residual Epichlorohydrin, max ppm	10
Hydrolyzable Chloride, max %	0.05
Weight per Gallon, @ 25°C, lbs.	7.4 ± 0.1
Flash Point, °C (°F)	>94(>200)

**HANDLING PROPERTIES**

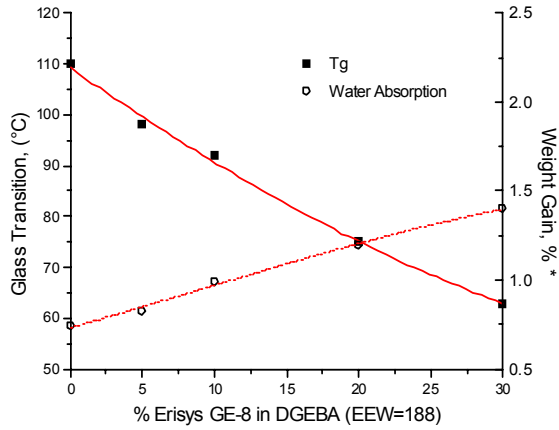
The use of ERISYS GE-8 will effect the handling and cured properties of resin formulations. The effects of these changes are shown below.

**VISCOSITY AND POT LIFE**

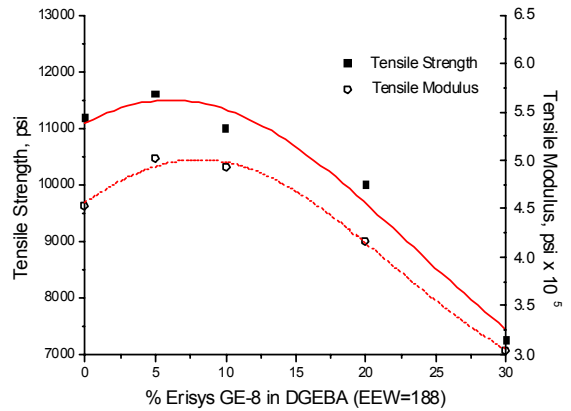


**HANDLING PROPERTIES (Continued)**

**Tg and MOISTURE PICKUP**



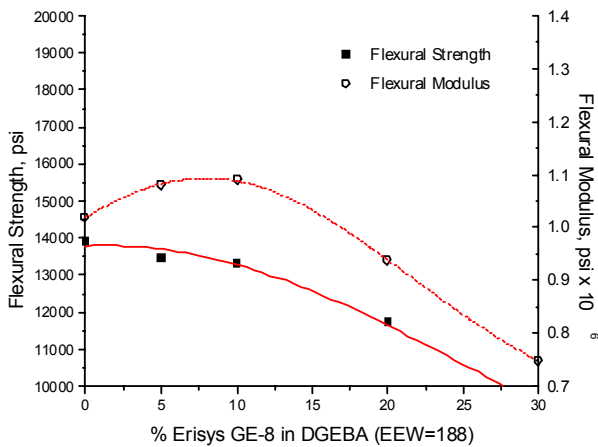
**TENSILE PROPERTIES**



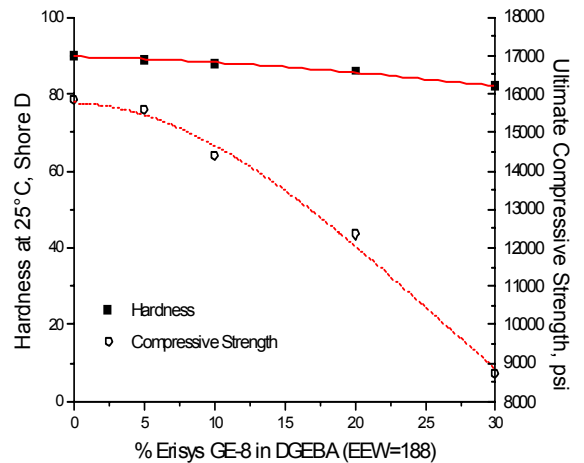
\*After 2 hours in boiling water

**THE EFFECT OF ERISYS GE-8 ON THE CURED PROPERTIES OF LIQUID EPOXY RESIN (EEW 188) CURED WITH TETA**

**FLEXURAL PROPERTIES**



**HARDNESS and COMPRESSIVE STRENGTH**





<b>PROPERTIES OF DGEBA/GE-8/TETA SYSTEMS</b>					
<b>FORMULATION, pbw</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
DGEBA (EEW-188)	100.0	95.0	90.0	80.0	70.0
ERISYS GE-8	0	5.0	10.0	20.0	30.0
Triethylenetetramine	13.0	12.7	12.4	11.8	11.3
<b>RESULTS</b>					
<b>HANDLING PROPERTIES</b>					
Viscosity @ 25° C of resin portion only, cps	13,800	4,500	1,908	513	197
20 g Pot Life, hours:minutes	0:45	0:40	0:56	1:20	2:14
<b>CURED PROPERTIES*</b>					
<b>TENSILE</b>					
Strength, psi	11,165	11,600	11,000	10,005	7,250
MPa	77	80	80	69	50
Elongation, %	4.2	5	6	6.8	5.7
Modulus, psi	4.53E + 05	5.02E + 05	4.92E + 05	4.16E + 05	3.04E + 05
MPa	3,127	3,465	3,391	2,870	2,098
<b>FLEXURAL</b>					
Strength, psi	13,920	13,485	13,340	11,745	9,425
MPa	96	93	92	81	65
Modulus, psi	1.02E + 06	1.08E + 06	1.09E + 06	9.38E+05	7.47E + 05
MPa	7,063	7,446	7,484	6,470	5,152
<b>COMPRESSIVE</b>					
Strength at yield, psi	7,067	8,800	8,667	7,433	5,300
MPa	49	61	60	51	37
Ultimate strength, psi	15,833	15,567	14,370	12,333	8,733
MPa	109	107	99	85	60
<b>HARDNESS @ 25°C,</b>					
D durometer	90	89	88	86	82
<b>GLASS TRANSITION TEMPERATURE,</b>					
° C	110	98	92	75	63
° F	230	208	198	167	145
<b>WATER ABSORPTION, WEIGHT GAIN AFTER:</b>					
28 Days in 25°C water, %	0.77	0.80	0.83	1.0	1.4
2 Hours in boiling water, %	0.74	0.83	0.99	1.2	1.4

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



## **HEALTH & SAFETY PRECAUTIONS**

ERISYS GE-8 is not a primary 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 SPECIALTY CHEMICALS, INC.** Material Safety Data Sheet on ERISYS GE-8 for additional safety & handling information. The MSDS is revised as new data becomes available.

## **PACKAGING & AVAILABILITY**

ERISYS GE-8 is available in 55 gallon steel non-returnable drums (410 lbs. net) and 5 gallon plastic pails (35 lbs. net). Bulk deliveries are available on special request.

## **DISCLAIMER**

*While the information and precautions outlined here are believed to be accurate and complete, CVC Specialty Chemicals makes no warranty regarding these precautions. User assumes full responsibility for determining appropriate application of the product and the necessary precautions to be taken.*