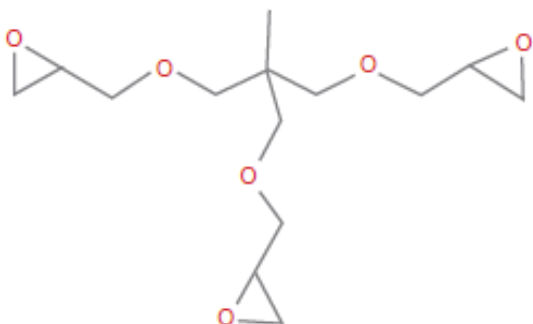


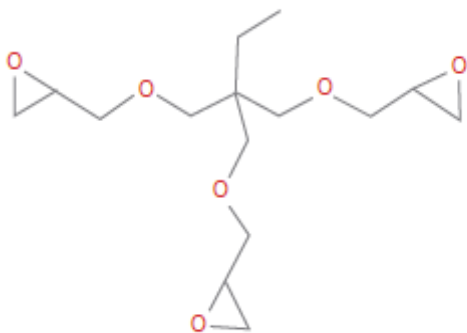
ERISYS™ GE-31



ERISYS™ GE 31

Trimethylol ethane triglycidyl ether

CAS no: 68460-21-9



ERISYS™ GE 30

Trimethylol propane triglycidyl ether

CAS no: 30499-70-8



A Safer Solution to Trimethylol Propane Tri Glycidyl Ether

Formulators today face many challenges. Material functionality, VOC, regulatory compliance requirements and potential adverse affects upon direct human contact are some among many considerations that play into material selection and application.

Epoxyes are raw materials commonly used in various applications such as coatings, civil engineering, composites and adhesives. These epoxyes are often high in viscosity and therefore can be difficult to work with. The addition of epoxy reactive modifiers (known also as epoxy reactive diluents) can modify various physical and chemical properties, improving formulation processing, as well as enhancing desirable performance features.

There are many types of epoxy reactive modifiers available. Most common are mono functional aromatic and aliphatic, di and trifunctional aliphatic modifiers for various applications. High functionality epoxy modifiers are chosen in applications where mechanical and thermal properties are demanding. Trimethylol Propane Triglycidyl Ether is a multifunctional epoxy reactive modifier widely used in applications such as adhesives, coatings and composite applications.

Trimethylol Propane Triglycidyl Ether (TMPTGE) is currently classified as a CMR active compound under REACH regulation and hence there is a growing demand from the marketplace to find more suitable, safer alternative products. **Trimethylol Ethane Triglycidyl Ether (ERISYS™ GE 31) manufactured by CVC Thermoset Specialties (CTS), is a CMR label free alternative product** available to formulators searching for safer and effective formulation practice.

Typical Properties	ERISYS™ GE31	Trimethylol propane Tri-glycidyl ether
Appearance	Clear, clean	Clear, clean
Epoxy equivalent weight, g/eq	150-170	135-150
Viscosity @25°C, cP	200 - 300	100-200
Residual epichlorohydrin , ppm	10 max	10 max
Hydrolysable chloride, %	0.1 max	0.1 max
Water , %	0.1 max	0.1 max



An Emerald Performance Materials® Company

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Web: www.cvc.emeraldmaterials.com

Formulation					
Standard BPA resin, %	100	95	90	80	70
Modifier concentration, %	0	5	10	20	30
Dilution property					
TMPTGE	13800	7700	5200	2596	1588
ERISYS™ GE31	13800	7700	6300	3600	2200
100 gm gel time, min with TETA					
TMPTGE	45	34	34	33	30
ERISYS™ GE31	45	37	36	33	32
Tensile strength, Mpa					
TMPTGE	77	81	78	77	73
ERISYS™ GE31	77	74	67	67	68
Tensile elongation, %					
TMPTGE	4.2	5.1	5.2	5.9	5
ERISYS™ GE31	4.2	5.1	5.8	5.5	5.5
Tensile modulus, Mpa					
TMPTGE	3127	3207	3110	3083	3069
ERISYS™ GE31	3127	3048	2908	2845	2845
Flexural strength, Mpa					
TMPTGE	13920	14210	13195	13050	12615
ERISYS™ GE31	13920	13557	12774	12516	12083
Flexural modulus, Mpa					
TMPTGE	7063	7419	7303	7215	7034
ERISYS™ GE31	7063	6843	5960	5880	5759
Compressive yield strength, Mpa					
TMPTGE	15833	15533	15467	14833	14200
ERISYS™ GE31	15833	14680	14370	13200	13150
Hardness- D					
TMPTGE	90	90	90	90	89
ERISYS™ GE31	90	88	86	85	82
Glass Transition temperature, T_g, °C					
TMPTGE	116	115	113	107	96
ERISYS™ GE31	116	107	110	103	85
Water absorption, 28 days at RT, %					
TMPTGE	0.77	0.78	0.85	0.97	1.1
ERISYS™ GE31	0.77	0.77	0.77	0.92	1.1
Water absorption, 2 hrs boiling, %					
TMPTGE	0.74	0.82	0.9	1.1	1.3
ERISYS™ GE31	0.74	0.74	0.9	0.9	1.4

HEALTH & SAFETY PRECAUTIONS

Refer to **CVC Thermoset Specialties** Material Safety Data Sheet on ERISYS GE-30 and GE31 for additional safety and health information. The MSDS is revised as new data becomes available.

PACKAGING & AVAILABILITY

ERISYS reactive modifiers are available in 55 gal. non-returnable steel drums (net weight 480 lbs.). 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.

DISCLAIMER

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