EMEROX® Polyols in Rigid Foam Applications

EMEROX Polyols are engineered for performance and sustainable by nature. Our branched, renewable polyester polyols provide formulators and end-users with enhanced performance properties, increased efficiencies, and sustainability. They are excellent low viscosity and high renewable content raw materials for use in the manufacture of polyurethane rigid foams.

This family of aliphatic EMEROX Polyols is engineered to perform similarly to sucrose glycerin polyether polyols in typical rigid foam applications. Foams prepared with EMEROX Polyols exhibit excellent compressive strength and dimensional stability properties, and by virtue of a hydrophobic backbone structure, provide lower water absorption and better water displacement in field applied foams, such as geotechnical applications, versus equivalent sucrose glycerin polyether polyols.

PRODUCT NAME	HYDROXYL VALUE	VISCOSITY cP @25°C	FN (Calc.)	BIO-BASED CONTENT (%)	APPLICATION DESCRIPTION
EMEROX® 14270	355	1,800	2.7	99*	Hydrophobic polyol with excellent compressive strength. SG 360 polyether alternative.
EMEROX® 14280	280	3,700	2.7	99*	Lower hydroxyl version of EMEROX 14355. Used for H_2O blown formulations.
EMEROX® 14355	355	1,800	2.7	99*	Hydrophobic polyol with excellent compressive strength. SG 360 polyether alternative. Ideal for PUR field applications.
EMEROX® 14371	370	15,000	3.7	99*	High function version of EMEROX 14355. Used for PUR and spray foam applications. Alternative to SG 370.
EMEROX® 14375	365	1,600	2.9	99**	A highly branched, natural-based polyester polyol. Used for rigid polyurethane PiP, spray, and packaging foam applications.

USDA CERTIFIED BIOBASED PRODUCT PRODUCT 99%

*USDA Certified Biobased Product.
** Product not evaluated by USDA yet.

Key Benefits

Aliphatic EMEROX® Polyols for rigid foams are designed as a highly hydrophobic, bio-based alternative to sucrose glycerin (SG) polyether polyols.

Hydrophobicity

When foamed under water, the EMEROX® Polyol-based system foamed out of the water (leaving the water clear) and provided a density much closer to the product foamed under dry conditions.

BEFORE CREAM, FOAM MIX SINKS TO THE BOTTOM

ON INITIATION, FOAM MIX FLOATS, CREATING CLEAR SEPARATION

FOAM RISES OUT OF THE WATER

CURED FOAM WITH WATER BELOW

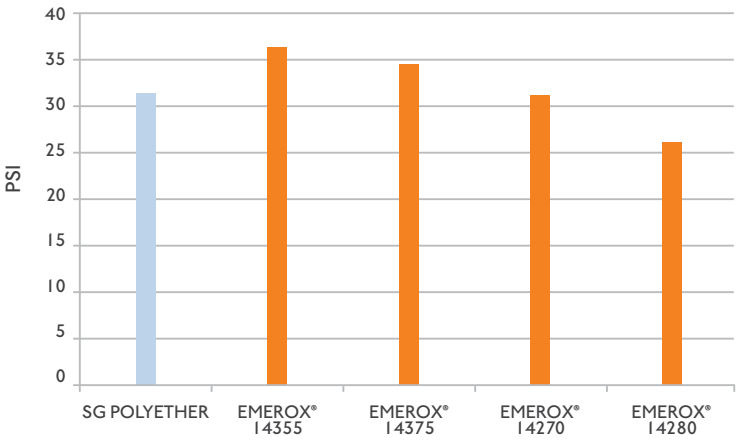
EMEROX® I 4355

SG POLYETHER

Video: See how EMEROX® Polyols perform in geotechnical applications

Normalized Compression Strength

"Generic" 2.0 pcf Closed Cell Spray Foam with H_2O



EMEROX® Polyols demonstrate excellent compression strength and dimensional stability properties compared to SG polyether.

Fire Performance

Cross sections of foam after burning show positive swelling benefits of the EMEROX® Polyols versus shrinkage from the SG polyether.

SG POLYETHER (SHRINKAGE)

EMEROX® I 4270 (SWELLING)

To request a sample or to find out more about our aliphatic EMEROX® Polyols for rigid foam, contact Polyols@emeryoleo.com or visit www.emeryoleo.com/polyols

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