## How can EMEROX® Polyols help you improve your rigid foam applications?

EMEROX Polyols are engineered for performance and sustainability. Our highly-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, than equivalent sucrose glycerin polyether polyols.

| PRODUCT NAME | HYDROXYL VALUE | VISCOSITY CP @25°C | ACID VALUE | FUNCTIONALITY (CALCULATED) | BIO-BASED CONTENT | DESCRIPTION |
|---|---|---|---|---|---|---|
| EMEROX® 14270 | 355 | 1,800 | ≤1.5 | 2.7 | 99* | Workhorse polyol. Functionally performs similar to SG 360 type polyether polyol. Low viscosity. Hydrophobic. Excellent in geotechnical applications. |
| EMEROX® 14280 | 280 | 3,700 | ≤ 1.5 | 2.7 | 99* | Lower hydroxyl version of EMEROX® 14270. Used in water blown formulations to maintain A: B ratio. Low viscosity with good functionality. |
| EMEROX® 14355 | 355 | 1,800 | ≤ 1.5 | 2.7 | 99* | Similar to EMEROX® 14270, but with improved low temperature stability. Functionally performs similar to SG 360 type polyether polyol. Hydrophobic. |
| EMEROX® 14371 | 370 | 15,000 | ≤ 1.5 | 3.7 | 99* | Higher functionality version of EMEROX® 14270. Designed to be used as the sole polyol in PIP and spray foams. Hydrophobic. |
| EMEROX® 14372 | 370 | 30,000 | ≤ 1.5 | 4.7 | 99* | Very high functionality. Used primarily as a co-polyol with enhanced functionality to provide improved foam mechanical properties. Hydrophobic. |

*USDA Certified Biobased Product.

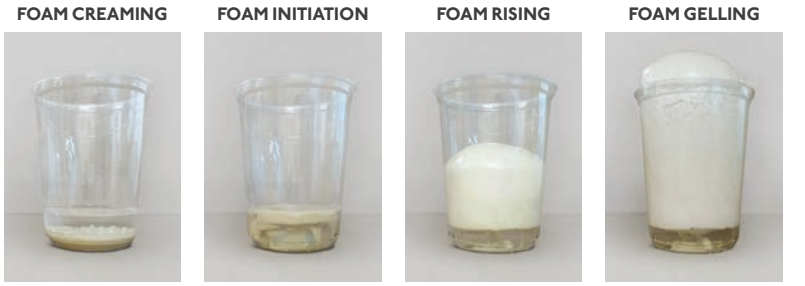
USDA CERTIFIED BIOBASED PRODUCT

## 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 than the SG polyether-based system.




BEFORE CREAM, FOAM MIX SINKS TO THE BOTTOM

ON INITIATION, FOAM MIX FLOATS, CREATING CLEAR SEPARATION

FOAM RISES OUT OF THE WATER

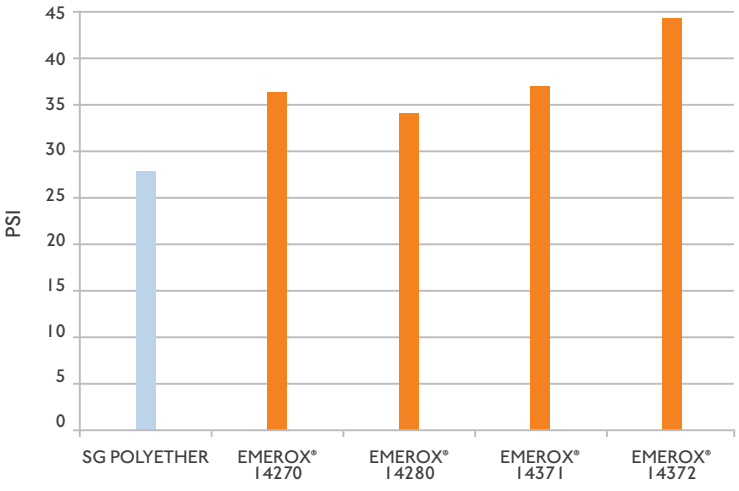
CURED FOAM WITH WATER BELOW

EMEROX® 14355

SG POLYETHER

### Normalized Compressive Strength

"Generic" 2.0 pcf Closed Cell Spray Foam with HFO1233zd




EMEROX® Polyols demonstrate excellent compressive 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® 14280 (SWELLING)

EMEROX® 14270 (SWELLING)

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



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