



INFIGREEN® Polyols are based on a multi-award winning technology for recycling scrap polyurethane foam back into recycled content polyols. These polyols can be either re-introduced into the same foam process (closed loop), or they can be used in entirely different applications (open loop). Emery Oleochemicals offers both open loop and closed loop products, both based on post-industrial scrap flexible foam.

Key Benefits

INFIGREEN Polyols are well suited for a broad range of applications. Unique attributes include:

- Versatile chemical formulation with a range of molecular weights and viscosities possible
- High to moderate reactivity, depending upon the application requirements
- Cost-effective replacement for petroleum-based polyols
- Broad feedstock capabilities with the use of many types of scrap polyurethane foam for custom tailored solutions
- Closed-loop processing for best performance, sustainability goal documentation and economics

INFIGREEN® Process

The INFIGREEN process starts with polyurethane foam scrap. The scrap can be based on either ether or ester chemistry, and as a general rule it is best to use a scrap grade that is similar in structure to the grade of foam one intends to produce from the resultant polyol. The foam is glycolized to form a liquid, and the glycolysis product is further worked to remove any residual solids that may have been introduced into the foam scrap stream. In a second step the hydroxyl value is adjusted to meet application specifications.

The process is depicted in the schematic in Figure 1.

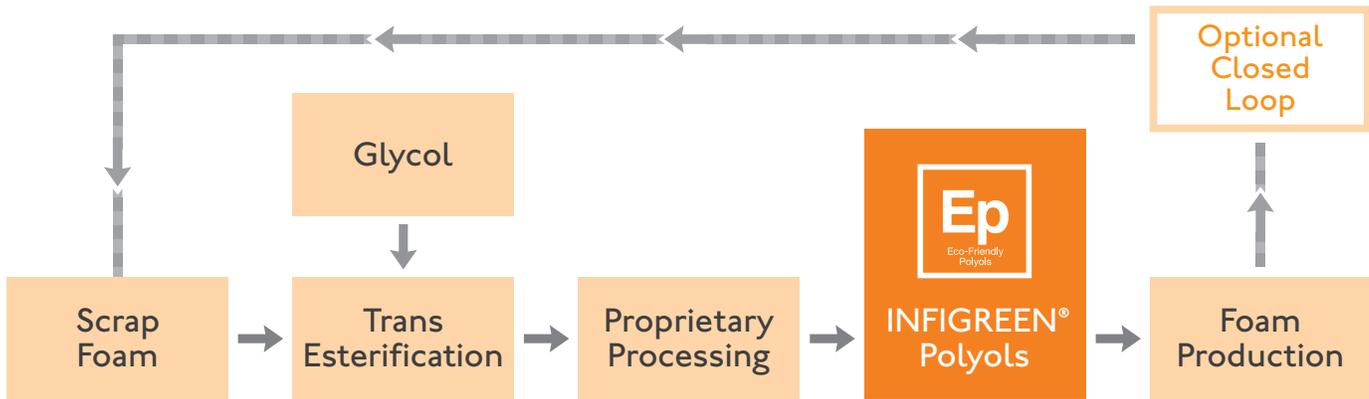


Figure 1: Process flow chart of INFIGREEN® recycled content polyols.

Closed Loop: Your material – back to you

Of particular interest is the potential for closed loop processing of a foam producer’s scrap. Depending on the grade and application, foam production can have high yield loss. There is a keen interest in the industry to find methods of reintroducing the scrap foam back into the foam process, especially for difficult to rebond grades of foam. In the closed loop process, the foam producer’s scrap is converted back to polyol and returned for reprocessing into the foam manufacturing process. With closed loop processing, your own chemistry is returned back to you and issues of variability and formulation change are minimized.

Open Loop: Grades available based on open-sourced foam scrap

The table below summarizes INFIGREEN grades commercially available which are based on open-sourced flexible foam.

Open Loop INFIGREEN® Polyol Product Line

PRODUCT	TYPICAL PROPERTIES		RECOMMENDED APPLICATIONS
	HYDROXYL VALUE	VISCOSITY (25°C)	
INFIGREEN® 300	290	3,000	<ul style="list-style-type: none"> Flexible slab Molded foams Memory foam
INFIGREEN® 420A	385	1,100	<ul style="list-style-type: none"> Injected pour-in-place foams Rigid/semi-rigid foams

To find out more about our INFIGREEN® recycled content polyols, contact EFP.Americas@emeryoleo.com or visit www.emeryoleo.com/polyols

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