

BiOH® Polyols – Facts and Definitions



Did you know?

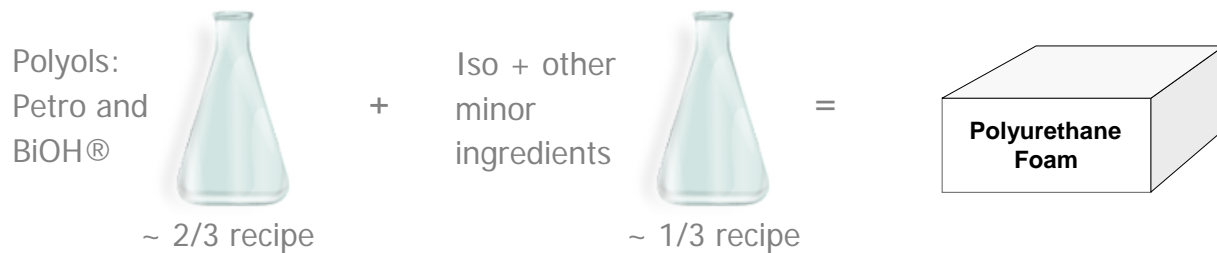
Upholstered furniture cushions, mattresses, pillows and bed toppers made with foam may contain BiOH® brand polyols, allowing consumers more responsible product choices regarding the environment.

Definitions:

- 1) Renewable or bio-based content - The percentage of a material in any product that is made from renewable resources such as plants (like soybeans) or animals. If the content is not plant or animal based, then it comes from a non-renewable resource such as petroleum.
- 2) BiOH® brand polyols - a liquid chemical made from soybeans: a renewable resource. Renewably sourced BiOH polyols are used in the production of flexible foam to replace a portion of the nonrenewable petroleum-based chemicals traditionally used to manufacture foam. (Pronounced Bi-O)

How is foam produced?

Foam is produced by combining two main chemicals together –polyols and isocyanates. The polyols typically make up about 2/3 of the recipe, while the isocyanates and other minor ingredients make up the remaining portion.



Where does soy-based BiOH polyol fit in?

Soy-based BiOH polyol replaces a **portion**, but **not all** of the petroleum-based polyol used in the foam recipe.

So, are there MULTIPLE polyols used in the production of foam now?

Yes, traditional nonrenewable petroleum-based polyols and the renewable soy-based BiOH polyols.

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How much soy-based content is there in a seat cushion labeled as “soy foam” made with BiOH polyols?

With current technology, commercial foam products are typically made with **5-20%** renewable content from BiOH polyols. The level depends on the type of foam used, how it is manufactured, etc.

Why only up to 20%?

The amount of renewable content in foam is first limited by the amount of polyol used in the foam formulation – typically about 67%. Therefore, if ALL of the polyol in the flexible foam recipe was replaced with BiOH polyols, the maximum amount of renewable content in foams would be 67%. Our goal is to develop new biobased polyols that can replace all of the petroleum polyols to get renewable content to those high levels.

Renewable BiOH® polyols were introduced in 2005 –just a few years ago. Since this is a first generation technology, flexible foam manufacturers want to ensure that the foam they are selling your vendors meets certain performance requirements. Right now, 5- 20% is the typical range that can be used across foam grades and still meet the performance needs for their customers. The BiOH polyols business is working with flexible foam manufacturers to increase the use of the renewable soy based content

How do I find out how much renewable content from BiOH polyols is in a cushion if my customer asks?

Ask your **buyer** for the specific percentages of soy content from BiOH polyols used in any line that you carry which offers a soy foam option.

Who should our buyer and/or our rep contact for specific percentage information?

The right contact for your buyer and/or your rep would be the person at the manufacturer level who decides which foam they are going to specify and buy to go into that manufacturer’s products.

Manufacturers can work with their foam suppliers to identify renewable content ranges for the foam grades they use in their products. Additionally, there are tests available for third party verification of the amounts of renewable content in foam. This third party verification utilizes carbon dating, costs approximately \$600.00 per foam sample and is accurate within a +/-3% margin of error according to Beta Analytic. If your buyer and/or vendors would like more information regarding this option, they can call Beta Analytic Inc. at 305-667-5167 or see www.radiocarbon.com.

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