



POLYLABS

BIOPOLYOL SYSTEMS

**HIGH QUALITY
BIO POLYOL
FROM RENEWABLE
RESOURCES**

Quality approved by:



ABOUT US

PolyLabs is an innovative chemical company established in close partnership with scientific Institute of Wood Chemistry of Latvia to produce Bio polyol for the polyurethane industry.

ABOUT THE PRODUCT

Our Bio Polyol is a high quality bio based polyol, produced from renewable materials (rapeseed oil and tall oil) for the polyurethane industry e.g. polyurethane system houses, manufacturers of insulation material, rigid foam and other rigid polyurethane products.

The proportion of renewable materials in our Bio Polyols is 60 - 74% of total mass. Our Bio Polyols are available in a wide range of hydroxyl values and viscosities.

We obtain polyols from renewable resources by adding hydroxyl groups to fatty acids and resin acids in amidization and esterification reactions of carboxyl groups with alkanolamines.

Depending on used alkanolamine, our Bio Polyols contain secondary or tertiary amine groups, making them autocatalytically active. By using these polyols it is possible to decrease the needed catalyst amount in a polyol composition.

The big advantage over other polyols is that hydroxyl groups in our Bio Polyols are up to 100 % primary. Our method of Bio Polyol production insures that all carboxylic compounds in natural oils are transferred into polyols while the other common method of polyol synthesis from natural oils is the epoxidation of double bonds, which introduces hydroxyl groups only to the unsaturated residue in the oils.

WHY WE DO IT?

We believe the future is in renewable resources. We believe we can change the conventional polyurethane industry. In our research we have found that renewable sources are better suited for high quality polyol production than conventional raw materials. Most importantly, these unique advantages cost less than the average polyols. In summary - it does not cost more to work environmentally friendlier.



OUR ADVANTAGES

TECHNOLOGY

Our product is a result of almost 45 years of research and experience.

COMPETITIVE PRICE

Compared with polyols of petrochemical origin, bio polyols provide not only a sustainable material source but have a stable, competitive material price.

RENEWABLE SOURCE

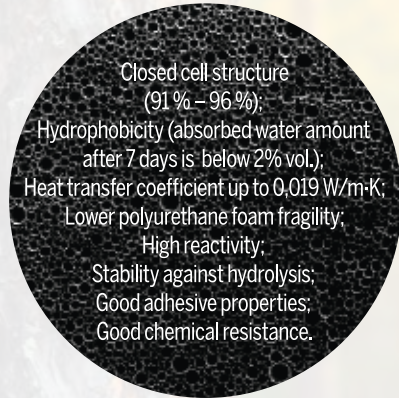
We produce polyol using raw materials from renewable sources such as rapeseed oil or distilled tall oil.

GREEN PROCESS

Production of our Bio Polyols does not create noxious by-products, making the process eco-friendly.

BETTER CHARACTERISTICS

Polyurethane foam, manufactured from our bio polyols, has similar or better physical characteristics than those obtained from petrochemical origin. By using our bio polyol in our suggested formulation, your polyurethane foam formulation will have these advantages:



TECHNICAL DETAILS

	Polyol characteristics	OH value, mgKOH/g	Acid value, mgKOH/g	Viscosity at 25 °C, mPa·s	Water content, %	Density, g/cm ³	Functionality
Standard Product		DIN 53240	DIN 53402	DIN 53015	DIN 51777	DIN 51757	
BioPolyol RD	yellow-brown colour viscous liquid	350-390 (including NH value)	<2	1100-1200	<0.2	0.976	2.1
BioPolyol TD	yellow-brown colour viscous liquid	260-300 (including NH value)	<5	1800-1900	<0.2	0.987	2.0
BioPolyol TT	yellow-brown colour viscous liquid	300-340	<5	330-370	<0.2	0.997	2.1

Contact us



POLYLABS

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