



TECHNICAL BULLETIN

Hydroxyl Functional Polybutadiene 100 CAS # 69102-90-5

DESCRIPTION

Polybutadiene 100 is a low-molecular-weight, hydroxyl-functional liquid polybutadiene. Its inherent hydrophobicity, low glass-transition temperature, high reactivity, and water-white appearance make it an ideal component of polyurethane systems and elastomers. These polyurethanes typically exhibit outstanding low-temperature flexibility, superior hydrolytic stability, and extraordinary compatibility with such extenders as oils, asphalt and fillers.

Polybutadiene 100 has side-chain allyl functionality in addition to the hydroxyl functionality. This feature offers additional cross-linking options with peroxides.

Polybutadiene 100 has a molecular weight of about 1200 and a hydroxyl functionality of about 2.5. It is a Lower viscosity, lower molecular weight version of Polybutadiene R-45.

FEATURES & BENEFITS

Polybutadiene 100 has excellent hydrophobicity which imparts excellent hydrolytic stability and low permeability to moisture. It also enhances the resistance to acids and to bases. Its low glass-transition temperature (T_g) enables polyurethane systems with excellent flexibility at low temperatures.

The multi-functionality of both the polybutadiene backbone and the hydroxyl groups enhances adhesive properties, allows flexibility in reaction options, and provides compatibility and miscibility with a wide variety of oils, fillers, and asphalt.

Polybutadiene 100 has excellent electrical insulation properties which are ideal for electrically insulating coatings and for electrical potting compounds and encapsulants. Its lower viscosity provides the formulator more options in additives and fillers.

APPLICATIONS

Hydroxyl-functional polybutadiene is a specialty polyol with many attributes that produce a variety of features for polyurethane systems. Some of the value-added applications:

- ≥ Potting compounds and encapsulants for electronics
- ≥ Waterproof coatings and membranes
- ≥ Insulating glass
- ≥ Adhesives and sealants

TYPICAL PROPERTIES

Polybutadiene 100 is a clear, water-white liquid with these typical properties:

Non-Volatile, wt. (%)	>99
Viscosity @ 30°C, cps	900 – 1,900
Hydroxyl Value, meg/g	1.60 - 2.00
Hydroxyl Equivalent Weight, g/eq	500 – 625
Hydroxyl Number, mg. KOH/g	89.8 - 112.2
Hydroxyl Functionality	2.4 - 2.6
Tg, ° C (approximate)	-70
Molecular Weight, Mn	1200



Polybutadiene 100

HEALTH & SAFETY PRECAUTIONS

Polybutadiene 100 may cause eye and skin irritation. Excess inhalation may cause headaches and dizziness. Low volatility makes vapor inhalation unlikely. Inhalation of fumes and vapors from processing, combustion or decomposition may cause irritation of the respiratory tract and mucous membranes. Prolonged or repeated contact may irritate skin, causing dermatitis.

Refer to the **Everchem Specialty Chemicals** Material Safety Data Sheet on **Polybutadiene 100** for additional safety and handling information. The MSDS is revised as new data becomes available.

PACKAGING & AVAILABILITY

Polybutadiene 100 is available in 55 gal. non-returnable closed head steel drums (net weight 410 lbs.) and 5 gal. plastic pails (35 lbs. net). For further information regarding this material or any other Everchem Specialty Chemical product, please contact your local Sales Representative or our Customer Service Department at 484-234-5030.

The US Department of Commerce regulates this family of polyol; exports require licenses from the Commerce Department.

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