

# POLYVEST<sup>®</sup> eCO HT Bio

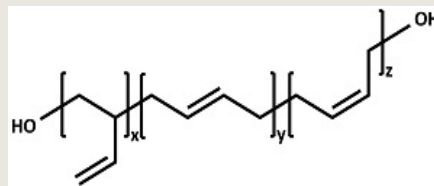
ISCC certified material (mass balance approach)

## HYDROXYL-TERMINATED LIQUID POLYBUTADIENE

### GENERAL DESCRIPTION

POLYVEST<sup>®</sup> eCO HT Bio is a stereospecific, low viscous and hydroxyl-terminated liquid polybutadiene with a high content of double bonds having the following composition:

- 1,2-vinyl (x)                      approx. 22 %
- 1,4-trans (y)                      approx. 58 %
- 1,4-cis (z)                          approx. 20 %



An amount of **bio-based** material equivalent to **99.7% of POLYVEST<sup>®</sup> eCO HT Bio** is allocated to this product using the ISCC mass balance approach. With this product, Evonik is contributing to the replacement of virgin fossil resources by renewable feedstocks and thus, supporting the circular economy/bioeconomy.

### SPECIFICATION

Property	Value	Unit	Test Method
Viscosity at 30°C	4,000 – 5,500	mPa s	DIN EN ISO 3219
Hydroxyl Number	44 – 51	mg KOH/g	DIN EN ISO 4629-2

## TYPICAL DATA

Property	Value	Unit	Test Method
Mean molar mass	approx. 2,900	g/mol	GPC* (polybutadiene standard)
Mean OH functionality	approx. 2.4		calculated via Mn and hydroxyl number
Density at 20°C	0.90 – 0.92	g/cm <sup>3</sup>	DIN ISO 2811-1
Iodine Number	420 – 440	g Iodine/100 g	DIN 53 241
Gardner Color	≤ 1		DIN EN ISO 4630
Flash Point	approx. 215	°C	DIN EN ISO 2719
Ignition Temperature	approx. 375	°C	DIN 51 794
Pour Point	approx. -18	°C	DIN ISO 3016
Glass Transition Temperature (Tg)	approx. -80	°C	DIN EN ISO 11 357-1

## GENERAL USE AND APPLICATIONS

Due to its unsaturated polymer backbone and the terminal hydroxyl functionalities, the apolar and hydrophobic hydrocarbon resin POLYVEST® eCO HT Bio is a highly reactive binder and it provides versatile opportunities for precise chemical modifications and reactions. POLYVEST® eCO HT Bio exhibits the following features:

- high chemical resistance towards acids and bases
- excellent water resistance
- excellent electrical insulation properties
- high cold resistance by keeping good flexibility at low temperatures
- good solubility in aliphatics, aromatics and ethers
- low moisture and gas permeability
- good adhesion to various substrates

In this form POLYVEST® eCO HT Bio is used in various fields of application such as:

- adhesives and sealants
- insulated glass sealants
- waterproofing membranes and coatings
- gap fillers and expansion joints
- electrical insulations and potting compounds
- binder for rubber based sealants and recycled rubber compounds
- polymer modification

We are pleased to send guide formulations.

\*GPC: Gel Permeation Chromatography

## SUPPLY FORM

Viscous liquid

## PACKAGING AND TRANSPORT

- steel drums (content 180 kg); minimum order quantity 4 drums on pallet
- IBC (content 850 kg)
- delivery in road tankers

## STORAGE

POLYVEST® eCO HT Bio is stable for at least 1 year with exclusion from air, light and moisture at storage temperatures below 25 °C.

## SAFETY AND HANDLING

POLYVEST® eCO HT Bio is supplied under a blanket of inert gas (nitrogen). The contact with air oxygen should be avoided as possible. Opened containers should be blanketed with inert gas again and closed tightly.

We are pleased to send our current Material Safety Data Sheet.

## EXPORT REGULATIONS

POLYVEST® eCO HT Bio is subject to export control regulations. For exportation of this product, an export licence by German Export Control Authorities (BAFA) may be mandatory.

Marl, March 9th, 2022; This data sheet replaces all former issues.  
POLYVEST® is a registered trademark of Evonik Industrie AG or one of its subsidiaries.

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