

## Product information

# POLYVEST<sup>®</sup> eCO ST-E 60 Bio

ISCC certified material (mass balance approach)

## TRIETHOXYSILANE-TERMINATED LIQUID POLYBUTADIENE

### GENERAL DESCRIPTION

POLYVEST<sup>®</sup> eCO ST-E 60 Bio is a stereospecific, low viscous and triethoxysilane-terminated liquid polybutadiene having the following composition of double bonds:

- 1,2-vinyl double bonds approx. 22 %
- 1,4-trans double bonds approx. 58 %
- 1,4-cis double bonds approx. 20 %

An amount of **bio-based** material equivalent to **>87% of POLYVEST<sup>®</sup> eCO ST-E 60 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 20°C	7,500 – 15,000	mPa s	DIN EN ISO 3219
Viscosity at 30°C	4,000 – 7,500	mPa s	DIN EN ISO 3219
Gardner Color	≤ 1.5		DIN EN ISO 4630
Water Content	≤ 500	mg/kg	DIN 51 777-2

### TYPICAL DATA

Property	Value	Unit	Test Method
Density at 25°C	0.8 - 1.0	g/cm <sup>3</sup>	DIN 51757, method 4
Mean Molar Mass	approx. 3,200	g/mol	GPC* (polybutadiene standard)
Glass Transition Temperature (T <sub>g</sub> )	approx. -80	°C	DIN EN ISO 11 357-1
Silane functionality	approx. 1.5		calculated
Residue on Ignition at 950°C	1.0 - 3.5	wt%	ASTM D 6740

\*GPC: gel permeation chromatography

## GENERAL USE AND APPLICATIONS

Due to its unsaturated polymer backbone and the terminal triethoxysilane functionalities, the apolar and hydrophobic hydrocarbon resin POLYVEST® eCO ST-E 60 Bio is a highly reactive binder with very good dispersing properties of inorganic fillers. POLYVEST® eCO ST-E 60 Bio exhibits the following features:

- Excellent compatible with solid rubber and recycled rubber
- high chemical resistance
- good dispersion and chemical modification with high loading capacity of inorganic fillers
- high cold resistance by keeping good flexibility at low temperatures
- good solubility in aliphatics, aromatics and ethers
- low moisture and gas permeability
- possibility of moisture induced curing

POLYVEST® eCO ST-E 60 Bio is used in various fields of application such as:

- additive for tires
- adhesive and sealants
- insulated glass sealants
- waterproofing membranes and coatings
- dispersion additive for rubber based formulations

We are pleased to send guideline formulations.

## SUPPLY FORM

Viscous liquid

## PACKAGING AND TRANSPORT

- steel drums (content 180 kg)
- IBC (content 850 kg)

## STORAGE

POLYVEST® eCO ST-E 60 Bio is stable for at least 12 months with exclusion from air, light and moisture at storage temperatures below 25°C.

## SAFETY AND HANDLING

POLYVEST® eCO ST-E 60 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.



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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