

Technical Data Sheet

Polyhydroxybutyrate-co-valerate (PHBV) Aqueous Dispersion

Overview

A colloidal aqueous dispersion of semi-crystalline PHBV particles in water. Produced through a completely biobased process, it is suited for direct coating, paper sizing, SPF boosting and water barrier layer applications.

Key characteristics: Bio-based · Home compostable · Biocompatible · Solvent-free · Aqueous system

Storage: Store at cool temperature in a sealed container.



Physicochemical properties

Appearance	Milky white liquid
Concentration in water (wt%)	15-30 wt%
Mean Particle Size (μm)	1-10
Monomeric Composition	97–99 mol% 3-Hydroxybutyrate (3-HB) 1–3 mol% 3-Hydroxyvalerate (3-HV)
Melting Temperature, T_m ($^{\circ}\text{C}$)	160–180
Glass Transition Temperature, T_g ($^{\circ}\text{C}$)	3–7
Thermal Degradation Onset Temperature, T_d ($^{\circ}\text{C}$)	250–290
Enthalpy of Fusion, ΔH_m (J/g)	75–80 (Semi-crystalline)
Average Molecular Weight	
Mw (g/mol)	550,000–600,000
Dispersity Index, $\bar{D} = M_w/M_n$	4.1