bioextrax

Technical Data Sheet

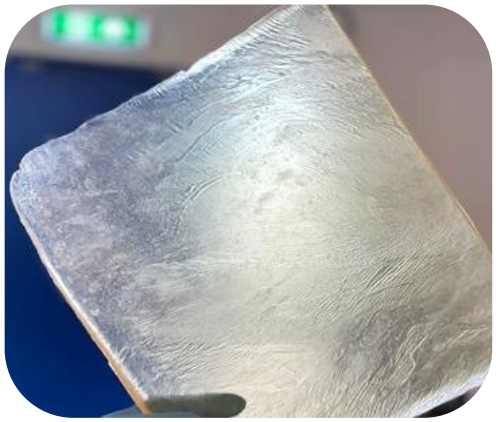
Polyhydroxyoctanoate-co-hexanoate (PHO)

Overview

PHO is a medium-chain-length polyhydroxyalkanoate (mcl-PHA). Its low melting point and exceptional elasticity make it ideal for flexible films, and elastomeric applications.

Key characteristics: Bio-based · Amorphous · Highly elastic · Flexible film-forming

Storage: Keep below 25 °C in sealed packaging away from direct sunlight.



Physicochemical properties

Appearance	Translucent film or granules
Density at 25 °C (g/cm³)	0.90
Monomeric Composition	90–92 mol% 3-Hydroxyoctanoate (3-HO) 8–10 mol% 3-Hydroxyhexanoate (3-HHx)
Melting Temperature, Tm (°C)	43–60
Glass Transition Temperature, Tg (°C)	−25 to −30
Thermal Degradation Onset Temperature, Td (°C)	260–290
Enthalpy of Fusion, ΔHm (J/g)	19.62 (Amorphous)
Average Molecular Weight Mw (g/mol) Dispersity Index, Đ = Mw/Mn	 110,000 2.2
Ultimate Tensile Strength, σu (MPa)	1
Elongation at Break, εb (%)	> 500

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