

Technical Data Sheet

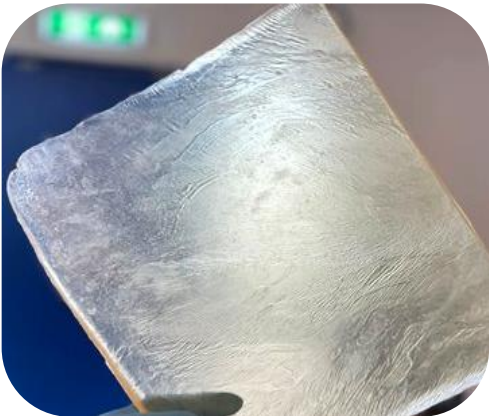
Polyhydroxyoctanoate-co-hexanoate (PHO)

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/cm ³)	0.90
Monomeric Composition	90–92 mol% 3-Hydroxyoctanoate (3-HO) 8–10 mol% 3-Hydroxyhexanoate (3-HHx)
Melting Temperature, T _m (°C)	43–60
Glass Transition Temperature, T _g (°C)	–25 to –30
Thermal Degradation Onset Temperature, T _d (°C)	260–290
Enthalpy of Fusion, ΔH _m (J/g)	19.62 (Amorphous)
Average Molecular Weight	
M _w (g/mol)	110,000
Dispersity Index, Đ = M _w /M _n	2.2
Ultimate Tensile Strength, σ _u (MPa)	13
Elongation at Break, ε _b (%)	> 500