Data Sheet

PLA

Alternative Designations

Polyactic Acid

Key Features

Low glass transition temperature • Biocompatible • High tensile strength

Description

This polymer is derived from renewable sources and is biodegradable. It can easily be melted and shaped without losing its mechanical properties. It has a melting point of 145 – 160°C. Its mechanical properties lie between those of polystyrene and PET. However, its low glass transition temperature makes it unsuitable for use in holding hot liquid. It is commonly used in plastic films, bottles and medical devices.

Mechanical Properties

Tensile modulus	2346.5 MPa
Tensile strength	49.5 MPa
Elongation at break	5.2%
Flexural strength	103 MPa
Flexural modulus	3.15 GPa
Hardness (Shore D)	83

Thermal Properties

Melting temperature (20°C/min)	145 – 160°C
Softening temperature	60°C

Physical Properties

Density	1.24 g/cm^3

Reference

Datasheets provided by Xometry contain materials sourced through trusted OEMs, material distributors, and databases. Please visit Materialdatacenter.com for further information on this material.