



MARPOL® LL4M 833

Marco Polo International, LLC - Linear Low Density Polyethylene

Sunday, July 23, 2023

General Information

Product Description

This resin exhibits an excellent balance of processability, stiffness, impact strength and ESCR.

Recommended Applications:

General purpose and injection molding applications

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Features	• Low Density
Uses	• General Purpose
Agency Ratings	• FDA 21 CFR 177.1520(c) 3.1a
Processing Method	• Injection Molding

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density	0.926	g/cm ³	ASTM D4883
Melt Mass-Flow Rate (190°C/2.16 kg)	35	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	11.0	MPa	ASTM D638
Tensile Strength (Break)	7.58	MPa	ASTM D638
Tensile Elongation (Yield)	2.0	%	ASTM D638
Tensile Elongation (Break)	75	%	ASTM D638
Flexural Modulus - 2% Secant	393	MPa	ASTM D790B
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	51		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 1.8 MPa, Unannealed	45.0	°C	ASTM D648
Brittleness Temperature	< -76.1	°C	ASTM D746
Vicat Softening Temperature	92.2	°C	ASTM D1525

Notes

¹ Typical properties: these are not to be construed as specifications.