

# CERTENE™ PHT-4

Polypropylene Homopolymer  
Muehlstein

Message:

PHT-4 is a certified prime grade Polypropylene specially designed for EXTRUSION of Water-Quench Cast Film for Slit film and Tape applications. PHT-4 combines excellent processability, very good thermal stability, and high degree of purity with Low Water Carry-over and good balance of tape strength and orientation properties, as well as, excellent process stability in extrusion application. PHT-4 applications include stretched tapes for textile Raffia uses, such as woven industrial sacks, carpet backing, tarpaulins and geotextiles. Fibrillated tapes for twines and ropes, and monofilaments for bristles and cordage, are other applications of PHT-4. Recommended processing temperatures of PHT-4 are: 1) tape - 204°C to 260°C in barrel and 230-250°C in head, and 2) multifilament - 210° to 230°C. PHT-4 complies with FDA regulation 21CFR 177.1520 and with most international regulations concerning the use of Polypropylene in contact with food articles

General Information	
Features	High purity
	Homopolymer
	Workability, good
	Good processing stability
	Good strength
	Thermal stability, good
	Compliance of Food Exposure
	Low water portability
Uses	Twine
	Strap
	monofilament
	Carpet backing
	Rope
Agency Ratings	FDA 21 CFR 177.1520
Forms	Particle
Processing Method	Film extrusion
	cast film

Physical	Nominal Value	Unit	Test Method
Density	0.905	g/cm <sup>3</sup>	ASTM D1505
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	4.0	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>1</sup> (Yield)	35.2	MPa	ASTM D638
Tensile Elongation <sup>2</sup> (Yield)	12	%	ASTM D638
Flexural Modulus - 1% Secant <sup>3</sup>	1450	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method

Notched Izod Impact (23°C)	32	J/m	ASTM D256A
Unnotched Izod Impact (23°C)	900	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	107	°C	ASTM D648
Melting Temperature	165	°C	DSC

#### Additional Information

Test made on injection molded Type 1 tension test specimen according to ASTM D 2146.

#### Extrusion instructions

Recommended processing temperatures of PHT-4 are:1) tape: 204 to 260°C in barrel and 230-250°C in head2) multifilament: 210° to 230°C

#### NOTE

1. 50 mm/min
2. 50 mm/min
3. 1.3 mm/min

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#### Recommended distributors for this material

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