



Data sheets for over 140,000 metals, plastics, ceramics, and composites.

Advertise with MatWeb!

REGISTER NOW

HOME • SEARCH • TOOLS • SUPPLIERS • FOLDERS • ABOUT US • FAQ • LOG IN

Searches: Advanced | Category | Property | Metals | Trade Name | Manufacturer | Recently Viewed Materials

SEARCH

**Your materials matter.**  
Trade in your competitive instrument and save on TA's latest technology!

Save on your new instrument

**Premix Thermoplastics PRE-ELEC® PE 1291****Categories:** [Polymer](#); [Film](#); [Thermoplastic](#); [Polyethylene \(PE\)](#); [High Density \(HDPE\)](#)

**Material Notes:** PRE-ELEC PE 1291 is a conductive thermoplastic compound based on PE-HD. Conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity PRE-ELEC PE 1291 has an excellent balance of mechanical properties and is easy to extrude. PRE-ELEC PE 1291 can also be blow molded.

Typical applications include extrusion of pipe and sheet which can be welded or vacuum formed without predrying.

Information provided by Premix Thermoplastics Inc.

**Vendors:** No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Printer friendly version
 Download as PDF
 Download to Excel (requires Excel and Windows)

Export data to your CAD/FEA program

Add to Folder:  My Folder 0/0

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in <sup>3</sup>	
Thickness	406 microns	16.0 mil	
Linear Mold Shrinkage	0.015 - 0.025 cm/cm	0.015 - 0.025 in/in	4 mm thick, 10.0 mm wide molded rod; ISO 294-4
Melt Flow	0.80 g/10 min @Load 10.0 kg, Temperature 190 °C	0.80 g/10 min @Load 22.0 lb, Temperature 374 °F	ISO 1133
High Load Melt Index	6.0 g/10 min @Load 21.6 kg, Temperature 190 °C	6.0 g/10 min @Load 47.6 lb, Temperature 374 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	97	97	4.0 mm thick;10.0 mm wide molded rod; ISO 868
Film Tensile Strength at Yield, MD	25.0 MPa	3630 psi	ISO 527
Film Elongation at Yield, MD	14 %	14 %	ISO 527
Film Elongation at Yield, TD	9.0 %	9.0 %	ISO 527
Elongation at Break	>= 500 %	>= 500 %	Trans-Machine Direction; 400 um thick sheet; ISO 527
	>= 650 %	>= 650 %	Machine Direction; 400 um thick sheet; ISO 527
Modulus of Elasticity	1.20 GPa	174 ksi	4 mm thick;10.0 mm wide molded rod; ISO 178
Izod Impact, Notched	1.50 J/cm @Thickness 4.00 mm, Temperature -20.0 °C	2.81 ft-lb/in @Thickness 0.157 in, Temperature -4.00 °F	ISO 180
	2.30 J/cm @Thickness 4.00 mm, Temperature 23.0 °C	4.31 ft-lb/in @Thickness 0.157 in, Temperature 73.4 °F	ISO 180
Izod Impact, Unnotched	NB @Thickness 4.00 mm, Temperature -20.0 °C	NB @Thickness 0.157 in, Temperature -4.00 °F	ISO 180
	NB @Thickness 4.00 mm, Temperature 23.0 °C	NB @Thickness 0.157 in, Temperature 73.4 °F	ISO 180
Film Tensile Strength at Break, MD	26.0 MPa	3770 psi	ISO 527



Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 10000 ohm-cm	<= 10000 ohm-cm	400 um thick sheet; ISO D-257
Surface Resistance	<= 1e+05	<= 1e+05	400 um thick sheet; ISO D-257
Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	76.0 °C	169 °F	4 mm thick;10.0 mm wide molded rod; ISO 75/Method Bf
Vicat Softening Point	126 °C	259 °F	Rate A; 4 mm thick;10.0 mm wide molded rod; ISO 306/A50
Processing Properties	Metric	English	Comments
Middle Barrel Temperature	200 °C	392 °F	Zone 1; Cylinder
	210 °C	410 °F	Zone 2; Cylinder
	220 °C	428 °F	Zone 3; Cylinder
	220 °C	428 °F	Zone 4; Cylinder
	230 °C	446 °F	Zone 5; Cylinder
	230 °C	446 °F	Zone 6; Cylinder
Die Temperature	220 °C	428 °F	Zone 3
	230 °C	446 °F	Zone 2
	230 °C	446 °F	Zone 4
	240 °C	464 °F	Zone 5
	240 °C	464 °F	Zone 1
Roll Temperature	50.0 °C	122 °F	3rd Roll
	60.0 °C	140 °F	2nd Roll
	70.0 °C	158 °F	1st Roll
Drying Temperature	80.0 °C	176 °F	Pre-drying in a dehumidifier
	@Time 7200 - 14400 sec	@Time 2.00 - 4.00 hour	
Moisture Content	<= 0.15 %	<= 0.15 %	When Produced
Shelf Life	12.0 Month	12.0 Month	Normal Storing Conditions

#### Descriptive Properties


Appearance	Granule
Color	Black

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's terms of use regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.

#### Users viewing this material also viewed the following:

[Premix Thermoplastics PRE-ELEC® PE 1200 Conductive Thermoplastic Compound](#)  
[Premix Thermoplastics PRE-ELEC® PE 1296 Conductive Thermoplastic Compound](#)  
[Premix Thermoplastics PRE-ELEC® PA 1409 Conductive Thermoplastic Compound](#)  
[Premix Thermoplastics PRE-ELEC® PC/ABS 1420](#)  
[Premix Thermoplastics PRE-ELEC® PE 1297 Conductive Thermoplastic Compound](#)

PPREMA036 / 58049



## Clean, Efficient Manufacturing

Denver, Colorado www.protocast.com

☎ 303.574.0060 ✉ sales@protocast.com

#### Subscribe to Premium Services

**Searches:** Advanced • Composition • Property • Material Type • Manufacturer • Trade Name • UNS Number  
**Other Links:** Advertising • Submit Data • Database Licensing • Web Design & Hosting • Trade Publications  
 Supplier List • Unit Converter • Reference • Links • Help • Contact Us • Site Map • FAQ • Home

Follow @MatWeb

Please read our License Agreement regarding materials data and our Privacy Policy. Questions or comments about MatWeb? Please contact us at webmaster@matweb.com. We appreciate your input.

The contents of this web site, the MatWeb logo, and "MatWeb" are Copyright 1996-2021 by MatWeb, LLC. MatWeb is intended for personal, non-commercial use. The contents, results, and technical data from this site may not be reproduced either electronically, photographically or substantively without permission from MatWeb, LLC.