

DuPont™ 20 Series DPE-2010

DuPont™ 20 Series resins Product Data Sheet

**Description**

Product Description DuPont™ 20 Series DPE-2010, specialty low density polyethylene resin is characterized by low melt index and intermediate crystallinity. This product, produced via a unique polymerization process, has outstanding flexibility and environmental stress crack resistance

**Restrictions**

Material Status • Commercial: Active

**Typical Characteristics**

Features Contains Oleamide as a slip agent  
 Applications Injection blow molded bottles and tubes and extruded tubing in particular used in medical, pharmaceutical, and personal care packaging

**Typical Properties**

Physical	Nominal Values	Test Method(s)	
Density ( )	0.92 g/cm <sup>3</sup>	ASTM D792	ISO 1183
Melt Flow Rate (190°C/2.16kg)	1.9 g/10 min	ASTM D1238	ISO 1133
Thermal	Nominal Values	Test Method(s)	
Melting Point (DSC)	109°C (228°F)	ASTM D3418	ISO 3146
Freezing Point (DSC)	96°C (205°F)	ASTM D3418	
Vicat Softening Point ( )	96°C (205°F)	ASTM D1525	ISO 306

**Processing Information**

**General**

Maximum Processing Temperature 310°C (590°F)  
 General Processing Information DPE-2010 is normally processed at melt temperatures ranging from 180-235°C (356-455°F). Actual processing temperatures will usually be determined by optimizing product appearance and production rates on individual production lines  
  
 Unusual materials of construction are not required in the processing of this resin due to the non-corrosive nature of DPE-2010. For long equipment life, a wear-resistant extruder barrel is recommended. Nickel or chrome plating of the screw, adapter, and die parts is also recommended.  
  
 General Processing Recommendations:  
 Dry blending of DPE-2010 with other polyethylene resins additive masterbatches is best done

using resins with melt indexes similar to DPE2010 and a screw design that enhances mixing. No special purging prior to shut down is necessary when processing only DPE2010 resin, but purging with a low melt index LDPE resin is recommended if pigment additives, or other resins have been added during production runs. Shut down of the melt handling system on DPE2010 resin or some other low melt index LDPE resin.

#### **FDA Status Information**

DPE-2010 specialty polyethylene resin conforms to FDA regulation 21 CFR 177.1520 covering the use of polyethylene in contact with food. DPE-2010 specialty polyethylene resins conform to the requirements of ASTM D1248-69, Type I, Class A, Category 3.

DPE-2010 series specialty polyethylene resins are specified in pharmaceutical packaging. They conform to FDA regulation 21 CFR 177.1520 for olefin polymers. In addition, they are listed in FDA Drug Master File 1528 for packaging materials applications.

#### **Regulatory Information**

For information on regulatory compliance outside of the U.S., consult your local DuPont representative.

#### **Safety & Handling**

DuPont™ 20 Series polyethylene resins as supplied by DuPont are not considered hazardous materials. As with any hot material, care should be taken to protect the hands and other exposed parts of the body when handling molten polymer. At recommended processing temperatures, small amounts of fumes may evolve from the resins. When resins are overheated, more extensive decomposition may occur. Adequate ventilation should be provided to remove fumes from the work area. Disposal of scrap presents no special problems and can be by landfill or incineration in a properly operated incinerator. Disposal should comply with local state, and federal regulations. Resin pellets can be a slipping hazard. Loose pellets should be swept up promptly to prevent falls. For more detailed information on the safe handling and disposal of DuPont resins, a Material Safety Data Sheet can be obtained from the DuPont Packaging and Industrial Polymers website or by contacting your sales representative.

### **Read and Understand the Material Safety Data Sheet (MSDS) before using this product**

#### **Regional Centres**

DuPont operates in more than 70 countries. For help finding a local representative, please contact one of the following regional customer contact centers:

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