

DuPont™ 20 Series DPE-20

DuPont™ 20 Series resins Product Data Sheet

Description

Product Description

DuPont™ 20 Series DPE-20, 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

Applications

Injection blow molded bottles and tubes, and extruded tubing, in particular used in medical and pharmaceutical packaging.

Typical Properties

Physical	Nominal Values	Test Method(s)	
Density ()	0.92 g/cm ³	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)	108°C (226°F)	ASTM D3418	ISO 3146
Freezing Point (DSC)	92°C (198°F)	ASTM D3418	
Vicat Softening Point ()	94°C (201°F)	ASTM D1525	ISO 306

Processing Information

General

Maximum Processing Temperature 310°C (590°F)

General Processing Information DPE-20 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-20. 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-20 with other polyethylene resins additive masterbatches is best done using resins with melt indexes similar to DPE-20 and a screw design that enhances mixing.

No special purging prior to shut down is necessary when processing only DPE-20 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 DPE-20 resin or some other low melt index LDPE resin.

FDA Status Information

DPE-20 specialty polyethylene resin conforms to FDA regulation 21CFR177.1520 covering the use of polyethylene in contact with food.

DPE-20 specialty polyethylene resins conform to the requirements of ASTM D1248-69, Type I, Class A, Category 3.

DPE-20 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:

Americas

DuPont Company, BMP26-2363
Lancaster Pike & Route 141
Wilmington, DE 19805 U.S.A.
Telephone +1 302-774-1161
Toll-free (USA) 800-628-6208
Fax +1 302-999-4399

DuPont do Brasil, S.A.
Alameda Itapecuru, 506
06454-080 Barueri, SP Brasil
Telephone +55 11 4166 8122
Fax +55 11 4166 8720

Asia Pacific

DuPont China Holding Co., Ltd.
Shanghai Branch
399 Keyuan Road, Bldg. 11
Zhangjiang Hi-Tech Park
Pudong New District, Shanghai
P.R. China (Postcode: 201203)
Telephone +86 21 3862 2888
Fax +86-21-3862-2889

Europe / Middle East / Africa

DuPont de Nemours Int'l. S.A.
2, Chemin du Pavillon Box 50
CH-1218 Le Grand Saconnex
Geneva, Switzerland
Telephone +41 22 717 51 11
Fax +41 22 717 55 00

www.dupont.com

The data listed here fall within the normal range of properties, but they should not be used to establish specification limits nor used

CAUTION: Do not use DuPont materials in medical applications involving implantations in the human body or contact with internal body

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fluids or tissues unless the material has been provided from DuPont under a written contract that is consistent with DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative. You may also request a copy of DuPont POLICY Regarding Medical Applications H-50103-3 and DuPont CAUTION Regarding Medical Applications H-50102-3.

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This data sheet is effective as of 04/24/2009 03:21:28 PM and supersedes all previous versions.