

DuPont™ 20 Series DPE-2050

DuPont™ 20 Series resins Product Data Sheet

Description

Product Description

DuPont™ 20 Series DPE-2050, 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, pharmaceutical, and personal care packaging

Typical Properties

Physical

Density ()

Nominal Values

0.925 g/cm³

Test Method(s)

ASTM D792 ISO 1183

Melt Flow Rate (190°C/2.16kg)

1.1 g/10 min

ASTM D1238 ISO 1133

Thermal

Melting Point (DSC)

111°C (232°F)

Test Method(s)

ASTM D3418 ISO 3146

Freezing Point (DSC)

98°C (208°F)

ASTM D3418

Processing Information

General

Maximum Processing Temperature

310°C (590°F)

General Processing Information

DPE-2050 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-2050. 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-2050 with other polyethylene resins additive masterbatches is best done using resins with melt indexes similar to DPE-2050 and a screw design that enhances mixing.

No special purging prior to shut down is necessary when processing only DPE-2050 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-2050 resin or some other low melt index LDPE

resin.

FDA Status Information

DPE-2050 specialty polyethylene resin conforms to FDA regulation 21CFR177.1520 covering the use of polyethylene in contact with food.
DPE-2050 specialty polyethylene resins conform to the requirements of ASTM D1248-69, Type I, Class A, Category 3.

DPE-2050 series specialty polyethylene resins are specified in pharmaceutical packaging. They conform to FDA regulation 21 CFR 177.1520 for olefin polymers.

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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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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