**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**

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

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

**Typical Properties**

**Physical**

<table>
<thead>
<tr>
<th>Property</th>
<th>Nominal Values</th>
<th>Test Method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density ()</td>
<td>0.92 g/cm³</td>
<td>ASTM D792</td>
</tr>
<tr>
<td>Melt Flow Rate (190°C/2.16kg)</td>
<td>1.9 g/10 min</td>
<td>ISO 1183</td>
</tr>
</tbody>
</table>

**Thermal**

<table>
<thead>
<tr>
<th>Property</th>
<th>Nominal Values</th>
<th>Test Method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Point (DSC)</td>
<td>108°C (226°F)</td>
<td>ASTM D3418</td>
</tr>
<tr>
<td>Freezing Point (DSC)</td>
<td>92°C (198°F)</td>
<td>ISO 3146</td>
</tr>
<tr>
<td>Vicat Softening Point ()</td>
<td>94°C (201°F)</td>
<td>ASTM D1525</td>
</tr>
</tbody>
</table>

**Processing Information**

**General**

<table>
<thead>
<tr>
<th>Property</th>
<th>Nominal Values</th>
<th>Test Method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Processing Temperature</td>
<td>310°C (590°F)</td>
<td></td>
</tr>
</tbody>
</table>

**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**

DuPont™ DPE 20 Specialty Polyethylene Resin complies with Food and Drug Administration Regulation 21 CFR 177.1520(c)2.2 - Olefin polymers. This Regulation describes polymers that may be used as articles or components of articles in contact with food, including articles used for packing or holding food during cooking, subject to the limitations and requirements therein.

The information and certifications provided herein are based on data we believe to be reliable, to the best of our knowledge. The information and certifications apply only to the specific material designated herein as sold by DuPont and do not apply to use in any process or in combination with any other material. They are provided at the request of and without charge to our customers. Accordingly, DuPont cannot guarantee or warrant such certifications or information and assumes no liability for their use.

**Regulatory Information**

DPE-20 series specialty polyethylene resins are specified in pharmaceutical packaging and are listed in FDA Drug Master File 1528 for packaging materials applications.

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

**Safety & Handling**

For information on appropriate Handling & Storage of this polymeric resin, please refer to the Material Safety Data Sheet.

A Product Safety Bulletin, Material Safety Data Sheet, and/or more detailed information on extrusion processing and/or compounding of this polymeric resin for specific applications are available from your DuPont Packaging and Industrial Polymers 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  
Chestnut Run Plaza – Bldg. 730  
974 Centre Road  
Wilmington, Delaware  
19805 U.S.A.  
Toll-Free (USA): 1-800-628-6208  
Telephone: 1-302-774-1000  
Fax: 1-302-355-4013

DuPont do Brasil, S.A.  
Alameda Itapecuru, 506  
06454-080 Barueri, SP Brasil  
Telephone: +55 11 4166 8000  
Fax: +55 11 4166 8736

**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
<table>
<thead>
<tr>
<th>The data listed here fall within the normal range of properties, but they should not be used to establish specification limits nor used alone as the basis of design. The DuPont Company assumes no obligations or liability for any advice furnished or for any results obtained with respect to this information. All such advice is given and accepted at the buyer's risk. The disclosure of information herein is not a licence to operate under, or a recommendation to infringe, any patent of DuPont or others. Since DuPont cannot anticipate all variations in actual end-use conditions, DuPont makes no warranties and assumes no liability in connection with any use of this information.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAUTION: Do not use DuPont materials in medical applications involving implantations in the human body or contact with internal body 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.</td>
</tr>
</tbody>
</table>

Copyright © 2009 DuPont. The DuPont Oval Logo, DuPont™, The miracles of science™, and trademarks designated with “®” are registered trademarks or trademarks of E.I. du Pont de Nemours and Company or its affiliates. All rights reserved.

This data sheet is effective as of 08/07/2010 01:27:55 PM and supersedes all previous versions.