Dow Packaging & Specialty Plastics

Product Data Sheet

DOW™ 20 HEALTH+™

Ultra-Pure Polyethylene

General Information

Product Description	DOW™ 20 HEALTH+™ Ultra-Pure Polyethylene resin is characterized by low melt index and intermediate crystallinity. A unique polymerization process allows for the production of a very high purity product, vital for pharmaceutical applications. The product also has outstanding flexibility and environmental stress crack resistance without the use of additives.

Status

Typical Characteristics

Applications	Extrusion Blow / Fill / Seal vials, also known as "BFS vials". Injection molded parts, in particular used in medical and pharmaceutical packaging.

Typical Properties

Physical	Nominal Values	Test Method(s)	
*Density ( )	0.92 g/cm³	ASTM D792	ISO 1183
*Melt Flow Index (190°C/2.16kg)	1.9 g/10 min	ASTM D1238	ISO 1133

Thermal	Nominal Values	Test Method(s)	
*Melting Point (DSC)	108 °C (226.4 °F)	ASTM D3418	ISO 3146
Freezing Point (DSC)	92 °C (197.6 °F)	ASTM D3418	ISO 3146
Vicat Softening Point ( )	94 °C (201.2 °F)	ASTM D1525	ISO 306

Processing Information

*Maximum Processing Temperature	310 °C (590 °F)
General Processing Information	DOW™ 20 HEALTH+™ Ultra-Pure Polyethylene 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 DOW™ 20 HEALTH+™ Ultra-Pure Polyethylene. 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 DOW™ 20 HEALTH+™ Ultra-Pure Polyethylene with other polyethylene resins additive masterbatches is best done using resins with melt indexes similar to DOW™ 20 HEALTH+™ Ultra-Pure Polyethylene and a screw design that enhances mixing. No special purging prior to shut down is necessary when processing only DOW™ 20 HEALTH+™ Ultra-Pure Polyethylene 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 DOW™ 20 HEALTH+™ Ultra-Pure Polyethylene resin or some other low melt index LDPE resin.

FDA Status Information	**DOW™ 20 HEALTH+™ Ultra-Pure 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 Dow 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, Dow cannot guarantee or warrant such certifications or information and assumes no liability for their use.**
Regulatory Information	**DOW™ 20 HEALTH+™ Ultra-Pure Polyethylene is specified in pharmaceutical packaging and is listed in FDA Drug Master File 1528 for packaging materials applications.** **For information on regulatory compliance outside of the U.S.A., consult your local Dow 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 Dow representative.**

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

Medical Applications Policy

Any and all medical application use of Dow materials, whether a device, a component, or any type of primary or secondary packaging of a medically related object or substance, needs to be reviewed and approved by Dow before any Dow material can be tested in such application.

Dow requests that customers considering use of Dow products in medical applications notify Dow so that appropriate assessments may be conducted. Dow does not endorse or claim suitability of its products for specific medical applications. It is the responsibility of the medical device or pharmaceutical manufacturer to determine that the Dow product is safe, lawful, and technically suitable for the intended use. DOW MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE SUITABILITY OF ANY DOW PRODUCT FOR USE IN MEDICAL APPLICATIONS.

For further information contact your Dow sales or technical representative to request a Medical Application Review Request Form. Additional details of Dow's Medical Applications Policy are available at:
https://www.dow.com/en-us/support/product-safety.html

Tobacco and Marijuana Policy

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Harmful Applications Policy

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http://www.dow.com/products_services

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P&SP Disclaimer

Additional Information

To contact Dow via Toll-Free or Local Toll phone numbers in specific countries, please see the following webpage:
https://www.dow.com/en-us/support/contact-representative.html

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Manufacturer website: https://www.dow.com/en-us/market/mkt-polyethylene.html