

DuPont™ HPF 1000

polymer

Product Information

Golf Ball Resins



DuPont™ HPF 1000 is based on a new technology platform. It is extremely versatile and can be used to manufacture all layers of the golf ball. DuPont™ HPF 1000 offers a combination of high resilience and low compression never before available. This polymer is a highly amorphous material.

Properties of DuPont™ HPF 1000

Resin Property	Typical Value	Test Method
General		
Cation Type	Magnesium	--
Melt Flow Index, g/10 min	0.65	ASTM D1238 (190°C/2.16 kg)
Density, g/cc	0.96	ASTM D1003
Mechanical		
Tensile Strength, MPa (kpsi)	18 (2.6)	ASTM D638
Elongation, %	430	ASTM D638
Shore D Hardness	52	ASTM D2240D
Flex Modulus, MPa (kpsi)	220 (31)	ASTM D790
Thermal		
Vicat Softening Point, °C (°F)	59 (137)	ASTM D1525

Processing Conditions

Drying

DuPont™ HPF 1000 is shipped dry, (<1000 ppm moisture), in moisture-resistant bags or in moisture-resistant liners in boxes, and can be used as received. However, DuPont™ HPF 1000 does absorb moisture from the air, and should be kept sealed in a moisture-resistant

container whenever possible. DuPont™ HPF 1000 may be dried using regenerative-type desiccant bed dryers capable of producing dry air with a dew point of -20 to -40°C (-4 to -40°F). Typical drying conditions for this magnesium ion grade are 24 hours at a temperature below 50°C (122°F). If moisture levels have reached greater than 2000 ppm, it may be necessary to employ vacuum as well as heat to remove moisture.

Processing

This material is readily processible in conventional molding equipment. Typical melt temperatures for injection molding are 410°F – 500°F.

Safety

DuPont™ HPF polymers 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 the 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 Product Bulletin and OSHA Material Safety Data Sheet can be obtained from the DuPont Packaging and Industrial Polymers sales office serving you.

For more information about DuPont™ HPF 1000 polymer:

DuPont Worldwide

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The technical data and/or information (Information) contained herein can be useful as a general guide to the use of the DuPont resins identified on these pages. Any advice or recommendation provided herein is based upon information believed to be reliable, but users are cautioned not to rely solely or absolutely upon such advice or recommendation for their specific applications. Information or advice provided by DuPont herein is accepted by the user at user's risk. Independent confirmation of the applicability of such Information to specific cases should be obtained by the user. The DuPont Company makes no guarantees of results and assumes no obligations or liability in connection with any advice or Information provided herein. This publication should under no circumstances be taken as a license to operate under, or recommendation to infringe, any valid patent.

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