



Rynite® FR543 BK507 (PRELIMINARY)

THERMOPLASTIC POLYESTER RESIN

Rynite® FR543 BK507 is a 43% Glass Reinforced, Flame Retardant, Polyethylene Terephthalate

Product information

Resin Identification	PET-GF43FR(17)	ISO 1043
Part Marking Code	>PET-GF43FR(17)<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0.2 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.8 %	ISO 294-4, 2577
Melt viscosity, @ 1000 sec-1, 250°C	200 Pa.s	ISO 11443

Typical mechanical properties

Tensile Modulus	15600 MPa	ISO 527-1/-2
Stress at break	160 MPa	ISO 527-1/-2
Strain at break	1.5 %	ISO 527-1/-2
Elongation at break	1.6 %	ASTM D 638
Flexural Modulus	16500 MPa	ISO 178
Flexural Strength	275 MPa	ISO 178
Charpy notched impact strength, 23°C	10.5 kJ/m ²	ISO 179/1eA
Poisson's ratio	0.33 -	

Thermal properties

Melting temperature, 10°C/min	254 °C	ISO 11357-1/-3
RTI, electrical, 0.75mm	155 °C	UL 746B
RTI, electrical, 1.5mm	155 °C	UL 746B
RTI, electrical, 3mm	155 °C	UL 746B
RTI, impact, 0.75mm	155 °C	UL 746B
RTI, impact, 1.5mm	155 °C	UL 746B
RTI, impact, 3mm	155 °C	UL 746B
RTI, strength, 0.75mm	155 °C	UL 746B
RTI, strength, 1.5mm	155 °C	UL 746B
RTI, strength, 3mm	155 °C	UL 746B

Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0 class	IEC 60695-11-10
Thickness tested	1.5 mm	IEC 60695-11-10
UL recognition	yes -	UL 94
Burning Behav. at thickness h	V-0 class	IEC 60695-11-10
Thickness tested	0.8 mm	IEC 60695-11-10
UL recognition	yes -	UL 94
Burning Behav. 5V at thickness h	5VA class	IEC 60695-11-20



Rynite® FR543 BK507 (PRELIMINARY)

THERMOPLASTIC POLYESTER RESIN

Thickness tested	1.5 mm	IEC 60695-11-20
UL recognition	yes -	UL 94
Glow Wire Flammability Index, 3mm	960 °C	IEC 60695-2-12
Glow Wire Ignition Temperature, 3mm	960 °C	IEC 60695-2-13
FMVSS Class	B -	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80 mm/min	ISO 3795 (FMVSS 302)

Electrical properties

Comparative tracking index	225 -	IEC 60112
Comparative tracking index	2 PLC	UL 746A

Other properties

Humidity absorption, 2mm	0.1 %	Sim. to ISO 62
Density	1790 kg/m ³	ISO 1183

Injection

Drying Recommended	yes
Drying Temperature	120 °C
Drying Time, Dehumidified Dryer	4 - 6 h
Processing Moisture Content	≤0.02 ^[1] %
Melt Temperature Optimum	280 °C
Min. melt temperature	270 °C
Max. melt temperature	290 °C
Max. screw tangential speed	0.2 m/s
Mold Temperature Optimum	110 °C
Min. mould temperature	100 °C
Max. mould temperature	120 ^[2] °C
Hold pressure range	≥80 MPa
Hold pressure time	4 s/mm
Back pressure	As low as possible MPa
Ejection temperature	170 °C

[1]: At levels above 0.02%, strength and toughness will decrease, even though parts may not exhibit surface defects.

[2]: (6mm - 1mm thickness)

Characteristics

Additives Flame retardant



Rynite® FR543 BK507 (PRELIMINARY)

THERMOPLASTIC POLYESTER RESIN

Revised: 2020-07-21

Page: 3 of 3

dupont.com

The above data are preliminary and are subject to change as additional data are developed on subsequent lots.

The information set forth herein is furnished free of charge, is based on technical data that DuPont believes to be reliable, and represents typical values that fall within the normal range of properties. This information relates only to the specific material designated and may not be valid for such material used in combination with other materials or in other processes. It is intended for use by persons having technical skill, at their own discretion and risk. This information should not be used to establish specification limits nor used alone as the basis of design. Handling precaution information is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards and comply with applicable law. Since conditions of product use and disposal are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. As with any product, evaluation under end-use conditions prior to specification is essential. Nothing herein is to be taken as a license to operate or a recommendation to infringe on patents.

CAUTION: Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract or other acknowledgement that is consistent with the DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative.

DuPont's sole warranty is that our products will meet our standard sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DUPONT SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR NON-INFRINGEMENT. DUPONT DISCLAIMS LIABILITY FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

DuPont™, the DuPont Oval Logo, and all trademarks and service marks denoted with ™, SM or ® are owned by affiliates of DuPont de Nemours, Inc. unless otherwise noted.

© 2021 DuPont. All rights reserved.