

# DuPont™ Crastin® SK609 BK851

## THERMOPLASTIC POLYESTER RESIN

### Product Information

Common features of Crastin® thermoplastic polyester resin include mechanical and physical properties such as stiffness and toughness, heat resistance, friction and wear resistance, excellent surface finishes and good colourability. Crastin® thermoplastic polyester resin has excellent electrical insulation characteristics and high arc-resistant grades are available. Many flame retardant grades have UL recognition (class V-0). Crastin® thermoplastic polyester resin typically has high chemical and heat ageing resistance.

The good melt stability of Crastin® thermoplastic polyester resin normally enables the recycling of properly handled production waste.

If recycling is not possible, DuPont recommends, as the preferred option, incineration with energy recovery (-24 kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

Crastin® thermoplastic polyester resin typically is used in demanding applications in the electronics, electrical, automotive, mechanical engineering, chemical, domestic appliances and sporting goods industry.

**Crastin® SK609 BK851 is a 50% glass fiber reinforced, lubricated polybutylene terephthalate resin for injection molding.**

General information	Value	Unit	Test Standard
Resin Identification	PBT-GF50	-	-
Part Marking Code	>PBT-GF50<	-	ISO 11469
Mechanical properties	Value	Unit	Test Standard
Tensile Modulus	15700	MPa	ISO 527-1/-2
Stress at break	145	MPa	ISO 527-1/-2
Strain at break	1.7	%	ISO 527-1/-2
Flexural Strength	210	MPa	ISO 178
Charpy impact strength, 23°C	50	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	11	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, 23°C	10	kJ/m <sup>2</sup>	ISO 180/1A
Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	225	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	210	°C	ISO 75-1/-2
RTI, electrical, 0.8mm	130	°C	UL 746B
RTI, impact, 0.8mm	125	°C	UL 746B
RTI, strength, 0.8mm	130	°C	UL 746B
Flammability	Value	Unit	Test Standard
Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.8	mm	IEC 60695-11-10
Glow Wire Flammability Index, 3mm	750	°C	IEC 60695-2-1/2
Electrical properties	Value	Unit	Test Standard
Comparative tracking index	400	-	IEC 60112
Other properties	Value	Unit	Test Standard
Density	1710	kg/m <sup>3</sup>	ISO 1183

### Characteristics

Processing	• Injection Moulding		
Regional Availability	• North America	• Asia Pacific	• Near East/Africa
	• Europe	• South and Central America	• Global

### Processing Texts

#### Injection molding

##### PREPROCESSING

Drying recommended = Yes

Drying temperature = 110-130°C

Drying time, dehumidified dryer = 2-4 h

Processing moisture content = <0.04 %

To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

#### North America

Tel: +1 302 999-4592

Toll-Free (USA): 800 441-0575

#### Asia Pacific

Tel: +81 3 5521 8600

#### Europe/Middle East/Africa

Tel: +41 22 717 51 11



# DuPont™ Crastin® SK609 BK851

## THERMOPLASTIC POLYESTER RESIN

### PROCESSING

Melt temperature optimum = 260 °C  
Melt temperature range = 250-270 °C  
Mould temperature optimum = 80 °C  
Mould temperature range = 30-130 °C

### Chemical Media Resistance

#### Acids

- ✓ Acetic Acid (5% by mass) (23 °C)
- ✓ Citric Acid solution (10% by mass) (23 °C)
- ✓ Lactic Acid (10% by mass) (23 °C)
- ✗ Hydrochloric Acid (36% by mass) (23 °C)
- ✗ Nitric Acid (40% by mass) (23 °C)
- ✗ Sulfuric Acid (38% by mass) (23 °C)
- ✗ Sulfuric Acid (5% by mass) (23 °C)
- ✗ Chromic Acid solution (40% by mass) (23 °C)

#### Bases

- ✗ Sodium Hydroxide solution (35% by mass) (23 °C)
- ✓ Sodium Hydroxide solution (1% by mass) (23 °C)
- ✓ Ammonium Hydroxide solution (10% by mass) (23 °C)

#### Alcohols

- ✓ Isopropyl alcohol (23 °C)
- ✓ Methanol (23 °C)
- ✓ Ethanol (23 °C)

#### Hydrocarbons

- ✓ n-Hexane (23 °C)
- ✓ Toluene (23 °C)
- ✓ iso-Octane (23 °C)

#### Ketones

- ✓ Acetone (23 °C)

#### Ethers

- ✓ Diethyl ether (23 °C)

#### Mineral oils

- ✓ SAE 10W40 multigrade motor oil (23 °C)
- ✗ SAE 10W40 multigrade motor oil (130 °C)
- ✗ SAE 80/90 hypoid-gear oil (130 °C)
- ✓ Insulating Oil (23 °C)

#### Standard Fuels



# DuPont™ Crastin® SK609 BK851

## THERMOPLASTIC POLYESTER RESIN

- X ISO 1817 Liquid 1 (60°C)
- X ISO 1817 Liquid 2 (60°C)
- X ISO 1817 Liquid 3 (60°C)
- X ISO 1817 Liquid 4 (60°C)
- ✓ Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)
- ✓ Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)
- ✓ Diesel fuel (pref. ISO 1817 Liquid F) (23°C)
- ✓ Diesel fuel (pref. ISO 1817 Liquid F) (90°C)
- X Diesel fuel (pref. ISO 1817 Liquid F) (>90°C)

### Salt solutions

- ✓ Sodium Chloride solution (10% by mass) (23°C)
- ✓ Sodium Hypochlorite solution (10% by mass) (23°C)
- ✓ Sodium Carbonate solution (20% by mass) (23°C)
- ✓ Sodium Carbonate solution (2% by mass) (23°C)
- ✓ Zinc Chloride solution (50% by mass) (23°C)

### Other

- ✓ Ethyl Acetate (23°C)
- X Hydrogen peroxide (23°C)
- X DOT No. 4 Brake fluid (130°C)
- X Ethylene Glycol (50% by mass) in water (108°C)
- ✓ 1% nonylphenoxy-polyethyleneoxy ethanol in water (23°C)
- ✓ 50% Oleic acid + 50% Olive Oil (23°C)
- ✓ Water (23°C)
- X Water (90°C)
- ✓ Phenol solution (5% by mass) (23°C)

### Symbols used:

- ✓ possibly resistant

Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).

- X not recommended - see explanation

Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 4.0mm (Hytrel® measured at 2 mm), IEC Electrical properties measured at 2.0mm, all ASTM properties measured at 3.2mm, and test temperatures are 23°C unless otherwise stated.

The information set forth herein is furnished free of charge and is based on technical data that DuPont believes to be reliable and falls within the normal range of properties. It is intended for use by persons having technical skill, at their own discretion and risk. This data 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. 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

To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

#### North America

Tel: +1 302 999-4592

Toll-Free (USA): 800 441-0575

#### Asia Pacific

Tel: +81 3 5521 8600

#### Europe/Middle East/Africa

Tel: +41 22 717 51 11



# DuPont™ Crastin® SK609 BK851

## THERMOPLASTIC POLYESTER RESIN

license to operate or a recommendation to infringe on patents. Caution: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, discuss with your DuPont customer representative and read Medical Caution H-50103-4.

Copyright © 2014 DuPont or its affiliates. All Rights Reserved. The DuPont Oval Logo, DuPont™, The miracles of science™ and all products denoted with ® or ™ are registered trademarks or trademarks of E.I. du Pont de Nemours and Company or its affiliates.

To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

**North America**

Tel: +1 302 999-4592

Toll-Free (USA): 800 441-0575

**Asia Pacific**

Tel: +81 3 5521 8600

**Europe/Middle East/Africa**

Tel: +41 22 717 51 11

