TE Connectivity Corporation
175 North Diamond Street
Mansfield, OH 44902
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www.te.com

Date: 04/24/2023

Customer: Master Electronics

Dear to whom it may concern,

This letter is to inform you of changes to molded component parts used on the below contactor part numbers.

List Part Numbers:

Hartman Part Number	TE Part Number	Customer Part Number (If applicable)
K4001A3C	6-1616968-5	

Our material supplier Solvay has informed us that they are discontinuing the Ryton PPS R-4 and R-4-02 brands effective immediately. These products are being replaced with a direct alternative material defined as Ryton PPS R-4-200NA and R-4-200BL. The R-4-200 series materials have similar or better performance characteristics.

The datasheets for these Ryton products, along with supplemental data has been attached for review. There will be no form, fit, function change of parts using the Ryton material based on data provided by Solvay. TE is updating their raw material part number 99640-000 to accommodate the legacy and new changes as stated by Solvay.

Please reply within 30 days if there is any non-concurrence or if further information is required. If we do not hear from you within 30 days, we will assume the change to be satisfactory.

Sincerely,

Ryan Schwan

Engineering Manager
TE Connectivity/Hartman Division
Phone: 419-521-9518
Email: schwanr@te.com

Neil Chitwood

Product Manager
TE Connectivity/Hartman Division
Phone: 419-521-9551
Email: neil.chitwood@te.com

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TE Raw Material Data Sheet

99640-000

REV	~~C~~ D	REVISIONS	RELEASED	
LTR		DESCRIPTION	DATE	APPROVED
A	24195	UPDATED DATA	7/1/93	
B	27326	ADDED -002, TITLE WAS RYTON R4PPS	95-03-15	RS
C	45691	ADDED -003	01/10/08	
D		UPDATE COMMON NAMES AND SPECS		

MATERIAL PROPERTIES

			CHEMICAL	COMPOSITION
TENSILE STRENGTH	17.5 KSI			
FLEXURAL MODULUS	1.7 X 10^6 PSI			
COMPRESSIVE STRENGTH	26 KSI			
IZOD IMPACT	1.3 NOTCHED			
TENSILE MODULUS				
DENSITY	1.60-1.67			
DIELECTRIC STRENGTH	450 V/mil			
FLAMMABILITY	94 V-0	UL 94		
THERMAL CONDUCTIVITY	2.0 BTU m/h ft^2•F			
COEF. THERM. EXPANSION	1.6 IN/IN/°F			

AVAILABLE COMPOUNDS

	001	.250 x 6 x 6		
	002	.312 x 12 x 12		
	003	1.50 X 3 X 3		

21-116459
10/7/2021
RSS

Common Name
Ryton R4
Ryton R4-02
Ryton R-4-200NA (Nautral)
Ryton R-4-200BL (Black)
PPS 40

Per
ASTM D6358 PPS0110G40A43453 (R4)
ASTM D6358 PPS0110G40A63463 (R4-02)
ASTM D6358 PPS0110G40A63463 (R-4-200BL)
ASTM D6358 PPS0110G40A63473 (R-4-200NA)
MIL-M-24519

~~COMMON NAME~~
~~PHILLIPS 66 RYTON R4PPS~~
~~PER MIL-M-24519~~

NOTE: 275°F MINIMUM MOLD TEMP TO ENSURE CRYSTALLINE STRUCTURE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ANGLES±
2 PLACE DEC. ±
3 PLACE DEC. ±

MATERIAL

DR BY	CSC	01/10/17
CHK BY		
ENGR		
MFG		

APPROVED

APPROVED

CII Technologies™
Hartman™ Division • 175 N. DIAMOND STREET • MANSFIELD, OHIO 44902

POLYPHENYLENE SULFIDE, 40% GLASS REINFORCED

SIZE	CODE IDENT	
A	74063	99640-000
SCALE 1:1		SHEET

DASH NO.	NEXT ASSY	USED ON
	APPLICATION	

TE P/N: 5-1616896-9

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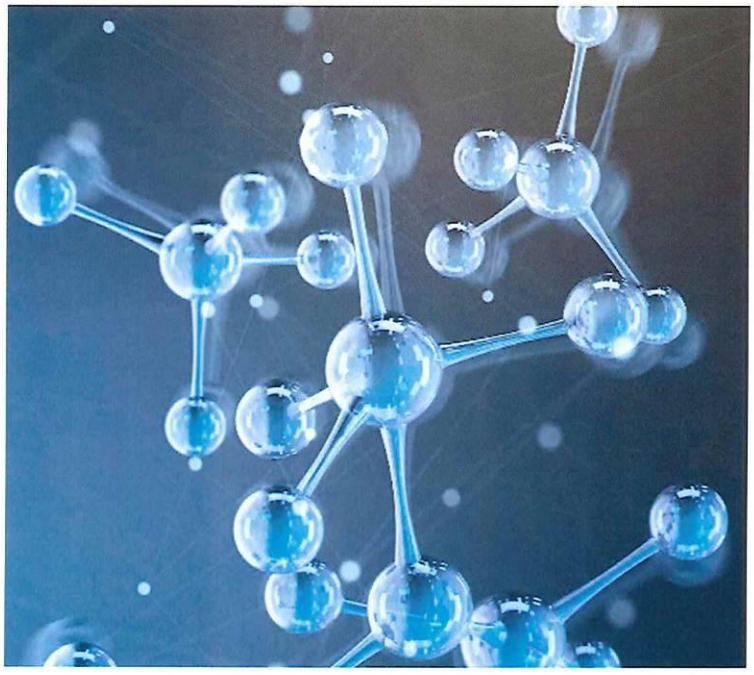
Solvay Comparison Presentation

Progress beyond

Ryton
R-4 and R-4-02

R-4-200NA and R-4-200BL

Comparison



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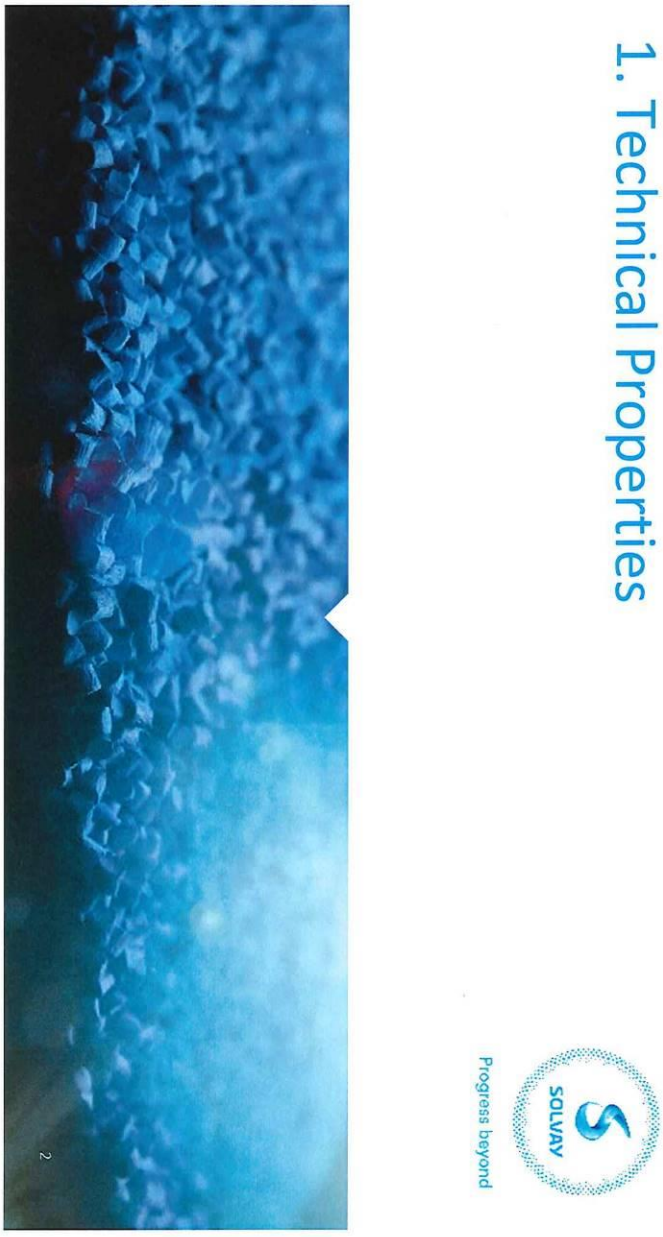
Solvay Comparison Presentation



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Solvay Comparison Presentation

Technical Properties

General

- All four polymer grades are 40% GF reinforced polyphenylene sulfide compounds.
- Covering multiple market segments with a focus in Automotive, Healthcare, Industrial, and Consumer Goods
- All are hot oil injection molded pellets

	R-4	R-4-200NA	R-4-02	R-4-200BL
Density / Specific Gravity	1.69	1.68	1.69	1.68
Mold Shrinkage % (Flow/Across Flow)	0.20/0.50	0.20/0.50	0.20/0.50	0.20/0.50
Water Absorption %	0.02	0.02	0.02	0.02
Hardness R-Scale	122	120	122	120
Flame Rating (UL94 1.5 mm)	V-0	V-0	V-0	V-0

*Typical Properties (not a specification)

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Solvay Comparison Presentation

Technical Properties
Mechanical

	R-4	R-4-200NA	R-4-02	R-4-200BL
Tensile Strength (MPa)	159	193	152	179
Tensile Elongation %	1.1	1.6	1.1	1.5
Flexural Modulus (MPa)	14500	14500	14500	14500
Flexural Strength (MPa)	221	269	207	255
Compressive Strength (MPa)	270	275	270	275
Poisson's Ratio	0.38	0.40	0.38	0.40

*Typical Properties (not a specification)

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Solvay Comparison Presentation

Technical Properties
Impact & Thermal

	R-4	R-4 → R-4-200NA	R-4-02	R-4-02 → R-4-200BL
Notched Izod Impact (3.18mm) J/m	91	91	80	80
Unnotched Izod Impact (3.18mm) J/m	400	640	350	530
HDT (1.8 MPa, Unannealed) ℃	265	265	265	265
CLTE Flow (-50 to 50℃) cm/cm/℃	2.0E-5	1.5E-5	2.0E-5	1.5E-5
Thermal Conductivity (W/m/K)	0.32	0.33	0.32	0.33

*Typical Properties (not a specification)

Effect of mold temperature on crystallinity

*No difference between Ryton R-4-200NA, R-4-200BL, R-4, R-4-02

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Solvay Comparison Presentation

Technical Properties
Electrical

	R-4	R-4-200NA	R-4-02	R-4-200BL
Surface Resistivity (ohms)	1.0E+16	1.0E+16	1.0E+16	1.0E+16
Volume Resistivity (ohms*cm)	1.0E+16	1.0E+16	1.0E+16	1.0E+16
Dielectric Strength (KV/mm)	20	22	20	22
CTI (V)	175	175	175	175
Insulation Resistance (90℃) ohms	1.0E+11	1.0E+11	1.0E+11	1.0E+11

*Typical Properties (not a specification)

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Solvay Comparison Presentation

2. Processing

Progress beyond

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Solvay Comparison Presentation

Processing Molding Parameter Data

Typical Molding Conditions

Shot size	% of capacity	50
Clamp	tonnage/in^2	2.5–4
Screw type – L/D, comp. ratio		16–20:1, 2.5:1
Check valve type		Ring, abrasion resistant
Nozzle type		Shut-off or reverse taper
Special materials, screw		Stellite® or Colmonoy® 56 Flights
Barrel		Xaloy® 502
Temperature ranges		
Nozzle	°C (°F)	302–327 (580–620)
Front	°C (°F)	316–343 (600–650)
Middle	°C (°F)	302–327 (580–620)
Rear	°C (°F)	293–316 (560–600)
Melt (typical/max)	°C (°F)	327/343 (620/650)
Mold (optimum)	°C (°F)	135–149 (275–300)

No major molding differences between R-4-200NA, R-4-200BL, R-4, and R-4-02

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Solvay Comparison Presentation

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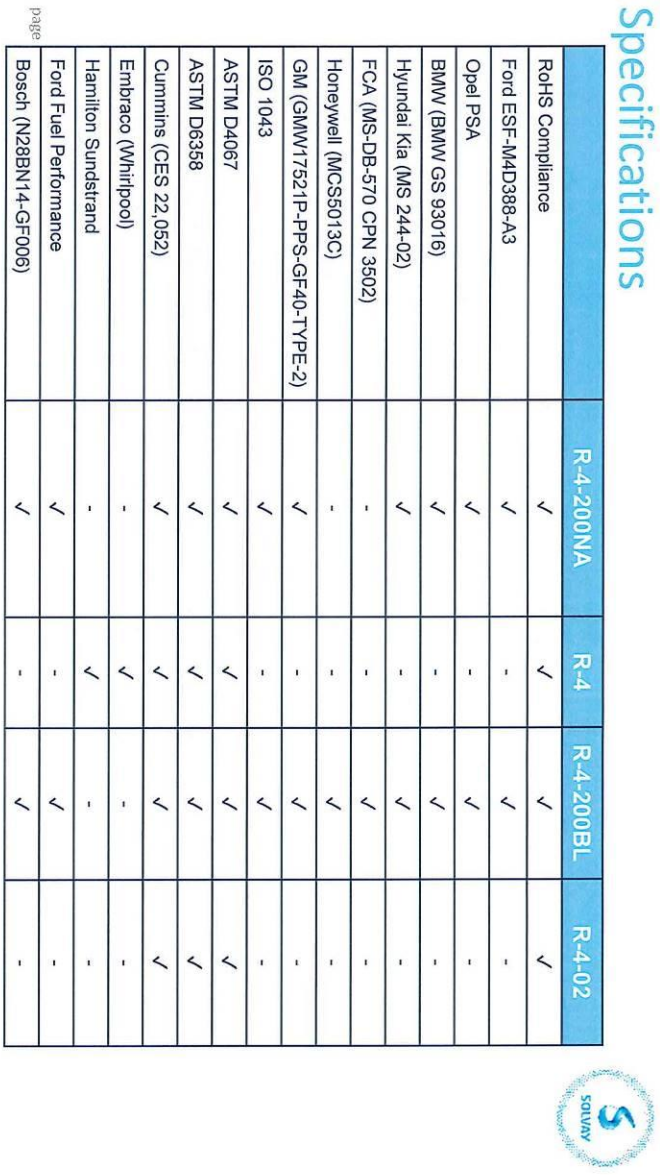
Solvay Comparison Presentation



Specifications

	R-4-200NA	R-4	R-4-200BL	R-4-02
RoHS Compliance	✓	✓	✓	✓
Ford ESF-M4D388-A3	✓	-	✓	-
Opel PSA	✓	-	✓	-
BMW (BMW GS 93016)	✓	-	✓	-
Hyundai Kia (MS 244-02)	✓	-	✓	-
FCA (MS-DB-570 CPN 3502)	-	-	✓	-
Honeywell (MCS5013C)	-	-	✓	-
GM (GMW17521P-PPS-GF40-TYPE-2)	✓	-	✓	-
ISO 1043	✓	-	✓	-
ASTM D4067	✓	✓	✓	✓
ASTM D6358	✓	✓	✓	✓
Cummins (CES 22,052)	✓	✓	✓	✓
Embraco (Whirlpool)	-	✓	-	-
Hamilton Sundstrand	-	✓	-	-
Ford Fuel Performance	✓	-	✓	-
Bosch (N28BN14-GF006)	✓	-	✓	-

page

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Solvay Comparison Presentation

Summary

Technical
- Most properties are very similar
- Improved mechanical properties and impact strength
- Additional Technical Resources:
  - Ryton R-4-200NA TDS
  - Ryton R-4-200BL TDS

Processing
- No differences in processing between R-4,R-4-02 and R-4-200NA, R-4-200BL
- Additional Processing Resources:
  - Ryton Processing and Design Guides

Specifications
- R-4-200NA and R-4-200BL are approved in more specifications
- Additional Specifications Resources:
  - Solvay Regulatory Page

For a deeper dive on a Ryton comparison and general material selection please reach out to Solvay's Customer Technical Development (CTD) team.

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Solvay Additional Data

Solvay Specialty Polymers
4500 McGinnis Ferry Road
Alpharetta, GA 30005
Phone: 770-772-8716
Fax: 770-772-8550
Girish.Grover@Solvay.com

December 19, 2018

To Whomsoever It May Concern:

RE: Ryton® PPS-GF40 Compounds and Mil-M-24519E Type GST-40F

Ryton® PPS compounds are not on the Mil-M-24519E approved source list. Many Government standards and approvals have been moved to standards consensus bodies such as ASTM; however a diminished approved source list still seems to be in place for this specific standard issued in 1992. Historically, 40% glass filled Ryton® grades inferior to those produced today were on the approved source list, but due to low volume and excessive testing, these grades were discontinued.

Alternative 1 (Cross-References in ASTM D4067 and D6358 PPS Standards):
ASTM D4067, "Standard Specification for PPS materials using ASTM methods", appendix X1, section X1.2 specifically references Mil-M-24519E Type GST-40F to ASTM D4067 PPS000A00330E01EA124.

ASTM D6358, "Standard Specification for PPS materials using ISO methods", appendix X1, section X1.3 specifically references Mil-M-24519E Type GST-40F to ASTM D6358 PPS011G40A33443.

It is noted that current Ryton® grades R-4-200, R-4-220, R-4-230 and R-4-280 available in natural (NA) and black (BL) color versions meet and exceed these requirements, and can be certified to meet either ASTM D4067 PPS000A00330E01EA124 or ASTM D6358 PPS011G40A33443, both cross-reference Mil-M-24519E Type GST-40F.

Alternative 2 (From Connector MIL-DTL-5530 Standard):
MIL-DTL-5530G w/Amendment 2 (dated 16 November 2015) is a connector specification, to which many of the Mil-M-24519E material requirements in use can be traced back to. This connector standard has been amended several times and per the latest referenced version, allows use of ASTM D4067 PPS000G40A30330E01F01Y11 or ASTM D6358 PPS011G40A33443 or MIL-M-24519E Type GST-40F.

It is noted here as well that current Ryton® grades R-4-200, R-4-220, R-4-230 and R-4-280 available in natural (NA) and black (BL) color versions meet and exceed these requirements, and can be certified to meet either ASTM D4067 PPS000G40A00330E01EA124 or ASTM D6358 PPS011G40A33443, both allowed as alternative to MIL-M-24519E Type GST-40F per MIL-DTL-5530.

Summary: These alternatives should be evaluated to preclude the need to list Ryton® grades on the Mil-M-24519E approved source list, along with part validation testing. Many old prints may specify Mil-M-24519E but customers may not be aware of these alternative acceptable certifications.

Sincerely,

Girish Grover
Specifications

Cc: Terry Brcka, Ryton® Product Manager

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Solvay Datasheets

Product Comparison

PROSPECTOR®
www.ulprospector.com

Technical Data

Product Description	
Ryton® R-4	Ryton® R-4 and R-4-02 40% glass fiber reinforced polyphenylene sulfide compounds provide a good combination of mechanical and electrical properties with outstanding chemical resistance, even at elevated temperatures.
Ryton® R-4-200NA	Ryton® R-4-200NA and R-4-200BL 40% glass fiber reinforced polyphenylene sulfide compounds provide enhanced mechanical strength and low maintenance molding using conventional molding equipment

General	Ryton® R-4	Ryton® R-4-200NA
Manufacturer / Supplier	• Solvay Specialty Polymers	• Solvay Specialty Polymers
Generic Symbol	• PPS	• PPS
Material Status	• Commercial: Active	• Commercial: Active
Literature [1]	• Technical Datasheet	• Technical Datasheet
UL Yellow Card [2]	• E95746-102255885	• E95746-102108309
Search for UL Yellow Card	• Solvay Specialty Polymers • Ryton®	• Solvay Specialty Polymers • Ryton®
Availability	• Asia Pacific • Europe • Latin America • North America	• Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 40% Filler by Weight	• Glass Fiber, 40% Filler by Weight
Features	• Chemical Resistant • Good Electrical Properties	• Good Strength
Uses	• Automotive Applications	• Automotive Applications
RoHS Compliance	• RoHS Compliant	• RoHS Compliant
Appearance	• Natural Color	• Natural Color
Forms	• Pellets	• Pellets
Processing Method	• Injection Molding	• Injection Molding

Physical	Ryton® R-4	Ryton® R-4-200NA	Unit	Test Method
Density / Specific Gravity	1.69	1.68	g/cm³	ASTM D792
Molding Shrinkage				
Flow : 3.20 mm	0.20	--	%	
Flow : 3.20 mm [4]	--	0.20	%	Internal Method
Across Flow : 3.20 mm	0.50	--	%	
Across Flow : 3.20 mm [4]	--	0.50	%	Internal Method
Water Absorption				
24 hr	--	0.020	%	ASTM D570
24 hr, 23°C	0.020	--	%	ASTM D570
24 hr, 23°C	--	0.030	%	ISO 62
Saturation, 23°C	--	0.26	%	Internal Method
Equilibrium, 23°C, 50% RH	--	0.25	%	Internal Method

Mechanical	Ryton® R-4	Ryton® R-4-200NA	Unit	Test Method
Tensile Modulus	--	15600	MPa	ISO 527-2
Tensile Strength				
--	159	--	MPa	ASTM D638
--	150	200	MPa	ISO 527-2
--	--	193	MPa	ASTM D638
-- [5]	--	194	MPa	ISO 527-2

Form No. TDS-6163-41601-en
Document Created: Wednesday, May 19, 2021

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Solvay Datasheets

Product Comparison

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Mechanical	Ryton® R-4	Ryton® R-4-200NA	Unit	Test Method
Tensile Elongation				
Break	1.1	--	%	ASTM D638
Break	1.2	1.7	%	ISO 527-2
Break	--	1.6	%	ASTM D638
Break [5]	--	1.8	%	ISO 527-2
Flexural Modulus				
--	14500	14500	MPa	ASTM D790
--	14000	14000	MPa	ISO 178
Flexural Strength				
--	221	--	MPa	ASTM D790
--	220	285	MPa	ISO 178
--	--	269	MPa	ASTM D790
Compressive Strength	270	275	MPa	ASTM D695
Shear Strength	--	96.0	MPa	ASTM D732
Poisson's Ratio				
--	0.38	--		
--	--	0.40		ISO 527

Impact	Ryton® R-4	Ryton® R-4-200NA	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
--	--	8.7	kJ/m²	
-- [5]	--	8.8	kJ/m²	
Charpy Unnotched Impact Strength	--	53	kJ/m²	ISO 179
Notched Izod Impact				
3.18 mm	91	91	J/m	ASTM D256
--	9.0	9.0	kJ/m²	ISO 180/A
Unnotched Izod Impact				
3.18 mm	400	640	J/m	ASTM D4812
--	25	40	kJ/m²	ISO 180

Hardness	Ryton® R-4	Ryton® R-4-200NA	Unit	Test Method
Rockwell Hardness				ASTM D785
M-Scale	104	100		
R-Scale	122	120		

Thermal	Ryton® R-4	Ryton® R-4-200NA	Unit	Test Method
Deflection Temperature Under Load				ASTM D648
1.8 MPa, Unannealed	265	265	°C	
Melting Temperature	--	280	°C	ISO 11357-3
CLTE				ASTM E831
Flow : -50 to 50°C	2.0E-5	1.5E-5	cm/cm/°C	
Flow : 100 to 200°C	1.5E-5	1.0E-5	cm/cm/°C	
Transverse : -50 to 50°C	4.0E-5	4.0E-5	cm/cm/°C	
Transverse : 100 to 200°C	8.0E-5	8.5E-5	cm/cm/°C	
Thermal Conductivity				
--	0.32	--	W/m/K	
--	--	0.33	W/m/K	ASTM E1530
UL Temperature Rating	200 to 220	200 to 220	°C	UL 746B

Electrical	Ryton® R-4	Ryton® R-4-200NA	Unit	Test Method
Surface Resistivity	1.0E+16	1.0E+16	ohms	ASTM D257
Volume Resistivity	1.0E+16	1.0E+16	ohms·cm	ASTM D257

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Solvay Datasheets

Product Comparison

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Electrical	Ryton® R-4	Ryton® R-4-200NA	Unit	Test Method
Dielectric Strength	20	22	kV/mm	ASTM D149
Dielectric Constant				ASTM D150
25°C, 1 kHz	3.90	3.90		
25°C, 1 MHz	3.80	3.80		
Dissipation Factor				ASTM D150
25°C, 1 kHz	2.0E-3	2.0E-3		
25°C, 1 MHz	2.0E-3	2.0E-3		
Arc Resistance	125	125	sec	ASTM D495
Comparative Tracking Index (CTI)	PLC 4	PLC 4		UL 746
Comparative Tracking Index	175	175	V	IEC 60112
Insulation Resistance [6] (90°C)	1.0E+11	1.0E+11	ohms	

Flammability	Ryton® R-4	Ryton® R-4-200NA	Unit	Test Method
Flame Rating				UL 94
1.5 mm	--	V-0		
1.6 mm •	V-0	--		
1.6 mm •	5VA			
Oxygen Index	47	57	%	ASTM D2863

Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

[3] Typical properties: these are not to be construed as specifications.

[4] Measured on 102 mm x 102 mm x 3.2 mm plaques, edge gated.

[5] Conditioned data is meant to simulate 23°C 50% RH equilibrium values. Conditioning of specimens was achieved per ISO 1110 by exposing specimens for 11 days, 70°C and 62% RH.

[6] 95%RH, 48 hr

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Solvay Datasheets

Product Comparison

PROSPECTOR®
www.ulprospector.com

Technical Data

Product Description	
Ryton® R-4-02	Ryton® R-4 and R-4-02 40% glass fiber reinforced polyphenylene sulfide compounds provide a good combination of mechanical and electrical properties with outstanding chemical resistance, even at elevated temperatures.
Ryton® R-4-200BL	Ryton® R-4-200NA and R-4-200BL 40% glass fiber reinforced polyphenylene sulfide compounds provide enhanced mechanical strength and low maintenance molding using conventional molding equipment

General	Ryton® R-4-02	Ryton® R-4-200BL
Manufacturer / Supplier	• Solvay Specialty Polymers	• Solvay Specialty Polymers
Generic Symbol	• PPS	• PPS
Material Status	• Commercial: Active	• Commercial: Active
Literature [1]	• Technical Datasheet	• Technical Datasheet
UL Yellow Card [2]	• E95746-102108302	• E95746-102108309
Search for UL Yellow Card	• Solvay Specialty Polymers • Ryton®	• Solvay Specialty Polymers • Ryton®
Availability	• Asia Pacific • Europe • Latin America • North America	• Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 40% Filler by Weight	• Glass Fiber, 40% Filler by Weight
Features	• Chemical Resistant • Good Electrical Properties	• Good Strength
Uses	• Automotive Applications	• Automotive Applications
RoHS Compliance	• RoHS Compliant	• RoHS Compliant
Appearance	• Black	• Black
Forms	• Pellets	• Pellets
Processing Method	• Injection Molding	• Injection Molding

Physical	Ryton® R-4-02	Ryton® R-4-200BL	Unit	Test Method
Density / Specific Gravity	1.69	1.68		ASTM D792
Molding Shrinkage				
Flow : 0.126 in	2.0E-3	2.0E-3	in/in	
Across Flow : 0.126 in	5.0E-3	5.0E-3	in/in	
Water Absorption (24 hr, 73°F)	0.020	0.020	%	ASTM D570

Mechanical	Ryton® R-4-02	Ryton® R-4-200BL	Unit	Test Method
Tensile Strength				
--	22000	26000	psi	ASTM D638
--	20300	26800	psi	ISO 527-2
Tensile Elongation				
Break	1.1	1.5	%	ASTM D638
Break	1.0	1.5	%	ISO 527-2
Flexural Modulus				
--	2.10E+6	2.10E+6	psi	ASTM D790
--	2.03E+6	2.03E+6	psi	ISO 178
Flexural Strength				
--	30000	37000	psi	ASTM D790
--	29000	37700	psi	ISO 178
Compressive Strength	39200	39900	psi	ASTM D695

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Solvay Datasheets

Product Comparison

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Mechanical	Ryton® R-4-02	Ryton® R-4-200BL	Unit	Test Method
Poisson's Ratio				
--	0.38	--		
--	--	0.40		ISO 527
Impact	**Ryton® R-4-02**	**Ryton® R-4-200BL**	**Unit**	**Test Method**
Notched Izod Impact				
0.125 in	1.5	1.5	ft·lb/in	ASTM D256
--	3.8	3.8	ft·lb/in²	ISO 180/A
Unnotched Izod Impact				
0.125 in	6.5	10	ft·lb/in	ASTM D4812
--	9.5	17	ft·lb/in²	ISO 180
Hardness	**Ryton® R-4-02**	**Ryton® R-4-200BL**	**Unit**	**Test Method**
Rockwell Hardness				ASTM D785
M-Scale	104	100		
R-Scale	122	120		
Thermal	**Ryton® R-4-02**	**Ryton® R-4-200BL**	**Unit**	**Test Method**
Deflection Temperature Under Load				ASTM D648
264 psi, Unannealed	509	509	°F	
CLTE				ASTM E831
Flow : -58 to 122°F	1.1E-5	8.3E-6	in/in/°F	
Flow : 212 to 392°F	8.3E-6	5.6E-6	in/in/°F	
Transverse : -58 to 122°F	2.2E-5	2.2E-5	in/in/°F	
Transverse : 212 to 392°F	4.4E-5	4.7E-5	in/in/°F	
Thermal Conductivity	2.2	2.3	Btu·in/hr/ft²/°F	
UL Temperature Rating	392 to 428	392 to 428	°F	UL 746B
Electrical	**Ryton® R-4-02**	**Ryton® R-4-200BL**	**Unit**	**Test Method**
Surface Resistivity	1.0E+16	1.0E+16	ohms	ASTM D257
Volume Resistivity	1.0E+16	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	500	550	V/mil	ASTM D149
Dielectric Constant				ASTM D150
77°F, 1 kHz	3.90	3.90		
77°F, 1 MHz	3.80	3.80		
Dissipation Factor				ASTM D150
77°F, 1 kHz	2.0E-3	2.0E-3		
77°F, 1 MHz	2.0E-3	2.0E-3		
Arc Resistance	125	125	sec	ASTM D495
Comparative Tracking Index (CTI)	PLC 4	PLC 4		UL 746
Comparative Tracking Index	175	175	V	IEC 60112
Insulation Resistance [4] (194°F)	1.0E+11	1.0E+11	ohms	
Flammability	**Ryton® R-4-02**	**Ryton® R-4-200BL**	**Unit**	**Test Method**
Flame Rating (0.06 in)	• V-0 • 5VA	• V-0 • 5VA		UL 94
Oxygen Index	47	57	%	ASTM D2863

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Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

[3] Typical properties: these are not to be construed as specifications.

[4] 95%RH, 48 hr

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