



DuPont Washington Works
Certification Office
P.O. Box 1217
Washington, WV 26181-1217

JW
12/14/10

December 12, 2010

PENN FIBRE & SPECIALTY COMPANY, INC
CHRISSEY FANIN
DELAWARE DIVISION
PO BOX 160
GREENWOOD - DE 19850

DU PONT ORDER NO: 2452865
CUSTOMER PO NO: PO-29168
DELIVERY DATE: 12/10/10
DELIVERY NO: 33991395
FAX NUMBER: 302-349-9490

THIS IS TO ADVISE THAT THE PRODUCT LISTED BELOW HAS BEEN CLASSIFIED STANDARD PRODUCT. TEST DATA ARE ATTACHED WHICH SHOW COMPLIANCE TO THE INDICATED SPECIFICATION.

J. David Emerick
QUALITY ASSURANCE MANAGER

PRODUCT(S)	LOT(S)	QTY		SPECIFICATION(S)
		Kgs	Lbs	
ZYTEL® 42A NC010 750 KG BOX NYLON RESIN	N44KJ1UH01	11250.00	24795.00	ASTM D-4086 PA0110 ASTM D-4086 PA0114 ASTM D-6779 PA0114 CHRYSLER MS-DB41 DUPONT STANDARD SPEC FORD WSK-M4D647-A GENERAL MOTORS GNP.PA66.004 SAE J1639 PA0122

THIS PRODUCT CERTIFICATION IS NON-TRANSFERABLE AND IS VALID ONLY TO THE FIRST END-USER PURCHASING THIS PRODUCT DIRECTLY FROM DUPONT OR FROM A DUPONT-AUTHORIZED DISTRIBUTOR. PRODUCT AND/OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE IS ASSUMED COUNTERFEIT, AND DUPONT MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH THE USE OF PRODUCT OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE. Call 1-800-441-0575 for a list of authorized distributors in your area. Copyright © 2006 E.I. du Pont de Nemours and Company. All Rights Reserved. Property of E.I. du Pont de Nemours and Company. No portion of this work may be reproduced in whole or in part by any electronic, mechanical or other means, including xerography, photocopy, or any information storage or retrieval system, or otherwise distributed without the express permission of E.I. du Pont de Nemours and Company.

DU PONT COMPANY
CUSTOMER SPECIFICATION

Product: ZYTEL® 42A NC010 750 KG BOX NYLON RESIN

Specification: ASTM D-4066 FA0110

(01)

TESTS	TEST METHOD	LIMITS		RESULTS
		MIN	MAX	
<u>LOT TEST</u>		<u>LOT NO: N44KJ1UH01</u>		
Relative Viscosity	ASTM D 789	215	295	235
Water Content at Packout, %	ISO 15512		0.05	0.01
<u>PERIODIC TEST</u>		<u>LAST TEST DATE: December 2009</u>		
Deflection Temperature @1.80 MPa, °C	ISO 75-1&2	52		75
Flexural Modulus, MPa	ISO 178	2400		2929
Notched Izod Impact @ 23°C, kJ/m2	ISO 180	4.0		6.2
Tensile Stress @ Yield, 50 mm/min, MPa	ISO 527	70.0		85.2

(01) ASTM D-4066-01A CALLOUT: 854220

THIS PRODUCT CERTIFICATION IS NON-TRANSFERABLE AND IS VALID ONLY TO THE FIRST END-USER PURCHASING THIS PRODUCT DIRECTLY FROM DUPONT OR FROM A DUPONT-AUTHORIZED DISTRIBUTOR. PRODUCT AND/OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE IS ASSUMED COUNTERFEIT, AND DUPONT MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH THE USE OR PROPOSED OR PROPOSED CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE. Call 1-800-541-0575 for a list of authorized distributors in your area. Copyright © 2006 E.I. du Pont de Nemours and Company. All Rights Reserved. Property of E.I. du Pont de Nemours and Company. No portion of this work may be reproduced in whole or in part by any electronic, mechanical or other means, including xerography, photocopy, or any information storage or retrieval system, or otherwise distributed without the express permission of E.I. du Pont de Nemours and Company.

DU PONT COMPANY
CUSTOMER SPECIFICATION

Product: ZYTEL® 42A NC010 750 KG BOX NYLON RESIN

Specification: ASTM D-4066 PA0114

(01)

TESTS	TEST METHOD	LIMITS		RESULTS
		MIN	MAX	
<u>LOT TEST</u>		<u>LOT NO: N44K11UH01</u>		
Relative Viscosity	ASTM D 789	215	295	295
Water Content at Packout, %	ISO 15512		0.05	0.01
<u>PERIODIC TEST</u>		<u>LAST TEST DATE: December 2009</u>		
Deflection Temperature @1.80 MPa, °C	ISO 75-182	60		75
Density, g/cm ³	ISO 1183/A	1.13	1.15	1.13
Flexural Modulus, MPa	ISO 178	2300		2929
Notched Izod Impact @ 23°C, kJ/m ²	ISO 180	3.3		6.2
Tensile Stress @ Yield, 50 mm/min, MPa	ISO 527	70.0		85.2

(01) ASTM D-4066-01A

THIS PRODUCT CERTIFICATION IS NON-TRANSFERABLE AND IS VALID ONLY TO THE FIRST END-USER PURCHASING THIS PRODUCT DIRECTLY FROM DUPONT OR FROM A DUPONT-AUTHORIZED DISTRIBUTOR. PRODUCT AND/OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE IS ASSUMED COUNTERFEIT, AND DUPONT MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH THE USE OF PRODUCT OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE. Call 1-800-941-0575 for a list of authorized distributors in your area. Copyright © 2006 E.I. du Pont de Nemours and Company. All Rights Reserved. Property of E.I. du Pont de Nemours and Company. No portion of this work may be reproduced in whole or in part by any electronic, mechanical or other means, including photography, photocopy, or any information storage or retrieval system, or otherwise distributed without the express permission of E.I. du Pont de Nemours and Company.

DU PONT COMPANY
CUSTOMER SPECIFICATION

Product: ZYTEL® 42A NO010 750 KG BOX NYLON RESIN

Specification: ASTM D-6779 PA0114

TESTS	TEST METHOD	LIMITS		RESULTS
		MIN	MAX	
<u>LOT TEST</u>		<u>LOT NO: N42K311H01</u>		
Relative Viscosity	ASTM D 789	215	295	235
Water Content at Packout, %	ISO 15512		0.05	0.01
<u>PERIODIC TEST</u>		<u>LAST TEST DATE: December 2009</u>		
Deflection Temperature @1.80 MPa, °C	ISO 75-1&2	60		75
Density, g/cm ³	ISO 1183/A	1.13	1.15	1.13
Notched Charpy Impact @ 23C, kJ/m ²	ISO 179	3.3		6.6
Tensile Modulus, Mpa	ISO 527-1&2	2300		3206
Tensile Stress @ Yield, 50 mm/min, MPa	ISO 527	70.0		85.2

THIS PRODUCT CERTIFICATION IS NON-TRANSFERABLE AND IS VALID ONLY TO THE FIRST END-USER PURCHASING THIS PRODUCT DIRECTLY FROM DUPONT OR FROM A DUPONT-AUTHORIZED DISTRIBUTOR. PRODUCT AND/OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE IS ASSUMED COUNTERFEIT, AND DUPONT MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH THE USE OF PRODUCT OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE. Call 1-800-441-9375 for a list of authorized distributors in your area. Copyright © 2006 E.I. du Pont de Nemours and Company. All Rights Reserved. Property of E.I. du Pont de Nemours and Company. No portion of this work may be reproduced in whole or in part by any electronic, mechanical or other means, including xerography, photocopy, or any information storage or retrieval system, or otherwise distributed without the express permission of E.I. du Pont de Nemours and Company.

DU PONT COMPANY
CUSTOMER SPECIFICATION

Product: ZYTEL® 42A NC010 750 KG BOX NYLON RESIN

Specification: CHRYSLER MS-DB41

(01)

TESTS	TEST METHOD	LIMITS		RESULTS
		MIN	MAX	
<u>LOT TEST</u>				
				LOT NO: N44K11UH01
Relative Viscosity	ASTM D 789	215	295	235
Water Content at Packout, %	ISO 15512		0.20	0.01
<u>PERIODIC TEST</u>				
				LAST TEST DATE: December 2009
Deflection Temperature @1.80 MPa, °C	ISO 75-1&2	60		75
Density, g/cm ³	ISO 1183/A	1.12	1.15	1.13 (02)
Notched Charpy Impact @ 23C, kJ/m ²	ISO 179	3.3		6.0
Tensile Modulus, Mpa	ISO 527-1&2	2300		3206
Tensile Stress @ Yield, 50 mm/min, MPA	ISO 527	70.0		85.2
<u>HISTORICAL TEST</u>				
Flammability, mm/min	ISO 3795		100	DNI

(01) CPN: 1618 ASTM D-6779 PA0114

(02) DUPONT'S STATISTICAL LIMIT IS 1.12 - 1.15; EXCEPTION GRANTED BY CHRYSLER.

THIS PRODUCT CERTIFICATION IS NON-TRANSFERABLE AND IS VALID ONLY TO THE FIRST END-USER PURCHASING THIS PRODUCT DIRECTLY FROM DUPONT OR FROM A DUPONT-AUTHORIZED DISTRIBUTOR. PRODUCT AND/OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE IS ASSUMED COUNTERFEIT, AND DUPONT MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH THE USE OF PRODUCT OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE. Call 1-800-341-0575 for a list of authorized distributors in your area. Copyright © 2006 E.I. du Pont de Nemours and Company. All Rights Reserved. Property of E.I. du Pont de Nemours and Company. No portion of this work may be reproduced in whole or in part by any electronic, mechanical or other means, including xerography, photocopy, or any information storage or retrieval system, or otherwise distributed without the express permission of E.I. du Pont de Nemours and Company.

DU PONT STANDARD SPECIFICATION

Product: ZYTEL® 42A NC010 750 KG BOX NYLON RESIN

TESTS	TEST METHOD	LIMITS		RESULTS
		MIN	MAX	
<u>LOT TEST</u>		LOT NO: M44K11UHC1		
Relative Viscosity	ASTM D 789	215	295	235
Water Content at Packout, %	ISO 15512		0.04	0.01
<u>PERIODIC TEST</u>		LAST TEST DATE: December 2002		
Deflection Temperature @1.80 MPa, °C	ISO 75-1&2			75
Density, g/cm ³	ISO 1183/A			1.13
Flexural Modulus, MPa	ISO 178			2929
Melting Point 2nd, °C	ISO 11357			261
Notched Charpy Impact @ 23°C, kJ/m ²	ISO 179			6.8
Notched Izod Impact @ 23°C, kJ/m ²	ISO 180			8.2
Tensile Modulus, Mpa	ISO 527-1&2			3206
Tensile Stress @ Yield, 50 mm/min, MPa	ISO 527			85.2
<u>HISTORICAL TEST</u>				
Flammability (Burn Rate 1 of 5), mm/min	ISO 3795			DNF
Flammability (Burn Rate 2 of 5), mm/min	ISO 3795			DNF
Flammability (Burn Rate 3 of 5), mm/min	ISO 3795			DNF
Flammability (Burn Rate 4 of 5), mm/min	ISO 3795			DNF
Flammability (Burn Rate 5 of 5), mm/min	ISO 3795			DNF
Flammability, mm/min	ISO 3795		100	DNF
Plaque Thickness, mm	ISO 3795			2.22

THIS PRODUCT CERTIFICATION IS NON-TRANSFERABLE AND IS VALID ONLY TO THE FIRST END-USER PURCHASING THIS PRODUCT DIRECTLY FROM DUPONT OR FROM A DUPONT-AUTHORIZED DISTRIBUTOR. PRODUCT AND/OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE IS ASSUMED COUNTERFEIT, AND DUPONT MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH THE USE OF PRODUCT OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE. Call 1-800-441-0575 for a list of authorized distributors in your area. Copyright © 2000 E.I. du Pont de Nemours and Company. All Rights Reserved. Property of E.I. du Pont de Nemours and Company. No portion of this work may be reproduced in whole or in part by any electronic, mechanical or other means, including xerography, photocopy, or any information storage or retrieval system, or otherwise distributed without the express permission of E.I. du Pont de Nemours and Company.

DU PONT COMPANY
CUSTOMER SPECIFICATION

Product: ZYTEL® 42A NC010 750 KG BOX NYLON RESIN

Specification: FORD WSK-M4D647-A

(01)

TESTS	TEST METHOD	LIMITS		RESULTS
		MIN	MAX	
<u>LOT TEST</u>		LOT NO: N44KJ13H01		
Relative Viscosity	ASTM D 789	215	295	235
Water Content at Packout, %	ISO 15512		0.05	0.01
<u>PERIODIC TEST</u>		LAST TEST DATE: December 2009		
Deflection Temperature @1.80 MPa, °C	ISO 75-1&2	65		75
Density, g/cm ³	ISO 1183/A	1.12	1.16	1.13
Flexural Modulus, MPa	ISO 178	2500		2929
Melting Point 2nd °C	ISO 11357	250	265	261
Notched Izod Impact @ 23°C, kJ/m ²	ISO 180	3.5		3.2
Tensile Stress @ Yield, 50 mm/min, MPa	ISO 527	70.0		85.2
<u>HISTORICAL TEST</u>				
Deflection Temperature @.45 MPa, °C	ISO 75-1&2	160		212 (02)
Flammability, mm/min	ISO 3795		100	DN1
Notched Izod Impact @ -100	ISO 180	3.0		3.8
Shear Modulus @ 29C, MPa	ASTM D 5279	824	1236	1100
TenStress@50mm/min,Aged 1000Hrs@100C,%Chg	ISO 180/527 1&2	<-25		-2

(01) FORD WSK-M4D647-A, DATED 11/09/00.

(02) DUPONT STATISTICAL CAPABILITY IS 160 DEGREES C AS COMPARED TO SPECIFICATION LIMIT OF 210 DEGREES C, EXCEPTION GRANTED.

THIS PRODUCT CERTIFICATION IS NON-TRANSFERABLE AND IS VALID ONLY TO THE FIRST END-USER PURCHASING THIS PRODUCT DIRECTLY FROM DUPONT OR FROM A DUPONT-AUTHORIZED DISTRIBUTOR. PRODUCT AND/OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE IS ASSUMED COUNTERFEIT, AND DUPONT MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH THE USE OF PRODUCT OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE. Call 1-800-441-0575 for a list of authorized distributors in your area. Copyright © 2008 E.I. du Pont de Nemours and Company. All Rights Reserved. Property of E.I. du Pont de Nemours and Company. No portion of this work may be reproduced in whole or in part by any electronic, mechanical or other means, including photocopying, phoning, or any information storage or retrieval system, or otherwise distributed without the express permission of E.I. du Pont de Nemours and Company.

DU PONT COMPANY
CUSTOMER SPECIFICATION

Product: ZYTEL® 42A NC010 750 KG BOX NYLON RESIN

Specification: GENERAL MOTORS GMP, PA66.004

(01)

TESTS	TEST METHOD	LIMITS		RESULTS
		MIN	MAX	
<u>ACT. TEST</u>		<u>LOT NO: N44KJLH01</u>		
Relative Viscosity	ASTM D 789	215	295	295
Water Content at Packout, %	ISO 15512		0.05	0.01
<u>PERIODIC TEST</u>		<u>LAST TEST DATE: December 2009</u>		
Deflection Temperature @1.80 MPa, °C	ISO 75-1&2	60		75
Density, g/cm ³	ISO 1183/A	1.11	1.15	1.13
Flexural Modulus, MPa	ISO 178	2500		2929
Melting Point 2nd °C	ISO 11357	258	263	261
Notched Charpy Impact @ 23°C, kJ/m ²	ISO 179	4.0		6.6
Notched Izod Impact @ 23°C, kJ/m ²	ISO 180	5.0		6.2
Tensile Modulus, Mpa	ISO 527-1&2	2600		3206
Tensile Stress @ Yield, 50 mm/min, MPa	ISO 527	75.0		95.2
<u>HISTORICAL TEST</u>				
Flammability, mm/min	ISO 3795		100	DN1
Notched Charpy Impact Strength @ -40C	ISO 179	3.0		4.4
Notched Izod Impact @ -40C	ISO 180	6.0		6.8

(01) THE PROPERTY REQUIREMENTS LISTED ABOVE ARE CERTIFIED PER AGREED-UPON VALUES ON THE GM TEST SAMPLING PLAN, APPROVED BY GM 04/11/03.

THIS PRODUCT CERTIFICATION IS NON-TRANSFERABLE AND IS VALID ONLY TO THE FIRST END-USER PURCHASING THIS PRODUCT DIRECTLY FROM DUPONT OR FROM A DUPONT-AUTHORIZED DISTRIBUTOR. PRODUCT AND/OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE IS ASSUMED COUNTERFEIT, AND DUPONT MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH THE USE OF PRODUCT OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE. Call 1-800-311-0575 for a list of authorized distributors in your area. Copyright © 2005 E.I. du Pont de Nemours and Company. All Rights Reserved. Property of E.I. du Pont de Nemours and Company. No portion of this work may be reproduced in whole or in part by any electronic, mechanical or other means, including microphotography, photocopy, or any information storage or retrieval system, or otherwise distributed without the express permission of E.I. du Pont de Nemours and Company.

DU PONT COMPANY
CUSTOMER SPECIFICATION

Product: ZYTEL® 42A NC010 750 KG BOX NYLON RESIN

Specification: SAE J1639 PA0122

(01)

TESTS	TEST METHOD	LIMITS		RESULTS
		MIN	MAX	
<u>LOT TEST</u>		<u>LOT NO: N44KJ1UH01</u>		
<u>PERIODIC TEST</u>		<u>LAST TEST DATE: December 2009</u>		
Deflection Temperature @1.80 MPa, °C	ISO 75-1&2	60		75
Flexural Modulus, MPa	ISO 178	2300		2920
Notched Izod Impact @ 23°C, kJ/m ²	ISO 180	3.0		6.2
Tensile Stress @ Yield, 50 mm/min, MPa	ISO 527	70.0		95.2
<u>HISTORICAL TEST</u>				
Density, g/cm ³	ISO 1183/A	1.13	1.15	1.14
Flammability, mm/min	ISO 3795		100	ONI
Notched Izod Impact @ -40C	ISO 180	2.0		6.2

(01) SAE J1639, REVISED MAY 1995 CALLOUTS = PA0122,Z6 (Z6 = MATERIAL IS NOT HEAT STABILIZED).

THIS PRODUCT CERTIFICATION IS NON-TRANSFERABLE AND IS VALID ONLY TO THE FIRST END-USER PURCHASING THIS PRODUCT DIRECTLY FROM DUPONT OR FROM A DUPONT-AUTHORIZED DISTRIBUTOR. PRODUCT AND/OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE IS ASSUMED COUNTERFEIT, AND DUPONT MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH THE USE OF PRODUCT OR PRODUCT CERTIFICATION OBTAINED FROM AN UNAUTHORIZED SOURCE. Call 1-800-441-0575 for a list of authorized distributors in your area. Copyright © 2006 E.I. du Pont de Nemours and Company. All Rights Reserved. Property of E.I. du Pont de Nemours and Company. No portion of this work may be reproduced in whole or in part by any electronic, mechanical or other means, including micrography, photocopy, or any information storage or retrieval system, or otherwise distributed without the express permission of E.I. du Pont de Nemours and Company.