



Project No: F154316
File No.: E60086
Vol. No.: 1
Issued Date: 2014-03-06

Follow-up Sample Test Report

Customer Company and Address

RUDI HEUNINCK
RECTICEL NV

Damstraat 2
Wetteren
9230
Belgium

Manufacturer: RECTICEL NV
Damstraat 2, Wetteren, 9230, Belgium

Product Category: QMFZ2

Product Description: Plastics - component

Model Number(s): Fireflex S 305 (d)

Inspection Date: 2014-02-05

UL Contact

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Email: FUSAdmin.MEL@ul.com



Statement of Results

Test Name	Sample ID	Test Result
As Received Horizontal Burning Foamed Material Test	026312-S001	Pass
Oven Aged Horizontal Burning Foamed Material Test	026312-S001	Pass
Horizontal Burning Foamed Material Test (HBF, HF-1, or HF-2)	026312-S001	Pass
ID Color and Form	026312-S001	Pass
Infrared Spectroscopy	026312-S001	Pass
Thermogravimetry (TGA)	026312-S001	Pass
Differential Scanning Calorimetry (DSC)	026312-S001	Pass
Density Determination	026312-S001	Pass

As Received Horizontal Burning Foamed Material Test, Set:01, Sample ID:026312-S001

Result	Value	Unit
Thickness	3.920	mm
Afterflame Time	0.0	secs
Afterflame + Afterglow Time	0.0	secs
Burn Length	20.0	mm
Duration of Burning Beyond 25mm Mark	0.0	secs
Damaged Length Beyond 25mm Mark	0.0	mm
Burn Rate	N/A	mm/min
Comments Text	Specimen did not drip. / Ceased to burn before the 125 mm gauge mark; rate not determined.	

As Received Horizontal Burning Foamed Material Test, Set:02, Sample ID:026312-S001

Result	Value	Unit
Thickness	3.860	mm
Afterflame Time	0.0	secs
Afterflame + Afterglow Time	0.0	secs
Burn Length	15.0	mm
Duration of Burning Beyond 25mm Mark	0.0	secs
Damaged Length Beyond 25mm Mark	0.0	mm
Burn Rate	N/A	mm/min
Comments Text	Specimen did not drip. / Ceased to burn before the 125 mm gauge mark; rate not determined.	



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As Received Horizontal Burning Foamed Material Test, Set:03, Sample ID:026312-S001

Result	Value	Unit
Thickness	3.740	mm
Afterflame Time	0.0	secs
Afterflame + Afterglow Time	0.0	secs
Burn Length	25.0	mm
Duration of Burning Beyond 25mm Mark	0.0	secs
Damaged Length Beyond 25mm Mark	0.0	mm
Burn Rate	N/A	mm/min
Comments Text	Specimen did not drip. / Ceased to burn before the 125 mm gauge mark; rate not determined.	

As Received Horizontal Burning Foamed Material Test, Set:04, Sample ID:026312-S001

Result	Value	Unit
Thickness	3.900	mm
Afterflame Time	0.0	secs
Afterflame + Afterglow Time	0.0	secs
Burn Length	24.0	mm
Duration of Burning Beyond 25mm Mark	0.0	secs
Damaged Length Beyond 25mm Mark	0.0	mm
Burn Rate	N/A	mm/min
Comments Text	Specimen did not drip. / Ceased to burn before the 125 mm gauge mark; rate not determined.	

As Received Horizontal Burning Foamed Material Test, Set:05, Sample ID:026312-S001

Result	Value	Unit
Thickness	3.900	mm
Afterflame Time	0.0	secs
Afterflame + Afterglow Time	0.0	secs
Burn Length	23.0	mm
Duration of Burning Beyond 25mm Mark	0.0	secs
Damaged Length Beyond 25mm Mark	0.0	mm
Burn Rate	N/A	mm/min
Comments Text	Specimen did not drip. / Ceased to burn before the 125 mm gauge mark; rate not determined.	



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Oven Aged Horizontal Burning Foamed Material Test, Set:01, Sample ID:026312-S001

Result	Value	Unit
Thickness	4.140	mm
Afterflame Time	0.0	secs
Afterflame + Afterglow Time	0.0	secs
Burn Length	10.0	mm
Duration of Burning Beyond 25mm Mark	0.0	secs
Damaged Length Beyond 25mm Mark	0.0	mm
Burn Rate	N/A	mm/min
Comments Text	Specimen did not drip. / Ceased to burn before the 125 mm gauge mark; rate not determined.	

Oven Aged Horizontal Burning Foamed Material Test, Set:02, Sample ID:026312-S001

Result	Value	Unit
Thickness	4.000	mm
Afterflame Time	0.0	secs
Afterflame + Afterglow Time	0.0	secs
Burn Length	13.0	mm
Duration of Burning Beyond 25mm Mark	0.0	secs
Damaged Length Beyond 25mm Mark	0.0	mm
Burn Rate	N/A	mm/min
Comments Text	Specimen did not drip. / Ceased to burn before the 125 mm gauge mark; rate not determined.	

Oven Aged Horizontal Burning Foamed Material Test, Set:03, Sample ID:026312-S001

Result	Value	Unit
Thickness	3.820	mm
Afterflame Time	0.0	secs
Afterflame + Afterglow Time	0.0	secs
Burn Length	11.0	mm
Duration of Burning Beyond 25mm Mark	0.0	secs
Damaged Length Beyond 25mm Mark	0.0	mm
Burn Rate	N/A	mm/min
Comments Text	Specimen did not drip. / Ceased to burn before the 125 mm gauge mark; rate not determined.	



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Oven Aged Horizontal Burning Foamed Material Test, Set:04, Sample ID:026312-S001

Result	Value	Unit
Thickness	4.120	mm
Afterflame Time	0.0	secs
Afterflame + Afterglow Time	0.0	secs
Burn Length	11.0	mm
Duration of Burning Beyond 25mm Mark	0.0	secs
Damaged Length Beyond 25mm Mark	0.0	mm
Burn Rate	N/A	mm/min
Comments Text	Specimen did not drip. / Ceased to burn before the 125 mm gauge mark; rate not determined.	

Oven Aged Horizontal Burning Foamed Material Test, Set:05, Sample ID:026312-S001

Result	Value	Unit
Thickness	3.920	mm
Afterflame Time	0.0	secs
Afterflame + Afterglow Time	0.0	secs
Burn Length	12.0	mm
Duration of Burning Beyond 25mm Mark	0.0	secs
Damaged Length Beyond 25mm Mark	0.0	mm
Burn Rate	N/A	mm/min
Comments Text	Specimen did not drip. / Ceased to burn before the 125 mm gauge mark; rate not determined.	

Horizontal Burning Foamed Material Test (HBF, HF-1, or HF-2), Set:01, Sample ID:026312-S001

Result	Value	Unit
Radius <2.0mm	Yes	
Length 150mm +/- 5mm	Yes	
Width 50mm +/- 1mm	Yes	
Original Rating	HF-1	
Flame Rating AR	HF-1	
Flame Rating OA	HF-1	
Flame Rating	HF-1	
Total Burn Time AR	0	
Total Burn Time OA	0	

ID Color and Form, Set:01, Sample ID:026312-S001

Result	Value	Unit
Color	GY	
Form	BAR	



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Infrared Spectroscopy, Set:01, Sample ID:026312-S001

Result	Value	Unit
Conformance	Yes	

Thermogravimetry (TGA), Set:01, Sample ID:026312-S001

Result	Value	Unit
Conformance	Yes	

Differential Scanning Calorimetry (DSC), Set:01, Sample ID:026312-S001

Result	Value	Unit
Conformance	Yes	

Density Determination, Set:01, Sample ID:026312-S001

Result	Value	Unit
Thickness #1	3.980	mm
Thickness #2	4.160	mm
Thickness #3	4.400	mm
Average Thickness	4.180	mm
Width #1	50.240	mm
Width #2	50.050	mm
Width #3	49.940	mm
Average Width	50.077	mm
Length #1	150.180	mm
Length #2	149.890	mm
Length #3	150.100	mm
Average Length	150.057	mm
Weight	0.9695	g
Density	30.866	kg/m ³



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Density Determination, Set:02, Sample ID:026312-S001

Result	Value	Unit
Thickness #1	4.020	mm
Thickness #2	4.010	mm
Thickness #3	4.190	mm
Average Thickness	4.073	mm
Width #1	50.010	mm
Width #2	49.900	mm
Width #3	50.140	mm
Average Width	50.017	mm
Length #1	150.280	mm
Length #2	150.090	mm
Length #3	150.070	mm
Average Length	150.147	mm
Weight	0.9375	g
Density	30.649	kg/m3

Density Determination, Set:03, Sample ID:026312-S001

Result	Value	Unit
Thickness #1	4.000	mm
Thickness #2	3.920	mm
Thickness #3	4.040	mm
Average Thickness	3.987	mm
Width #1	49.860	mm
Width #2	50.030	mm
Width #3	49.990	mm
Average Width	49.960	mm
Length #1	150.210	mm
Length #2	150.100	mm
Length #3	150.200	mm
Average Length	150.170	mm
Weight	0.9164	g
Density	30.636	kg/m3

Density Determination, Set:01, Sample ID:026312-S001

Result	Value	Unit
Color	GY	
Start of Conditioning (>24h @ 23c / 50% rH)	2014-FEB-28 11:35:00 AM	
End of Conditioning (>24h @ 23c / 50% rH)	2014-MAR-05 11:35:00 AM	
Temperature	21	°C
Humidity	52	%rH
Original Minimum Density	28	kg/m3
Original Maximum Density	33	kg/m3
Average Density	30.717094672	kg/m3



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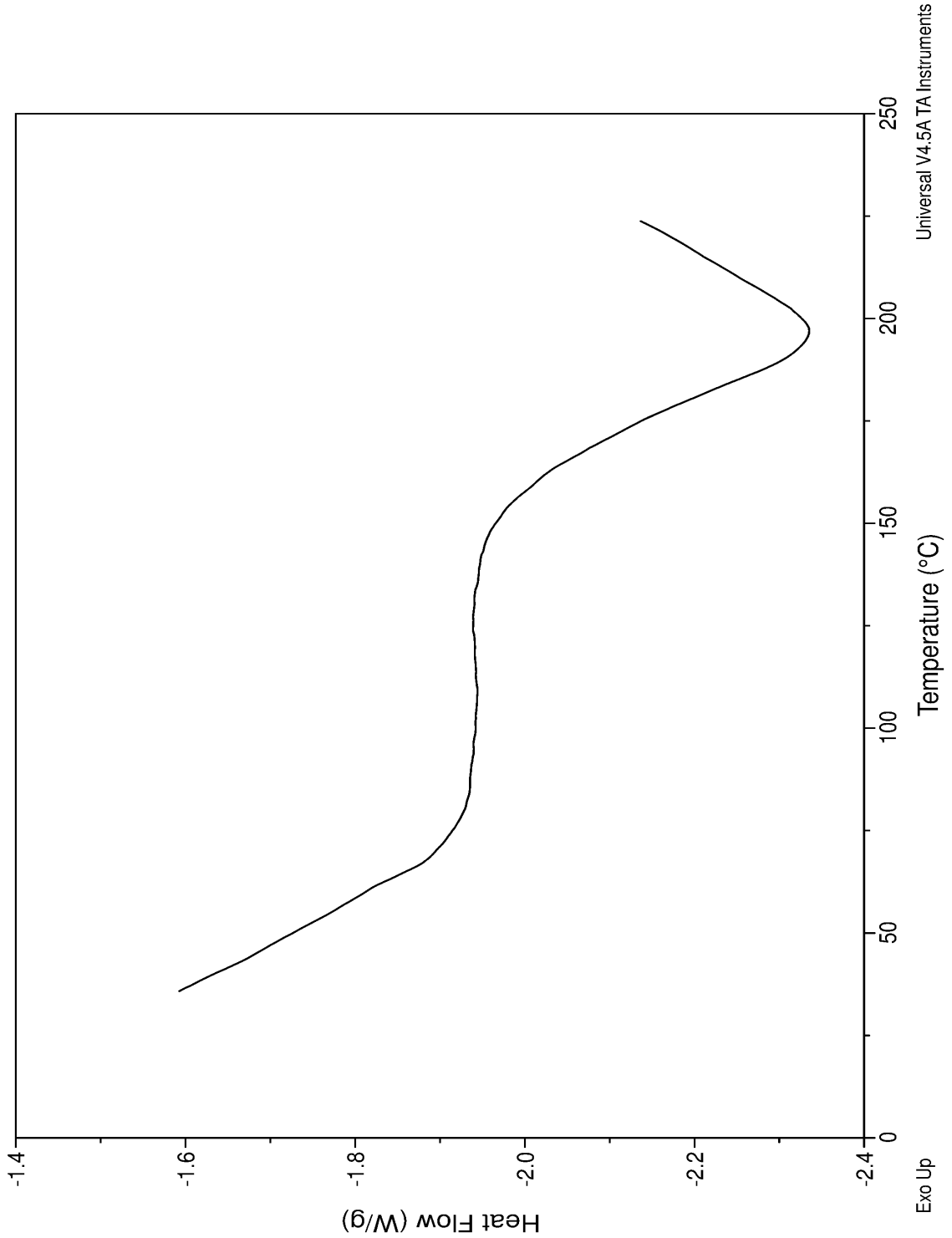
Result Images

Differential Scanning Calorimetry (DSC), Set:01, Sample ID:026312-S001

File: C:\TA\Data\QDFu\F154316.DSM
Operator: SA,M,N2@50mL/min,ME6362
Run Date: 14-Feb-2014 14:40
Instrument: DSC Q2000 V24.11 Build 124

DSC

Sample: FIREFLEX S 305,PER/PUR,GY
Size: 0.2900 mg
Method: Q2000 27°C-225°C@20°C/Min
Comment: FOLLOW UP/58441,25/23





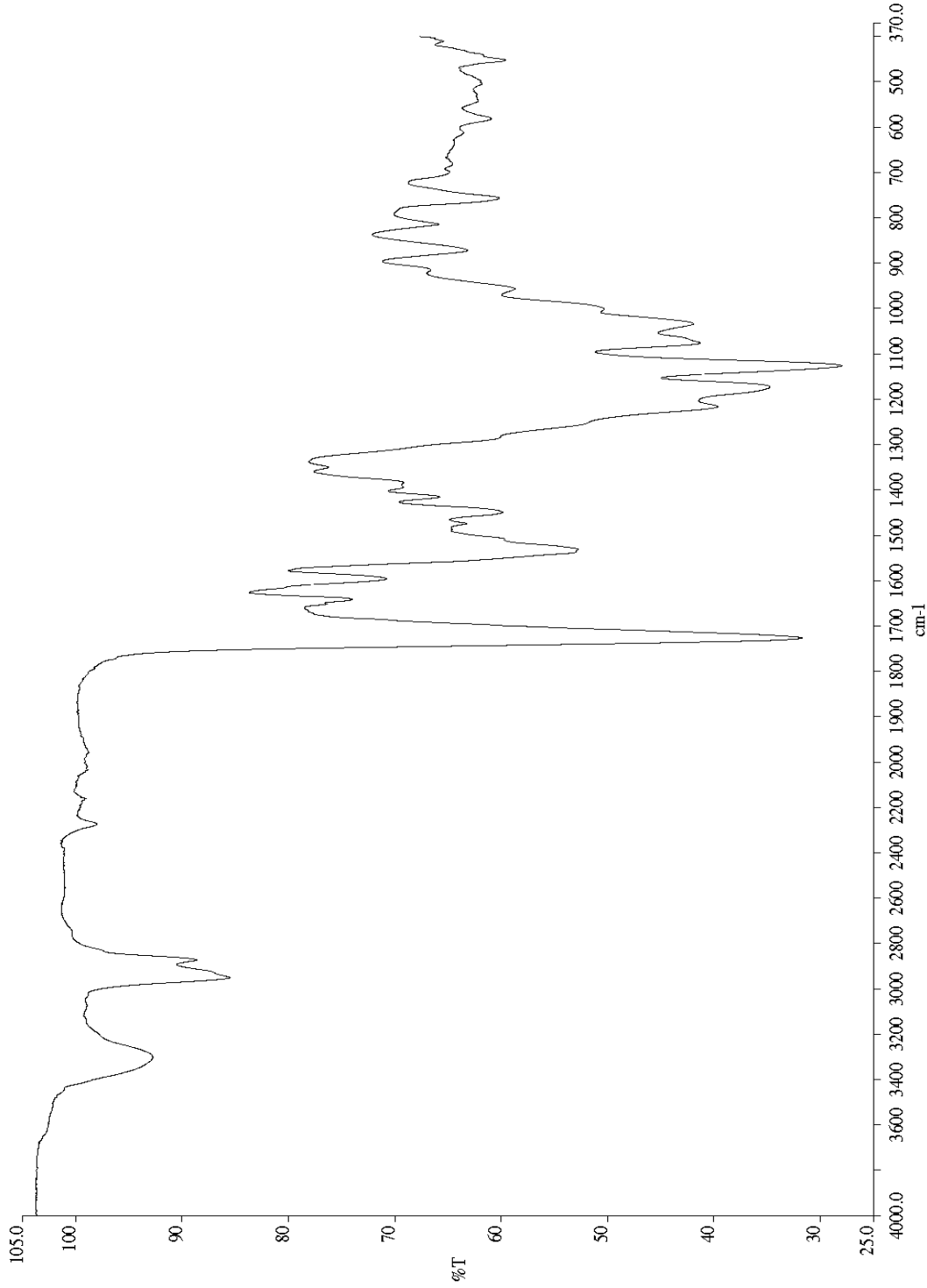
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Infrared Spectroscopy, Set:01, Sample ID:026312-S001

Data obtained using ATR accessory, KRS-5 window material, FTIR instrument.

Infrared Analysis

Spectrum Name: F154316A.sp



Description: E60086,S305(D),20,N,F,GY,O,23/16,ND

Instrument Model: Spectrum 100 Accumulations: 16 Resolution: 4 cm-1

Instrument ID#: ME5-8078

Date Created: Wednesday, February 26, 2014 9:37 AM Eas

Tested By: Nicole Driscoll



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Thermogravimetry (TGA), Set:01, Sample ID:026312-S001

File: C:\TA\Data\55471\FUVF154316.TGM
Operator: TL,M,N2@100cc/min,55471
Run Date: 13-Feb-2014 11:32
Instrument: TGA Q500 V20.13 Build 39

Sample: FIREFLEX S 305,PER/PUR,BK
Size: 7.4550 mg
Method: 40°-650°C @ 20°C/MIN
Comment: FOLLOW UP/LIMS 58441,25/23

TGA

