

Produkte
Products

Prüfbericht - Nr.: 21140393 001		Seite 1 von 4	
<i>Test Report No.:</i>		<i>Page 1 of 4</i>	
Auftraggeber: <i>Client:</i>	Reflexite Ireland Limited; Unit 5, Cleaboy Business Park, Old Kilmeaden Road, Waterford, Ireland		
Gegenstand der Prüfung: <i>Test item:</i>	Retroreflective Sheeting for Traffic Control		
Bezeichnung: <i>Identification:</i>	VC 310, blue	Serien-Nr.: <i>Serial No.:</i>	1042231
Wareneingangs-Nr.: <i>Receipt No.:</i>	744- 900229	Eingangsdatum: <i>Date of receipt:</i>	04.02.2009
Prüfört: <i>Testing location:</i>	TRPS / Prüfstelle für Produktsicherheit Leipzig Maximilianallee 4, 04129 Leipzig, Fon/Fax: +49 341 600 369-0 / -10		
Prüfgrundlage: <i>Test specification:</i>	ASTM D 4956-07 ^{e1} , clause 6.2 and 6.5		
Prüfergebnis: <i>Test Result:</i>	Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test item passed the test specification(s).</i>		
Prüflaboratorium: <i>Testing Laboratory:</i>	TRPS / Prüfstelle für Produktsicherheit Leipzig		
geprüft/ tested by:		kontrolliert/ reviewed by:	
19.02.2009	Baier/ Expert	19.02.2009	Knapel/ General Manager Leipzig
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>
			Name/Stellung <i>Name/Position</i>
			Unterschrift <i>Signature</i>
Sonstiges/ Other Aspects:			
Abkürzungen:	<i>P(ass) = entspricht Prüfgrundlage</i>	Abbreviations:	<i>P(ass) = passed</i>
	<i>F(ail) = entspricht nicht Prüfgrundlage</i>		<i>F(ail) = failed</i>
	<i>N/A = nicht anwendbar</i>		<i>N/A = not applicable</i>
	<i>NT = nicht getestet</i>		<i>NT = not tested</i>
<p>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</p> <p><i>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i></p>			

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Used measuring instruments

Measuring	Device-Number Inventory-Number Serial-Number	next Calibration
Colour		accredited subcontractor TÜV Fahrzeug- Lichttechnik report no.: 535 3949
Luminance factor		
Photometry		

Test results of accredited laboratories of competent subcontractor are marked with /*.

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Test results

According to ASTM D 4956-07^{e1}

Parameter	according to ASTM D 4956-07	Requirement	Test result	Remark P F N/A N/T																																																																																					
Coefficient of Retroreflection	clause 6.2 and clause 7.3	<p>the coefficient of Retroreflection shall meet or exceed the minimum requirements for the appropriate type of sheeting (see Tab. 1-5; Tab. 7-9, Tab. 11 and Tab 13)</p> <p>Tab 11, Type V: min. coefficient of retro reflection R_A in $cd/ft^2(cd \cdot lx^{-1} \cdot m^{-2})$</p> <table border="1"> <thead> <tr> <th>Observation Angle</th> <th>Entrance Angle</th> <th>colour: blue</th> </tr> </thead> <tbody> <tr> <td>0,1°</td> <td>-4°</td> <td>160</td> </tr> <tr> <td>0,1°</td> <td>+30°</td> <td>88</td> </tr> <tr> <td>0,2°</td> <td>-4°</td> <td>56</td> </tr> <tr> <td>0,2°</td> <td>+30°</td> <td>32</td> </tr> <tr> <td>0,5°</td> <td>-4°C</td> <td>13</td> </tr> <tr> <td>0,5°</td> <td>+30°C</td> <td>6,0</td> </tr> </tbody> </table> <p>Note: Values for 0,1° observation angle are supplementary requirements that shall apply only when specified by the purchaser in the contract r order</p>	Observation Angle	Entrance Angle	colour: blue	0,1°	-4°	160	0,1°	+30°	88	0,2°	-4°	56	0,2°	+30°	32	0,5°	-4°C	13	0,5°	+30°C	6,0	<p>VC 310, blue</p> <p>/* TÜV Fahrzeug- Lichttechnik, report no 535 399</p> <p>$\epsilon_1 = 0^\circ$ (lengthwise) Observation-angle Entrance angle -4° +30°</p> <table border="1"> <thead> <tr> <th>sample 1</th> <th>0,2°</th> <th>166</th> <th>86</th> </tr> </thead> <tbody> <tr> <td></td> <th>0,5°</th> <td>38,8</td> <td>27,3</td> </tr> <tr> <th>sample 2</th> <td>0,2°</td> <td>175</td> <td>92,1</td> </tr> <tr> <td></td> <th>0,5°</th> <td>41,7</td> <td>29,3</td> </tr> <tr> <th>sample 3</th> <td>0,2°</td> <td>181</td> <td>95,1</td> </tr> <tr> <td></td> <th>0,5°</th> <td>37,1</td> <td>28,2</td> </tr> <tr> <th>sample 4</th> <td>0,2°</td> <td>178</td> <td>92,6</td> </tr> <tr> <td></td> <th>0,5°</th> <td>39,8</td> <td>28,7</td> </tr> </tbody> </table> <p>$\epsilon_1 = 90^\circ$ (crosswise) Observation-angle Entrance angle -4° +30°</p> <table border="1"> <thead> <tr> <th>sample 1</th> <th>0,2°</th> <th>186</th> <th>97,4</th> </tr> </thead> <tbody> <tr> <td></td> <th>0,5°</th> <td>13,0</td> <td>18,0</td> </tr> <tr> <th>sample 2</th> <td>0,2°</td> <td>197</td> <td>102</td> </tr> <tr> <td></td> <th>0,5°</th> <td>13,2</td> <td>17,6</td> </tr> <tr> <th>sample 3</th> <td>0,2°</td> <td>209</td> <td>106</td> </tr> <tr> <td></td> <th>0,5°</th> <td>13,5</td> <td>18,1</td> </tr> <tr> <th>sample 4</th> <td>0,2°</td> <td>197</td> <td>92,2</td> </tr> <tr> <td></td> <th>0,5°</th> <td>13,0</td> <td>15,6</td> </tr> </tbody> </table>	sample 1	0,2°	166	86		0,5°	38,8	27,3	sample 2	0,2°	175	92,1		0,5°	41,7	29,3	sample 3	0,2°	181	95,1		0,5°	37,1	28,2	sample 4	0,2°	178	92,6		0,5°	39,8	28,7	sample 1	0,2°	186	97,4		0,5°	13,0	18,0	sample 2	0,2°	197	102		0,5°	13,2	17,6	sample 3	0,2°	209	106		0,5°	13,5	18,1	sample 4	0,2°	197	92,2		0,5°	13,0	15,6	P
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Colorfastness	clause 6.5	<p>after the specified outdoor weathering, the specimen shall conform to the requirements of Tab. 17 and one of the following : Tab. 6, 10, 12 or 14</p> <p>Tab. 12: daytime luminance factor (Y %)</p> <table border="1"> <thead> <tr> <th>color</th> <th>Y min</th> <th>Y max</th> </tr> </thead> <tbody> <tr> <td>white</td> <td>15</td> <td>...</td> </tr> <tr> <td>yellow</td> <td>12</td> <td>30</td> </tr> <tr> <td>orange</td> <td>7</td> <td>25</td> </tr> <tr> <td>green</td> <td>2,5</td> <td>11</td> </tr> <tr> <td>red</td> <td>2,5</td> <td>11</td> </tr> <tr> <td>blue</td> <td>1,0</td> <td>10</td> </tr> <tr> <td>brown</td> <td>1,0</td> <td>9,0</td> </tr> </tbody> </table> <p>Tab. 17: color specification limits (daytime)</p> <table border="1"> <thead> <tr> <th>Colour</th> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td rowspan="4">blue</td> <td>0,140</td> <td>0,035</td> </tr> <tr> <td>0,244</td> <td>0,210</td> </tr> <tr> <td>0,190</td> <td>0,255</td> </tr> <tr> <td>0,065</td> <td>0,216</td> </tr> </tbody> </table>	color	Y min	Y max	white	15	...	yellow	12	30	orange	7	25	green	2,5	11	red	2,5	11	blue	1,0	10	brown	1,0	9,0	Colour	x	y	blue	0,140	0,035	0,244	0,210	0,190	0,255	0,065	0,216	<p>/* TÜV Fahrzeug- Lichttechnik, report no 535 399</p> <p>daytime luminance factor: color: blue lengthwise Y= 2,5% crosswise Y= 3,4%</p> <p>Color specification: <i>blue</i></p> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>0,166</td> <td>0,116</td> </tr> <tr> <td>0,161</td> <td>0,131</td> </tr> </tbody> </table>	x	y	0,166	0,116	0,161	0,131	P P																																											
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Diagram of color specification

