

Certificate No.: 2531–CPR–CSC10004

Issue date: 2017-09-04



CERTIFICATE OF CONSTANCY OF PERFORMANCE

Issued by DBI Certification, notified body No. 2531.

In compliance with *Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011* (the Construction Products Regulation or CPR), this certificate applies to the construction product

Vertical hollow straight signpost

Scope: **Supports supplied for fixed vertical signs (ZA.2)**

The product fulfils the essential characteristic:

See Annex 1

Intended use: Stock items (described by performance)

Placed on the market under the name or trade mark of:

Saferoad Daluiso A/S
Hvidkærvej 33
DK-5250 Odense
Denmark

and produced in the manufacturing plant:

CPA30003

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the standards

EN 12899-1:2007 : **Fixed, vertical road traffic signs-Part 1: Fixed signs**

under system 1 for the performance set out in this certificate are applied and that the performance of the construction product is assessed to remain constant.

The attached annexes form part of this certificate.

Date of issue: **2017-09-04**.

This certificate will remain valid as long as neither the harmonized standard, the construction product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly unless suspended or withdrawn by the notified product certification body.

This certificate was first issued 2017-09-04.

Handwritten signature of Per Lyster Andersen in blue ink.

Per Lyster Andersen
Responsible for evaluation

Handwritten signature of Merete Poulsen in blue ink.

Merete Poulsen
Responsible for certification decision

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DBI Certification A/S

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Annex 1

EXTENT

Type	Description																																																																																																																																																								
<p>Dimensions: OD 33,7 x 3,2 mm OD 48,3 x 2,9 mm OD 48,3 x 3,0 mm OD 48,3 x 3,2 mm OD 48,3 x 4,0 mm OD 60,3 x 3,6 mm OD 60,3 x 4,5 mm OD 76,1 x 3,6 mm OD 76,1 x 4,5 mm OD 88,9 x 3,2 mm OD 88,9 x 4,0 mm OD 88,9 x 4,8 mm OD 114,3 x 4,5 mm OD 114,3 x 5,0 mm OD 114,3 x 5,4 mm</p> <p>Material: Steel S235JRH, S235JOH or S235J2H Hot dip galvanized coating, minimum 60 µm</p>	<p>Resistance to horizontal loads, bending, torsion:</p> <table border="1"> <thead> <tr> <th rowspan="2">Steel pipe mm</th> <th colspan="2">Bending</th> <th colspan="2">Torsion</th> </tr> <tr> <th>Max moment kNm</th> <th>Stiffness kNm²</th> <th>Max torque kNm</th> <th>Stiffness kNm²</th> </tr> </thead> <tbody> <tr><td>33,7 x 3,2</td><td>0,50</td><td>7,57</td><td>0,58</td><td>5,84</td></tr> <tr><td>48,3 x 2,9</td><td>1,04</td><td>22,5</td><td>1,20</td><td>17,3</td></tr> <tr><td>48,3 x 3,0</td><td>1,07</td><td>23,1</td><td>1,24</td><td>17,8</td></tr> <tr><td>48,3 x 3,2</td><td>1,13</td><td>24,3</td><td>1,30</td><td>18,8</td></tr> <tr><td>48,3 x 4,0</td><td>1,34</td><td>28,9</td><td>1,55</td><td>22,3</td></tr> <tr><td>60,3 x 3,6</td><td>2,02</td><td>54,3</td><td>2,33</td><td>41,9</td></tr> <tr><td>60,3 x 4,5</td><td>2,41</td><td>64,9</td><td>2,78</td><td>50,1</td></tr> <tr><td>76,1 x 3,6</td><td>3,34</td><td>113</td><td>3,85</td><td>87,5</td></tr> <tr><td>76,1 x 4,5</td><td>4,02</td><td>137</td><td>4,64</td><td>105</td></tr> <tr><td>88,9 x 3,2</td><td>4,19</td><td>166</td><td>4,84</td><td>128</td></tr> <tr><td>88,9 x 4,0</td><td>5,09</td><td>202</td><td>5,88</td><td>156</td></tr> <tr><td>88,9 x 4,8</td><td>5,95</td><td>236</td><td>6,87</td><td>182</td></tr> <tr><td>114,3 x 4,5</td><td>9,64</td><td>492</td><td>11,1</td><td>380</td></tr> <tr><td>114,3 x 5,0</td><td>10,6</td><td>540</td><td>12,2</td><td>416</td></tr> <tr><td>114,3 x 5,4</td><td>11,3</td><td>577</td><td>13,0</td><td>445</td></tr> </tbody> </table> <p>Performance under vehicle impact:</p> <table border="1"> <thead> <tr> <th>Steel pipe mm</th> <th>Speed class</th> <th>Energy absorption category</th> <th>Occupant safety level</th> </tr> </thead> <tbody> <tr><td>33,7 x 3,2</td><td>100</td><td>NE</td><td>2</td></tr> <tr><td>48,3 x 2,9</td><td>100</td><td>NE</td><td>2</td></tr> <tr><td>48,3 x 3,0</td><td>100</td><td>NE</td><td>2</td></tr> <tr><td>48,3 x 3,2</td><td>100</td><td>NE</td><td>2</td></tr> <tr><td>48,3 x 4,0</td><td>-</td><td>-</td><td>0</td></tr> <tr><td>60,3 x 3,6</td><td>-</td><td>-</td><td>0</td></tr> <tr><td>60,3 x 4,5</td><td>-</td><td>-</td><td>0</td></tr> <tr><td>76,1 x 3,6</td><td>-</td><td>-</td><td>0</td></tr> <tr><td>76,1 x 4,5</td><td>-</td><td>-</td><td>0</td></tr> <tr><td>88,9 x 3,2</td><td>100</td><td>NE</td><td>2</td></tr> <tr><td>88,9 x 4,0</td><td>-</td><td>-</td><td>0</td></tr> <tr><td>88,9 x 4,8</td><td>-</td><td>-</td><td>0</td></tr> <tr><td>114,3 x 4,5</td><td>-</td><td>-</td><td>0</td></tr> <tr><td>114,3 x 5,0</td><td>-</td><td>-</td><td>0</td></tr> <tr><td>114,3 x 5,4</td><td>-</td><td>-</td><td>0</td></tr> </tbody> </table> <p>Durability:</p> <table border="1"> <tr> <td>Corrosion resistance (supports) Metal</td> <td>SP1</td> </tr> <tr> <td>Resistance to penetration of dust and water</td> <td>Supports can not be provided with compartments for electrical equipment</td> </tr> </table>	Steel pipe mm	Bending		Torsion		Max moment kNm	Stiffness kNm ²	Max torque kNm	Stiffness kNm ²	33,7 x 3,2	0,50	7,57	0,58	5,84	48,3 x 2,9	1,04	22,5	1,20	17,3	48,3 x 3,0	1,07	23,1	1,24	17,8	48,3 x 3,2	1,13	24,3	1,30	18,8	48,3 x 4,0	1,34	28,9	1,55	22,3	60,3 x 3,6	2,02	54,3	2,33	41,9	60,3 x 4,5	2,41	64,9	2,78	50,1	76,1 x 3,6	3,34	113	3,85	87,5	76,1 x 4,5	4,02	137	4,64	105	88,9 x 3,2	4,19	166	4,84	128	88,9 x 4,0	5,09	202	5,88	156	88,9 x 4,8	5,95	236	6,87	182	114,3 x 4,5	9,64	492	11,1	380	114,3 x 5,0	10,6	540	12,2	416	114,3 x 5,4	11,3	577	13,0	445	Steel pipe mm	Speed class	Energy absorption category	Occupant safety level	33,7 x 3,2	100	NE	2	48,3 x 2,9	100	NE	2	48,3 x 3,0	100	NE	2	48,3 x 3,2	100	NE	2	48,3 x 4,0	-	-	0	60,3 x 3,6	-	-	0	60,3 x 4,5	-	-	0	76,1 x 3,6	-	-	0	76,1 x 4,5	-	-	0	88,9 x 3,2	100	NE	2	88,9 x 4,0	-	-	0	88,9 x 4,8	-	-	0	114,3 x 4,5	-	-	0	114,3 x 5,0	-	-	0	114,3 x 5,4	-	-	0	Corrosion resistance (supports) Metal	SP1	Resistance to penetration of dust and water	Supports can not be provided with compartments for electrical equipment
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Annex 2

TEST DOCUMENTATION

EN 12767:2007, Annex F - Deemed to comply



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Annex 3

TECHNICAL BASIS

File number	Title	Date
None	Daluiso A/S, CE marking and labeling Traffic signs - nomograms for calculation of hollow steel pipes for smaller sign sizes, Verification of the physical performance by calculation in accordance with EN 12899-1:2007.	February 2014
None	Daluiso A/S, CE marking and labeling Traffic signs - nomograms for calculation of hollow steel pipes for medium sign sizes, Verification of the physical performance by calculation in accordance with EN 12899-1:2007.	July 2014
None	Resistance to horizontal loads	2016-04-25
None	Annex 1	2016-04-25
None	Performance under vehicle impact	2016-04-25

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