

No. : NBIN2109011958CM Date : Oct 08, 2021

Page: 1 of 12

 Sample Name
 :
 REBOUNDABLE TRAFFIC CYLINDERS

 Product Specification
 :
 DH-FP-75N

 Material and Mark
 :
 TPU

 Above information and sample(s) was/were submitted and confirmed by the client_SGS_h

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Date of Receipt	:	Sep 28, 2021
Testing Start Date	:	Sep 28, 2021
Testing End Date	:	Oct 08, 2021
Test result(s)	:	For further details, please refer to the following page(s) (Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for SGS-CSTC Standards Technical Services Co., Ltd Ningbo Branch

Edward Chen

Edward Chen Authorized signatory



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No. : NBIN2109011958CM Date : Oct 08, 2021 Page: 2 of 12

Summary of Results:

No.	Test Item	Test Method	Result	Conclusion
1	Appearance	T/ZZB 2056-2021 Section6.1	See test result.	Pass
2	Shape and dimension	T/ZZB 2056-2021 Section6.2, GB/T 24972-2010 Section6.2	See test result.	Pass
3	Color	T/ZZB 2056-2021 Section6.3, GB/T 24972-2010 Section6.3	See test result.	Pass
4	Photometric Performance of reflective surface	T/ZZB 2056-2021 Section6.4, GB/T 24972-2010 Section6.4	See test result.	Pass
5	Color Adhesion between reflective surface and traffic column	T/ZZB 2056-2021 Section6.5	See test result.	Pass
6	Low temperature impact performance	T/ZZB 2056-2021 Section6.6	See test result.	Pass
7	High temperature impact performance	T/ZZB 2056-2021 Section6.7	See test result.	Pass
8	Rolling test of real vehicle	T/ZZB 2056-2021 Section6.8	See test result.	Pass
9	Bending resistance	T/ZZB 2056-2021 Section6.9 and requirement of client	See test result.	Pass

Note: Pass : Meet the requirements;

Fail : Does not meet the requirements;

/: Not Apply to the judgment.



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No. : NBIN2109011958CM Date : Oct 08, 2021 Page: 3 of 12

Original Sample Photo:



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No. : NBIN2109011958CM Date : Oct 08, 2021 Page: 4 of 12

Test Item: Appearance
 Sample Description: See photo
 Test Method: T/ZZB 2056-2021 Section6.1
 Test Condition: Visual inspection
 Test Result(s):

Test Item	Test Result	Requirement of T/ZZB 2056-2021 Section 5.1	Conclusion
Appearance	The surface of the traffic column is flat, smooth, and uniform in color, without obvious scratches, deformation and other defects. The reflective surface of the traffic column is not separated from the traffic column, and the retroreflective performance is	 The surface of the traffic column shall be flat, smooth and uniform in color, without obvious scratches, deformation and other defects. The reflective surface of the traffic column shall not be separated from the traffic column in normal use, and the retroreflective performance shall 	Pass
	maintained in the wet state.	be maintained in the wet state.	

Test Photo:





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No. : NBIN2109011958CM Date : Oct 08, 2021 Page: 5 of 12

2. Test Item: Shape and dimension

Sample Description: See photo

Test Method: T/ZZB 2056-2021 Section6.2, GB/T 24972-2010 Section6.2 Test Result(s):

Test Item		Test Result	Requirement of T/ZZB 2056-2021 Section 5.2	Conclusion
Height of traffic column		758mm	300mm-1250mm	
Traffic column diameter		Bottom diameter:102mm Top diameter:75mm	75mm-220mm	
	circular hole at the top of the column	35.6mm	30mm±10mm	Pass
Number		3	At least 3	
Column reflector	Width along longitudinal axis	54mm	Not less than 50mm	



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No. : NBIN2109011958CM Date : Oct 08, 2021 Page: 6 of 12

3. Test Item: Color

Sample Description: See photo

Test Method: T/ZZB 2056-2021 Section6.3, GB/T 24972-2010 Section6.3

Test Result(s):

Test Part	Chromaticity coordinates	Luminance factor	Requirement of T/ZZB 1962 Section 5.3, GB/T 24720-2009Table 2 and chart 1	Conclusion
Common materials (Red)	(0.5935, 0.3381)	0.25	The test points are in a quadrilateral composed of four points (0.690, 0.310), (0.595, 0.315), (0.569, 0.341), (0.655, 0.345). Luminance factor: \geq 0.07	Pass
Reflective surface material (White)	(0.3152, 0.3288)	0.38	Test points (0.350, 0.360), (0.300, 0.310), (0.290, 0.320), (0.340, 0.370) are in a quadrilateral composed of four points. Luminance factor: ≥ 0.27	Pass

Note: This test is completed in the laboratory.



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No. : NBIN2109011958CM Date : Oct 08, 2021 Page: 7 of 12

4. Test Item: Photometric Performance of reflective surface

Sample Description: See photo

Test Method: T/ZZB 2056-2021 Section6.4, GB/T 24972-2010 Section6.4

Test Condition: Observation angle: 0.2°, incident angle -4°

Test Result(s):

Test Item	Test Result	Requirement of T/ZZB 2056-2021 Section 5.4, GB/T 18833-2012 Table 5	Conclusion
Photometric Performance of reflective surface	809cd·lx⁻¹·m⁻²	≥580cd·lx ⁻¹ ·m ⁻²	Pass



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No. : NBIN2109011958CM Date : Oct 08, 2021 Page: 8 of 12

5. Test Item: Adhesion between reflective surface and traffic column

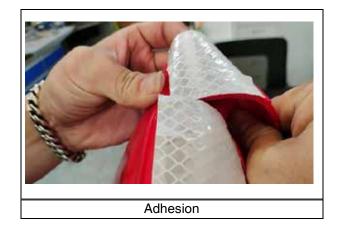
Sample Description: See photo

Test Method: T/ZZB 2056-2021 Section6.5

Test Result(s):

Test Item	Test Result	Requirement of T/ZZB 2056-2021 Section 5.5	Conclusion
Low temperature adhesion	The reflective surface is not separated from the cutting line on the column, and there is no interlayer peeling.	After the reflective surface perpendicular to the traffic column is cut, the reflective surface shall	Pass
High temperature adhesion	The reflective surface is not separated from the cutting line on the column, and there is no interlayer peeling.	not be separated from the cutting line on the column or peel off between layers.	Pass

Test Photo:





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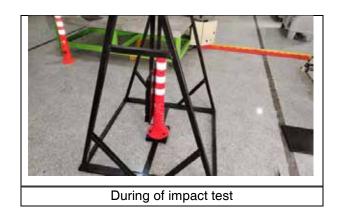
No. : NBIN2109011958CM Date : Oct 08, 2021 Page: 9 of 12

6. Test Item: Low temperature impact performanceSample Description: See photoTest Method: T/ZZB 2056-2021 Section6.6

Test Result(s):

Test Item	Test Result	Requirement of T/ZZB 2056-2021 Section 5.6	Conclusion
Low temperature impact performance	There is no abnormal change on the reflective surface of the column and base. The retroreflection coefficient of the reflective surface is 746cd·lx ⁻¹ ·m ⁻² , which is 92% of the value before impact.	The column, base and reflective surface shall not be torn, broken or damaged, and shall be restored to the original state after impact. The retroreflection coefficient of the reflective surface after impact shall not be less than 80% of that before impact.	Pass

Test Photo:





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No. : NBIN2109011958CM Date : Oct 08, 2021 Page: 10 of 12

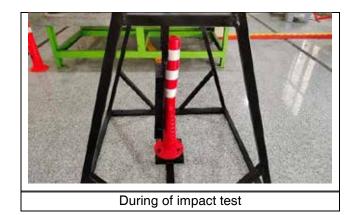
7. Test Item: High temperature impact performance Sample Description: See photo

Test Method: T/ZZB 2056-2021 Section6.7

Test Result(s):

Test Item	Test Result	Requirement of T/ZZB 2056-2021 Section 5.7	Conclusion
High temperature impact performance	There is no abnormal change on the reflective surface of the column and base. The retroreflection coefficient of the reflective surface is 759cd·lx ⁻¹ ·m ⁻² , which is 94% of the value before impact.	The column, base and reflective surface shall not be torn, broken or damaged, and shall be restored to the original state after impact. The retroreflection coefficient of the reflective surface after impact shall not be less than 80% of that before impact.	Pass

Test Photo:





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No. : NBIN2109011958CM Date : Oct 08, 2021 Page: 11 of 12

8. Test Item: Rolling test of real vehicleSample Description: See photoTest Method: T/ZZB 2056-2021 Section6.8Test Result(s):

Test Item	Test Result	Requirement of T/ZZB 2056-2021 Section 5.8 and Section 6.8.2.2	Conclusion
Rolling test of real vehicle	After the test, the column was restored to its original state, and there was no obvious abnormal change in the sample. The deflection of the top of the column in the horizontal direction is 2mm, which is 0.3% of the height of the column.	After the test, the column shall be restored to its original state after impact, and the reflective surface shall not fall off. The residual deflection of the top of the column in any horizontal direction shall not exceed 7% of the height of the column.	Pass

Test Photo:





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No. : NBIN2109011958CM Date : Oct 08, 2021 Page: 12 of 12

9. Test Item: Bending resistance

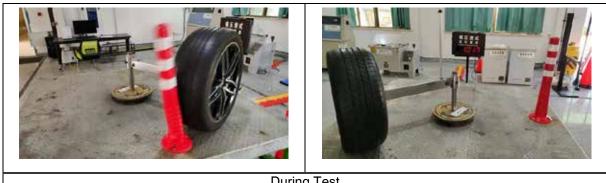
Sample Description: See photo

Test Method: T/ZZB 2056-2021 Section6.9 and requirement of client

Test Condition: Tire diameter: 640mm, linear speed: 70m / min (customer requirements) Test Result(s):

Test Item	Test Result	Requirement of T/ZZB 2056-2021 Section 5.9	Conclusion
	After the test, the column was	After the test, the column shall be	
	restored to its original state, and	restored to its original state after	
	there was no obvious abnormal	impact, and the reflective surface	
Bending	change in the sample. The	shall not fall off. The residual	Pass
resistance	deflection of the top of the	deflection of the top of the column in	Pass
	column in the horizontal	any horizontal direction shall not	
	direction is 2mm, which is 0.3%	exceed 7% of the height of the	
	of the height of the column.	column.	

Test Photo:



During Test

All above tests except test3 were conducted at the manufacturer's factory under sgs tester witness.

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