



Test Report

No.: SHHL2211051622CW

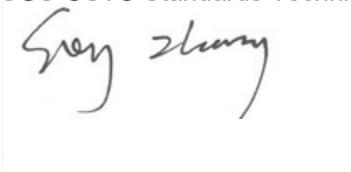
Date: NOV. 21, 2022

Page: 1 of 6

Sample Description : CPP OVERLAMINATE FILM
 SGS Ref No : NBHL2211021141SD
 Source of Sample : *****
 Sample Receiving Date : SENT BY CLIENT.
 Testing Period : NOV. 11, 2022
 Testing Location : NOV. 11, 2022 TO NOV. 21, 2022
 : 3RD. BUILDING, LANE 3999, XIUPU RD., PUDONG DISTRICT,
 SHANGHAI, CHINA

Test Requested	Result
SLIP RESISTANCE (DIN 51130:2014)	SEE RESULT

Signed for and on behalf of
 SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.



Sky Zhang
 Authorized Signatory



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Test Conducted:

Slip resistance (DIN 51130:2014)

Test Property	Test procedure/requirements	Rating/Result
<p>SLIP RESISTANCE</p>	<p>Prepare the test sample as the size of 100cm x 50cm, cleaning the surface before test.</p> <p>The temperature of the lab, shoes, lubricant and the decorative panels should be kept at (23 ± 5) °C</p> <p>Before test, apply a layer of lubricant on the surface of the decorative panels evenly with a brush, the density should be (200 ± 20) ml every square meter, the outer bottom of the shoes should also be covered with lubricant.</p> <div data-bbox="512 981 1070 1211" data-label="Image"> </div> <p>Illustration 1—bottom of the shoes for inspect</p> <p>Inspector should maintain upright posture and walk forward and backward on the decorative panels while watch below, stride width should reach half the length of the shoes. Start from the horizontality; Increase the angle of inclination of the panels at a angular velocity of about one degree every second. Inspector will linger at critical areas many times to determine the reliable walk limit inclination angle he or she can reached, repeat the above procedure three times and start from the horizontality every time. Before the second and the third time, reapply the lubricant on the surface as above with the brush.</p> <p>1. Calibration of the test person</p> <p>1. Each inspectors should walk on the every standard flooring for three times, then calculate the average angle respectively:</p> <p>① αKST-Ij ②αKST-IIj ③αKST-IIIj</p>	<p>α:17.9° Rating: R10</p>



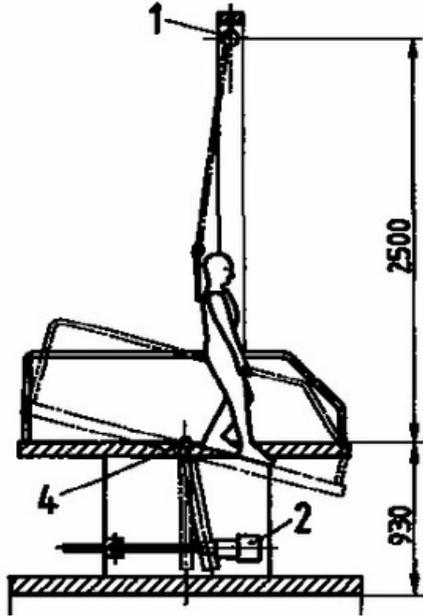
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Test Property	Test procedure/requirements	Rating/Result																						
	<p>2. The difference value will be calculated: $\Delta\alpha_{ST-Ij}$, $\Delta\alpha_{ST-IIj}$, $\Delta\alpha_{ST-IIIj}$. If the difference value is out of range of CrD95, the inspector should be eliminated</p> <p>See below table 1</p> <p style="text-align: center;">Table 1</p> <p style="text-align: center;">Standard flooring</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>i</th> <th>$\alpha_{S,i}$</th> <th>CrD95</th> </tr> </thead> <tbody> <tr> <td>St-I</td> <td>8.7°</td> <td>3.0°</td> </tr> <tr> <td>St-II</td> <td>17.3°</td> <td>3.0°</td> </tr> <tr> <td>St-III A</td> <td>27.3°</td> <td>3.0°</td> </tr> </tbody> </table> <p>2. Test for sample</p> <p>Two qualified inspector selected as above walk on the sample panels for three times respectively,, then calculate the mean value $\alpha_{0.1}$ and $\alpha_{0.2}$., then calculate the corrected value D_j according to below table 2..</p> <p style="text-align: center;">Table 2</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Case</th> <th>Corrected value D_j</th> </tr> </thead> <tbody> <tr> <td>$\alpha_{0,1} < \alpha_{K,St-I,1}$</td> <td>$D_1 = \Delta\alpha_{St-I,1} \cdot \frac{1}{\sqrt{2}}$</td> </tr> <tr> <td>$\alpha_{K,St-I,1} \leq \alpha_{0,1} < \alpha_{K,St-II,1}$</td> <td>$D_1 = \left[\Delta\alpha_{St-I,1} + (\Delta\alpha_{St-II,1} - \Delta\alpha_{St-I,1}) \cdot \frac{\alpha_{0,1} - \alpha_{K,St-I,1}}{\alpha_{K,St-II,1} - \alpha_{K,St-I,1}} \right] \cdot \frac{1}{\sqrt{2}}$</td> </tr> <tr> <td>$\alpha_{K,St-II,1} \leq \alpha_{0,1} < \alpha_{K,St-III A,1}$</td> <td>$D_1 = \left[\Delta\alpha_{St-II,1} + (\Delta\alpha_{St-III A,1} - \Delta\alpha_{St-II,1}) \cdot \frac{\alpha_{0,1} - \alpha_{K,St-II,1}}{\alpha_{K,St-III A,1} - \alpha_{K,St-II,1}} \right] \cdot \frac{1}{\sqrt{2}}$</td> </tr> <tr> <td>$\alpha_{K,St-III A,1} \leq \alpha_{0,1}$</td> <td>$D_1 = \Delta\alpha_{St-III A,1} \cdot \frac{1}{\sqrt{2}}$</td> </tr> </tbody> </table> <p>The result for inspector j: $\alpha_j = \alpha_{0,j} + D_j$</p> <p>The final result for the two inspectors: $\alpha = (\alpha_1 + \alpha_2) / 2$, on this basis and according to table 3, give a final rating of slip resistance.</p>	i	$\alpha_{S,i}$	CrD95	St-I	8.7°	3.0°	St-II	17.3°	3.0°	St-III A	27.3°	3.0°	Case	Corrected value D_j	$\alpha_{0,1} < \alpha_{K,St-I,1}$	$D_1 = \Delta\alpha_{St-I,1} \cdot \frac{1}{\sqrt{2}}$	$\alpha_{K,St-I,1} \leq \alpha_{0,1} < \alpha_{K,St-II,1}$	$D_1 = \left[\Delta\alpha_{St-I,1} + (\Delta\alpha_{St-II,1} - \Delta\alpha_{St-I,1}) \cdot \frac{\alpha_{0,1} - \alpha_{K,St-I,1}}{\alpha_{K,St-II,1} - \alpha_{K,St-I,1}} \right] \cdot \frac{1}{\sqrt{2}}$	$\alpha_{K,St-II,1} \leq \alpha_{0,1} < \alpha_{K,St-III A,1}$	$D_1 = \left[\Delta\alpha_{St-II,1} + (\Delta\alpha_{St-III A,1} - \Delta\alpha_{St-II,1}) \cdot \frac{\alpha_{0,1} - \alpha_{K,St-II,1}}{\alpha_{K,St-III A,1} - \alpha_{K,St-II,1}} \right] \cdot \frac{1}{\sqrt{2}}$	$\alpha_{K,St-III A,1} \leq \alpha_{0,1}$	$D_1 = \Delta\alpha_{St-III A,1} \cdot \frac{1}{\sqrt{2}}$	
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Test Property	Test procedure/requirements	Rating/Result												
	<p>Table3 –The relation between the corrected overall angle and the rating of the slip resistance</p> <table border="1" data-bbox="328 633 1262 922"> <thead> <tr> <th>α</th> <th>Rating</th> </tr> </thead> <tbody> <tr> <td>$6^\circ < \alpha \leq 10^\circ$</td> <td>R 9</td> </tr> <tr> <td>$10^\circ < \alpha \leq 19^\circ$</td> <td>R 10</td> </tr> <tr> <td>$19^\circ < \alpha \leq 27^\circ$</td> <td>R 11</td> </tr> <tr> <td>$27^\circ < \alpha \leq 35^\circ$</td> <td>R 12</td> </tr> <tr> <td>$\alpha > 35^\circ$</td> <td>R 13</td> </tr> </tbody> </table> <p>Illustration 2 inspect device with safety mechanism (inclined plane)</p> 	α	Rating	$6^\circ < \alpha \leq 10^\circ$	R 9	$10^\circ < \alpha \leq 19^\circ$	R 10	$19^\circ < \alpha \leq 27^\circ$	R 11	$27^\circ < \alpha \leq 35^\circ$	R 12	$\alpha > 35^\circ$	R 13	
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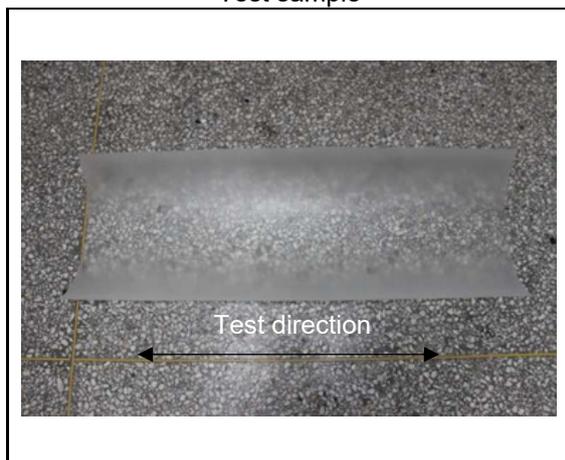
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Sample Photo:

Test sample



Standard floor



Test shoe



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End of Report



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