

## Test Report

No.: GZHL1901004114CE

Date: Apr 03, 2019

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POWERSLIDE SPORTARTIKELVERTRIEBS GMBH  
ESBACHGRABEN 1, 95463 BINDLACH, GERMANY

The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Description : POWERSLIDE ONESIE PROTECTION  
Style / Item No. : HP-S909  
Range : C  
Level : 1  
Buyer : POWERSLIDE SPORTARTIKELVERTRIEBS GMBH  
Manufacturer : HYPRO INDUSTRIAL CO., LTD  
Country of Origin : CHINA  
Country of Destination : EUROPE, US  
Test Performed : EN 14120:2003+A1:2007,  
Analysis of Azo Dye,  
To Determine the pH Value,  
Color Fastness to Perspiration  
Sample Receiving Date : Jan 28, 2019  
Sample Resubmission Date : Mar 15, 2019  
Test Performing Date : Jan 28, 2019 to Mar 25, 2019  
Test Result(s) : For further details, please refer to the following page(s)

Signed for and on behalf of  
Guangzhou Branch  
SGS-CSTC Ltd.

GZHL1901004114CE

Lell Wu  
Approved SignatorySGS-CSTC (China) Technical Services Co., Ltd.  
Guangzhou Branch Testing Center Headlines

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**I. Test Conducted:** Based on **EN 14120:2003+A1:2007** Protective clothing –Wrist, palm, knee and elbow protectors for user of roller sports equipment – requirements and test methods.

### Test Results:

| Clause     | Test Method/Requirement                                                                                                                                                                                                                                                                                                                            | Result |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| <b>4</b>   | <b>Performance levels</b>                                                                                                                                                                                                                                                                                                                          |        |
| <b>4.1</b> | Level 1: Protectors intended to be suitable for normal roller sports.                                                                                                                                                                                                                                                                              | ---    |
| <b>4.2</b> | Level 2: Protectors intended to be suitable for use in acrobatic roller sports.                                                                                                                                                                                                                                                                    |        |
| <b>5</b>   | <b>Requirements</b>                                                                                                                                                                                                                                                                                                                                |        |
| <b>5.1</b> | General performance requirements shall be based on 3 weight ranges as follows:<br>a) range A : Users of up to 25 kg body weight ;<br>b) range B : Users of body weight between 25 kg and 50 kg ;<br>c) range C : Users of body weight above 50 kg.<br>Combined protectors such as wrist protectors shall meet the requirements for each protector. | ---    |
| <b>5.2</b> | <b>Ergonomics</b><br>Protectors shall be so designed and manufactured that in the foreseeable conditions of use for which they are intended the user can perform the roller sports normally and unhindered whilst enjoying protection at the specified limit.                                                                                      | Pass   |
| <b>5.3</b> | <b>Innocuousness</b><br>Protectors shall be safe to use and fit for their purpose. They shall be designed and manufactured to provide protection when used according to the manufacturer's instructions, without endangering the user or others.                                                                                                   | Pass   |
|            | There shall not be hard or sharp edges, seams, buckles or other items on the surfaces of the products that could harm the user or others during normal use. Examination shall be made according to 6.3.                                                                                                                                            | Pass   |
|            | Construction materials and incorporated substances shall not harm those coming into contact with them.                                                                                                                                                                                                                                             | Pass   |
|            | The manufacturer shall list in the information supplied with the protectors the main composition of the protectors and shall label any protector containing substances or preparations generally known to be hazardous. Information about determining the chemical innocuousness of protectors is given in annex A.                                | NT     |
| <b>5.4</b> | <b>Sizing</b><br>Protectors shall be marked with a size. The size shall be designated by the range of body of the intended users, see 5.1.                                                                                                                                                                                                         | NT     |



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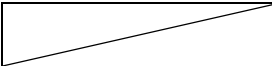
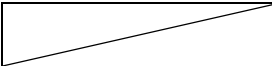
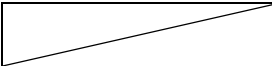
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中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075191 e [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

| 5.5                       | <p><b>Restraint</b></p> <p>Protectors shall not be easily displaced from the areas they are designed to protect during normal movements and when subjected to impacts. When subjected to impacts. When tested in accordance with 6.4 the central point of a protector shall not move more than the appropriate value in Table 1.</p> <p>Table 1: Maximum movement of protectors during testing.</p> <table><tr><th rowspan="2">Kind of protectors</th><th colspan="3">Maximum movement (mm)</th></tr><tr><th>A</th><th>B</th><th>C</th></tr><tr><td>Elbow protectors</td><td>20</td><td>40</td><td>50</td></tr><tr><td>Knee protectors</td><td>30</td><td>50</td><td>60</td></tr><tr><td>Wrist protectors</td><td>20</td><td>20</td><td>20</td></tr><tr><td>Palm protectors</td><td>20</td><td>20</td><td>20</td></tr></table> | Kind of protectors  | Maximum movement (mm) |         |      | A       | B | C | Elbow protectors   | 20 | 40 | 50 | Knee protectors | 30 | 50 | 60 | Wrist protectors | 20 | 20 | 20 | Palm protectors | 20   | 20   | 20   | Pass<br>See annex 1 |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------|---------|------|---------|---|---|--------------------|----|----|----|-----------------|----|----|----|------------------|----|----|----|-----------------|------|------|------|---------------------|------|------|------------------|------|------|------|------|------|------|---------------------------|------|------|------|------|------|------|---------------------|
| Kind of protectors        | Maximum movement (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |                       |         |      |         |   |   |                    |    |    |    |                 |    |    |    |                  |    |    |    |                 |      |      |      |                     |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |
|                           | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | B                   | C                     |         |      |         |   |   |                    |    |    |    |                 |    |    |    |                  |    |    |    |                 |      |      |      |                     |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |
| Elbow protectors          | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 40                  | 50                    |         |      |         |   |   |                    |    |    |    |                 |    |    |    |                  |    |    |    |                 |      |      |      |                     |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |
| Knee protectors           | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 50                  | 60                    |         |      |         |   |   |                    |    |    |    |                 |    |    |    |                  |    |    |    |                 |      |      |      |                     |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |
| Wrist protectors          | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 20                  | 20                    |         |      |         |   |   |                    |    |    |    |                 |    |    |    |                  |    |    |    |                 |      |      |      |                     |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |
| Palm protectors           | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 20                  | 20                    |         |      |         |   |   |                    |    |    |    |                 |    |    |    |                  |    |    |    |                 |      |      |      |                     |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |
| 5.6                       | <p><b>Abrasion resistance</b></p> <p>When tested in accordance with 6.5 the abrasion resistant layer of the protector shall not be perforated.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Pass<br>See annex 4 |                       |         |      |         |   |   |                    |    |    |    |                 |    |    |    |                  |    |    |    |                 |      |      |      |                     |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |
| 5.7                       | <p><b>Impact strength</b></p> <p>When tested in accordance with 6.6 the abrasion resistant layer of the knee, elbow, wrist or palm protector shall not break or split.</p> <p>Unit: J</p> <table><tr><th rowspan="3">Kind of protectors</th><th colspan="3">Level 1</th><th colspan="3">Level 2</th></tr><tr><th colspan="6">Range of body mass</th></tr><tr><th>A</th><th>B</th><th>C</th><th>A</th><th>B</th><th>C</th></tr><tr><td>Knee protectors</td><td>25±2</td><td>45±2</td><td>65±2</td><td>30±2</td><td>50±2</td><td>70±2</td></tr><tr><td>Elbow protectors</td><td>20±2</td><td>40±2</td><td>60±2</td><td>20±2</td><td>40±2</td><td>60±2</td></tr><tr><td>Wrist and Palm protectors</td><td>30±2</td><td>40±2</td><td>50±2</td><td>30±2</td><td>40±2</td><td>50±2</td></tr></table>                                 | Kind of protectors  | Level 1               |         |      | Level 2 |   |   | Range of body mass |    |    |    |                 |    | A  | B  | C                | A  | B  | C  | Knee protectors | 25±2 | 45±2 | 65±2 | 30±2                | 50±2 | 70±2 | Elbow protectors | 20±2 | 40±2 | 60±2 | 20±2 | 40±2 | 60±2 | Wrist and Palm protectors | 30±2 | 40±2 | 50±2 | 30±2 | 40±2 | 50±2 | Pass<br>See annex 5 |
| Kind of protectors        | Level 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                     |                       | Level 2 |      |         |   |   |                    |    |    |    |                 |    |    |    |                  |    |    |    |                 |      |      |      |                     |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |
|                           | Range of body mass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |                       |         |      |         |   |   |                    |    |    |    |                 |    |    |    |                  |    |    |    |                 |      |      |      |                     |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |
|                           | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | B                   | C                     | A       | B    | C       |   |   |                    |    |    |    |                 |    |    |    |                  |    |    |    |                 |      |      |      |                     |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |
| Knee protectors           | 25±2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 45±2                | 65±2                  | 30±2    | 50±2 | 70±2    |   |   |                    |    |    |    |                 |    |    |    |                  |    |    |    |                 |      |      |      |                     |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |
| Elbow protectors          | 20±2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 40±2                | 60±2                  | 20±2    | 40±2 | 60±2    |   |   |                    |    |    |    |                 |    |    |    |                  |    |    |    |                 |      |      |      |                     |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |
| Wrist and Palm protectors | 30±2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 40±2                | 50±2                  | 30±2    | 40±2 | 50±2    |   |   |                    |    |    |    |                 |    |    |    |                  |    |    |    |                 |      |      |      |                     |      |      |                  |      |      |      |      |      |      |                           |      |      |      |      |      |      |                     |



|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                      |      |      |     |     |    |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|-----|-----|----|-------------------------------------------------------------------------------------|-----------------------|--|--|--|--|--|---|--|---|--|---|--|-----------------|--|---|--|---|--|---|--|--|
| 5.8                                                                                 | <b>Impact performance for knee, palm and elbow protectors</b><br>A protector complies with this standard if the mean value of the peak force does not exceed the value in Table 2 when tested in accordance with 6.7.                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                      |      |      |     |     |    | Pass<br>See annex 6                                                                 |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     | Kind of protector                                                                                                                                                                                                                                                                                                                                                   | Protectors level 1                                                                                                                                                                                                                                                                                                                                   |      |      |     |     |    |                                                                                     | Maximum peak force kN |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                     | Range of body mass                                                                                                                                                                                                                                                                                                                                   |      |      |     |     |    |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                     | A                                                                                                                                                                                                                                                                                                                                                    |      | B    |     | C   |    |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                     | r                                                                                                                                                                                                                                                                                                                                                    | e    | r    | e   | r   | e  |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                     | mm                                                                                                                                                                                                                                                                                                                                                   | J    | mm   | J   | mm  | J  |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     | Knee protectors                                                                                                                                                                                                                                                                                                                                                     | 25                                                                                                                                                                                                                                                                                                                                                   | 3    | 35   | 8   | 50  | 12 |                                                                                     | 6                     |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     | Elbow protectors                                                                                                                                                                                                                                                                                                                                                    | 12.5                                                                                                                                                                                                                                                                                                                                                 | 1    | 17.5 | 4   | 25  | 6  |                                                                                     | 4                     |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     | Palm protectors                                                                                                                                                                                                                                                                                                                                                     | 100                                                                                                                                                                                                                                                                                                                                                  | 3    | 100  | 4   | 100 | 5  |                                                                                     | 3                     |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     | Kind of protector                                                                                                                                                                                                                                                                                                                                                   | Protectors level 2                                                                                                                                                                                                                                                                                                                                   |      |      |     |     |    |                                                                                     | Maximum peak force kN |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                     | Range of body mass                                                                                                                                                                                                                                                                                                                                   |      |      |     |     |    |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                     | A                                                                                                                                                                                                                                                                                                                                                    |      | B    |     | C   |    |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                     | r                                                                                                                                                                                                                                                                                                                                                    | e    | r    | e   | r   | e  |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                     | mm                                                                                                                                                                                                                                                                                                                                                   | J    | mm   | J   | mm  | J  |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
| Knee protectors                                                                     | 25                                                                                                                                                                                                                                                                                                                                                                  | 15                                                                                                                                                                                                                                                                                                                                                   | 35   | 20   | 50  | 25  | 6  |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
| Elbow protectors                                                                    | 12.5                                                                                                                                                                                                                                                                                                                                                                | 7.5                                                                                                                                                                                                                                                                                                                                                  | 17.5 | 10   | 25  | 15  | 4  |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
| Palm protectors                                                                     | 100                                                                                                                                                                                                                                                                                                                                                                 | 6                                                                                                                                                                                                                                                                                                                                                    | 100  | 8    | 100 | 10  | 3  |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
| r is the radius of curvature of the anvil<br>e is the impact energy                 |                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                      |      |      |     |     |    |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
| 5.9                                                                                 | <b>Specific requirements for wrist protectors</b>                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                      |      |      |     |     |    |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
| 5.9.1                                                                               | <b>Adjustment</b><br>The restraint system shall be continuously adjustable.<br>Testing in accordance with 6.1                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                      |      |      |     |     |    | Pass                                                                                |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
| 5.9.2                                                                               | <b>Stiffness</b><br>Wrist protectors shall be sufficiently stiff that when tested according to 6.8 the extension of the artificial wrist joint is between $\angle A \geq 35^\circ$ and $\angle A1$ and $55^\circ$ .<br><br>NOTE Extension of the wrist joint is the bending of the hand backwards from a position in a straight line with the forearm.<br>Unit: N-m |                                                                                                                                                                                                                                                                                                                                                      |      |      |     |     |    | Pass<br>See annex 3                                                                 |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                     | <table><tr><td rowspan="3"></td><td colspan="6">Range</td></tr><tr><td colspan="2">A</td><td colspan="2">B</td><td colspan="2">C</td></tr><tr><td colspan="2">Moment of force</td><td colspan="2">2</td><td colspan="2">3</td><td colspan="2">3</td></tr></table> |      |      |     |     |    |  | Range                 |  |  |  |  |  | A |  | B |  | C |  | Moment of force |  | 2 |  | 3 |  | 3 |  |  |
|  | Range                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                      |      |      |     |     |    |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     | A                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                      | B    |      | C   |     |    |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |
|                                                                                     | Moment of force                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                      | 2    |      | 3   |     | 3  |                                                                                     |                       |  |  |  |  |  |   |  |   |  |   |  |                 |  |   |  |   |  |   |  |  |



|       |                                                                                                                                                                                                                                                                                                                                                                          |                    |    |                     |    |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----|---------------------|----|
| 5.9.3 | <b>Dimensions of stiffness elements</b><br>Wrist protectors shall have stiffening elements that exceed the dimensions in table 3. The reference point for measurements shall be the plane of the wrist of an appropriate size of subject, who has put on the protector. The position of the plane of the wrist of the subject shall be determined according to EN 1082-1 |                    |    | Pass<br>See annex 2 |    |
|       | Unit: mm                                                                                                                                                                                                                                                                                                                                                                 |                    |    |                     |    |
|       | Location of stiffness elements                                                                                                                                                                                                                                                                                                                                           | Range of body mass |    |                     |    |
|       |                                                                                                                                                                                                                                                                                                                                                                          | A                  | B  |                     | C  |
|       | Length from the wrist up to the arm                                                                                                                                                                                                                                                                                                                                      | 30                 | 40 |                     | 50 |
|       | Length from the wrist towards the finger tip                                                                                                                                                                                                                                                                                                                             | 40                 | 50 |                     | 60 |
|       | Width in the palmer region                                                                                                                                                                                                                                                                                                                                               | 15                 | 20 |                     | 25 |

|                                                                                                      |                                                                                                      |    |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|----|
| 7                                                                                                    | <b>Marking</b>                                                                                       |    |
|                                                                                                      | Protectors shall be durably and clearly marked with the following:                                   | NT |
|                                                                                                      | a. name of trademark of the manufacturer or his authorized representative within the European Union; | NT |
|                                                                                                      | b. designation of the protector, commercial name of that uniquely identifies the protector;          | NT |
|                                                                                                      | c. size of the protector (see also 5.4)                                                              | NT |
|                                                                                                      | d. name of this standard and the performance level;                                                  | NT |
|                                                                                                      | e. clear indication whether the protector is for left or right fitting, if appropriate;              | NT |
|                                                                                                      | f. international care label symbols;                                                                 | NT |
|                                                                                                      | g. year of manufacture (date or code);                                                               | NT |
| h. the following pictogram, instructing the user to see the information supplied by the manufacture. | NT                                                                                                   |    |



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| Information supplied by the manufacturer |                                                                                                                                                                                                                                                                                                                                                                  |    |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 8                                        | Protectors shall be supplied with information and instructions for fitting and use to promote their safe and effective use. The information shall be precise and comprehensible and in the official languages of the country or region in which the equipment is to be placed on the market. At least the following information and instructions shall be given: | NT |
|                                          | a. all the information specified in clause 7;                                                                                                                                                                                                                                                                                                                    | NT |
|                                          | b. full address of the manufacturer or importer                                                                                                                                                                                                                                                                                                                  | NT |
|                                          | c. instructions on how to select protectors of the correct performance level and explanation of the performance level of the protectors specified in this standard;                                                                                                                                                                                              | NT |
|                                          | d. instructions on how to choose the correct size of protector and check its fit;                                                                                                                                                                                                                                                                                | NT |
|                                          | e. details of the size of protectors and the body dimensions to which they relate;                                                                                                                                                                                                                                                                               | NT |
|                                          | f. instructions on how to adjust the protectors;                                                                                                                                                                                                                                                                                                                 | NT |
|                                          | g. warning about any changes in environmental conditions, such as temperature, that would significantly reduce the performance of the protector;                                                                                                                                                                                                                 | NT |
|                                          | h. warning that no protector can offer full protection against injuries;                                                                                                                                                                                                                                                                                         | NT |
|                                          | i. warning about any contamination, alteration to the protector, or misuse that would dangerously reduce the performance of the protector;                                                                                                                                                                                                                       | NT |
|                                          | j. list of the substances in the main components of the protector;                                                                                                                                                                                                                                                                                               | NT |
|                                          | k. instructions for caring for and cleaning the protector;                                                                                                                                                                                                                                                                                                       | NT |
|                                          | l. instructions concerning the expected service life of the protector, inspections to carry out, repairs that may be made, and advice on when discard the protector because it might no longer perform adequately.                                                                                                                                               | NT |

Model: HP-S909

Range: C

Level: 1

### Annex 1: Restraint test result

Test Specification: EN 14120:2003+A1:2007-6.4

Ambient temperature at time of test: 22.2 °C

| Style        | Sample No. | Movement for upwards (mm) | Movement for downwards (mm) | Maximum movement requirement (mm)               | Result |
|--------------|------------|---------------------------|-----------------------------|-------------------------------------------------|--------|
| Knee         | 6          | 32                        | 48                          | Range A: 30mm<br>Range B: 50mm<br>Range C: 60mm | Pass   |
|              |            | 35                        | 45                          |                                                 |        |
|              |            | 33                        | 46                          |                                                 |        |
| Palm & Wrist | 6          | 7                         | 10                          | Range A: 20mm<br>Range B: 20mm<br>Range C: 20mm | Pass   |
|              |            | 8                         | 9                           |                                                 |        |
|              |            | 7                         | 9                           |                                                 |        |



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## Annex 2: Dimensions of stiffness elements test result

Test Specification: EN 14120:2003+A1:2007-5.9.3

Ambient temperature at time of test: 22.2 °C

| Style           | Sample No. | Location of stiffness elements               | Dimensions (mm) | Result |
|-----------------|------------|----------------------------------------------|-----------------|--------|
| Wrist protector | 7          | Length from the wrist up to the arm          | 80.2            | Pass   |
|                 |            | Length from the wrist towards the finger tip | 63.6            |        |
|                 |            | Width in the palmer region                   | 32.1            |        |

## Annex 3: Stiffness test result

Test Specification: EN 14120:2003+A1:2007-5.9.3

Ambient temperature at time of test: 22.2 °C

| Style           | Sample No. | Degree of angle (°) | Result |
|-----------------|------------|---------------------|--------|
| Wrist protector | 7          | 40°                 | Pass   |

## Annex 4: Abrasion resistance test result

Test Specification: EN 14120:2003+A1:2007-6.5.2

Ambient temperature at time of test: 22.2 °C

| Style                  | Sample No. | Test result description | Result |
|------------------------|------------|-------------------------|--------|
| Knee protector         | 6          | Not Perforated          | Pass   |
|                        | 7          | Not Perforated          |        |
| Palm & Wrist protector | 6          | Not Perforated          | Pass   |
|                        | 7          | Not Perforated          |        |

## Annex 5: Impact strength test result

Test Specification: EN 14120:2003+A1:2007-6.6

Ambient temperature at time of test: 22.2 °C

| Style          | Sample No. | Test result description | Result |
|----------------|------------|-------------------------|--------|
| Knee           | 4          | Not break or split      | Pass   |
|                | 5          | Not break or split      |        |
| Palm and wrist | 4          | Not break or split      | Pass   |
|                | 5          | Not break or split      |        |



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### Annex 6: Impact performance test result

Test Specification: EN 14120:2003+A1:2007-6.7

Ambient temperature at time of test: 22.2 °C

| Style          | Sample No. | Impact site | Peak force (kN) | Average (kN) | Requirement          | Result |
|----------------|------------|-------------|-----------------|--------------|----------------------|--------|
|                |            |             |                 |              | Max. peak force (kN) |        |
| Knee protector | 1          | 1           | 1.63            | 2.21         | 6                    | Pass   |
|                |            | 2           | 1.93            |              |                      |        |
|                | 2          | 3           | 1.19            |              |                      |        |
|                |            | 4           | 1.89            |              |                      |        |
|                | 3          | 5           | 2.13            |              |                      |        |
|                |            | 6           | 4.48            |              |                      |        |
| Palm protector | 1          | 1           | 2.13            | 2.11         | 3                    | Pass   |
|                |            | 2           | 1.99            |              |                      |        |
|                | 2          | 3           | 2.37            |              |                      |        |
|                |            | 4           | 2.13            |              |                      |        |
|                | 3          | 5           | 1.89            |              |                      |        |
|                |            | 6           | 2.13            |              |                      |        |

## II. Analysis of AZO Dye and to Determine the PH Value in the submitted sample.

SGS Ref No.: CAN19-030887

| Test Requested                                        | Result      |
|-------------------------------------------------------|-------------|
| To determine the pH Value in the submitted sample(s). | See Results |
| Determination of Azodyes in the submitted sample(s).  | See Results |

Test Results :.

### Test Part Description :

| Specimen No. | SGS Sample ID    | Description      |
|--------------|------------------|------------------|
| SN1          | CAN19-030887.001 | Black thread     |
| SN2          | CAN19-030887.002 | Dark gray thread |
| SN3          | CAN19-030887.003 | Cyan thread      |

Remarks :

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected ( < MDL )



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Guangzhou Branch Testing Center Hualin Road

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(4) "-" = Not Regulated

### pH value

Test Method : With reference to ISO 3071:2005, analysis was performed by pH meter.

| Test Item(s) | 001 | 002 | 003 |
|--------------|-----|-----|-----|
| pH value     | 6.4 | 6.3 | 6.7 |

### Azo Dyes

Test Method : With reference to ISO14362-1:2017, analysis was conducted with GC-MS/HPLC-DAD.

| Test Item(s)                       | CAS NO.  | Unit  | MDL | 001      | 002      |
|------------------------------------|----------|-------|-----|----------|----------|
|                                    |          |       |     | Method A | Method B |
| 4-Aminobiphenyl                    | 92-67-1  | mg/kg | 5   | ND       | ND       |
| Benzidine                          | 92-87-5  | mg/kg | 5   | ND       | ND       |
| 4-chloro-o-toluidine               | 95-69-2  | mg/kg | 5   | ND       | ND       |
| 2-naphthylamine                    | 91-59-8  | mg/kg | 5   | ND       | ND       |
| o-aminoazotoluene                  | 97-56-3  | mg/kg | 5   | ND       | ND       |
| 5-nitro-o-toluidine /              | 99-55-8  | mg/kg | 5   | ND       | ND       |
| 2-Amino-4-nitrotoluene             |          |       |     |          |          |
| 4-chloroaniline                    | 106-47-8 | mg/kg | 5   | ND       | ND       |
| 4-methoxy-m-phenylenediamine       | 615-05-4 | mg/kg | 5   | ND       | ND       |
| / 2,4-Diaminoanisole               |          |       |     |          |          |
| 4,4'-diaminodiphenylmethane        | 101-77-9 | mg/kg | 5   | ND       | ND       |
| 3,3'-dichlorobenzidine             | 91-94-1  | mg/kg | 5   | ND       | ND       |
| 3,3'-dimethoxybenzidine            | 119-90-4 | mg/kg | 5   | ND       | ND       |
| 3,3'-dimethylbenzidine             | 119-93-7 | mg/kg | 5   | ND       | ND       |
| 4,4'-methylenedi-o-toluidine/3,3'- | 838-88-0 | mg/kg | 5   | ND       | ND       |
| Dimethyl-4,4'-diaminodiphenylm     |          |       |     |          |          |
| ethane                             |          |       |     |          |          |
| p-cresidine                        | 120-71-8 | mg/kg | 5   | ND       | ND       |
| 4,4'-methylene-bis-                | 101-14-4 | mg/kg | 5   | ND       | ND       |
| (2-chloroaniline)                  |          |       |     |          |          |
| 4,4'-oxydianiline                  | 101-80-4 | mg/kg | 5   | ND       | ND       |
| 4,4'-thiodianiline                 | 139-65-1 | mg/kg | 5   | ND       | ND       |
| o-toluidine                        | 95-53-4  | mg/kg | 5   | ND       | ND       |
| 4-methyl-m-phenylenediamine /      | 95-80-7  | mg/kg | 5   | ND       | ND       |
| 2,4-Toluyldiamine                  |          |       |     |          |          |



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|                        |          |       |   |    |    |
|------------------------|----------|-------|---|----|----|
| 2,4,5-trimethylaniline | 137-17-7 | mg/kg | 5 | ND | ND |
| 4-aminoazobenzene      | 60-09-3  | mg/kg | 5 | ND | ND |
| O-Anisidine            | 90-04-0  | mg/kg | 5 | ND | ND |
| 2,4-Xylidine           | 95-68-1  | mg/kg | 5 | ND | ND |
| 2,6-Xylidine           | 87-62-7  | mg/kg | 5 | ND | ND |

| Test Item(s)                       | CAS NO.  | Unit  | MDL | 002      |          |
|------------------------------------|----------|-------|-----|----------|----------|
|                                    |          |       |     | Method A | Method B |
| 4-Aminobiphenyl                    | 92-67-1  | mg/kg | 5   | ND       | ND       |
| Benzidine                          | 92-87-5  | mg/kg | 5   | ND       | ND       |
| 4-chloro-o-toluidine               | 95-69-2  | mg/kg | 5   | ND       | ND       |
| 2-naphthylamine                    | 91-59-8  | mg/kg | 5   | ND       | ND       |
| o-aminoazotoluene                  | 97-56-3  | mg/kg | 5   | ND       | ND       |
| 5-nitro-o-toluidine /              | 99-55-8  | mg/kg | 5   | ND       | ND       |
| 2-Amino-4-nitrotoluene             |          |       |     |          |          |
| 4-chloroaniline                    | 106-47-8 | mg/kg | 5   | ND       | ND       |
| 4-methoxy-m-phenylenediamine       | 615-05-4 | mg/kg | 5   | ND       | ND       |
| / 2,4-Diaminoanisole               |          |       |     |          |          |
| 4,4'-diaminodiphenylmethane        | 101-77-9 | mg/kg | 5   | ND       | ND       |
| 3,3'-dichlorobenzidine             | 91-94-1  | mg/kg | 5   | ND       | ND       |
| 3,3'-dimethoxybenzidine            | 119-90-4 | mg/kg | 5   | ND       | ND       |
| 3,3'-dimethylbenzidine             | 119-93-7 | mg/kg | 5   | ND       | ND       |
| 4,4'-methylenedi-o-toluidine/3,3'- | 838-88-0 | mg/kg | 5   | ND       | ND       |
| Dimethyl-4,4'-diaminodiphenylm     |          |       |     |          |          |
| ethane                             |          |       |     |          |          |
| p-cresidine                        | 120-71-8 | mg/kg | 5   | ND       | ND       |
| 4,4'-methylene-bis-                | 101-14-4 | mg/kg | 5   | ND       | ND       |
| (2-chloroaniline)                  |          |       |     |          |          |
| 4,4'-oxydianiline                  | 101-80-4 | mg/kg | 5   | ND       | ND       |
| 4,4'-thiodianiline                 | 139-65-1 | mg/kg | 5   | ND       | ND       |
| o-toluidine                        | 95-53-4  | mg/kg | 5   | ND       | ND       |
| 4-methyl-m-phenylenediamine /      | 95-80-7  | mg/kg | 5   | ND       | ND       |
| 2,4-Toluyldiamine                  |          |       |     |          |          |
| 2,4,5-trimethylaniline             | 137-17-7 | mg/kg | 5   | ND       | ND       |
| 4-aminoazobenzene                  | 60-09-3  | mg/kg | 5   | ND       | ND       |
| O-Anisidine                        | 90-04-0  | mg/kg | 5   | ND       | ND       |
| 2,4-Xylidine                       | 95-68-1  | mg/kg | 5   | ND       | ND       |
| 2,6-Xylidine                       | 87-62-7  | mg/kg | 5   | ND       | ND       |

| Test Item(s)         | CAS NO. | Unit  | MDL | 003      |  |
|----------------------|---------|-------|-----|----------|--|
|                      |         |       |     | Method A |  |
| 4-Aminobiphenyl      | 92-67-1 | mg/kg | 5   | ND       |  |
| Benzidine            | 92-87-5 | mg/kg | 5   | ND       |  |
| 4-chloro-o-toluidine | 95-69-2 | mg/kg | 5   | ND       |  |
| 2-naphthylamine      | 91-59-8 | mg/kg | 5   | ND       |  |



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|                                    |          |       |   |    |
|------------------------------------|----------|-------|---|----|
| o-aminoazotoluene                  | 97-56-3  | mg/kg | 5 | ND |
| 5-nitro-o-toluidine /              | 99-55-8  | mg/kg | 5 | ND |
| 2-Amino-4-nitrotoluene             |          |       |   |    |
| 4-chloroaniline                    | 106-47-8 | mg/kg | 5 | ND |
| 4-methoxy-m-phenylenediamine       | 615-05-4 | mg/kg | 5 | ND |
| / 2,4-Diaminoanisole               |          |       |   |    |
| 4,4'-diaminodiphenylmethane        | 101-77-9 | mg/kg | 5 | ND |
| 3,3'-dichlorobenzidine             | 91-94-1  | mg/kg | 5 | ND |
| 3,3'-dimethoxybenzidine            | 119-90-4 | mg/kg | 5 | ND |
| 3,3'-dimethylbenzidine             | 119-93-7 | mg/kg | 5 | ND |
| 4,4'-methylenedi-o-toluidine/3,3'- | 838-88-0 | mg/kg | 5 | ND |
| Dimethyl-4,4'-diaminodiphenylm     |          |       |   |    |
| ethane                             |          |       |   |    |
| p-cresidine                        | 120-71-8 | mg/kg | 5 | ND |
| 4,4'-methylene-bis-                | 101-14-4 | mg/kg | 5 | ND |
| (2-chloroaniline)                  |          |       |   |    |
| 4,4'-oxydianiline                  | 101-80-4 | mg/kg | 5 | ND |
| 4,4'-thiodianiline                 | 139-65-1 | mg/kg | 5 | ND |
| o-toluidine                        | 95-53-4  | mg/kg | 5 | ND |
| 4-methyl-m-phenylenediamine /      | 95-80-7  | mg/kg | 5 | ND |
| 2,4-Toluyldiamine                  |          |       |   |    |
| 2,4,5-trimethylaniline             | 137-17-7 | mg/kg | 5 | ND |
| 4-aminoazobenzene                  | 60-09-3  | mg/kg | 5 | ND |
| O-Anisidine                        | 90-04-0  | mg/kg | 5 | ND |
| 2,4-Xylidine                       | 95-68-1  | mg/kg | 5 | ND |
| 2,6-Xylidine                       | 87-62-7  | mg/kg | 5 | ND |

### Notes :

- (1) Method A is direct reduction, direct reduction refers to the extraction and reduction according to ISO 14362-1:2017 clause 10.2 and relevant clauses. Method B is colorant extraction, colorant extraction refers to the colourant extraction and subsequent reduction according to ISO 14362-1:2017 clause 10.1 and relevant clauses.
- (2) Whenever 4-aminodiphenyl (CAS number 92-67-1), 2-naphylamine (CAS number 91-59-8) and 4-methoxy-m-phenylene-diamine (CAS number 615-05-4) is found, the use of banned azo colorants cannot be reliably ascertained without additional information, e.g. the chemical structure of the colorants used.
- (3) In case polyurethane materials are used, e.g. PU foams and coatings and in prints, it cannot be ruled out that certain amines, e.g. 4,4'-methylene-dianiline (MDA, CAS number 101-77-9) and 2,4-toluylen-diamine (TDA, CAS number 95-80-7) are released from the PU component and not from a banned azo colorant.
- (4) In case of pigment prints care has to be taken that 4,4'-methylene-dianiline (MDA, CAS number 101-77-9) is not released from a source of banned azo colorants but from e.g. a chemical fixing agent.



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Sample photo:



Product Photo



Product Photo



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Product Photo

### III. Colour Fastness to Perspiration.

SGS Ref. No.: SL91939220804101TX

THREE SAMPLES OF THREAD MARKED AS (A)1#Black Thread (B)2#Gray Thread (C) 3#Green Thread

### Test Result

#### Colour Fastness To Perspiration

(ISO 105-E04:2013;test specimen in vertical position)

#### Acid

| -                              | Unit | (A) | (B) | (C) | Requirement |
|--------------------------------|------|-----|-----|-----|-------------|
| Change In Shade                | -    | 4-5 | 4-5 | 4-5 | -           |
| Staining On Multi-fibre Stripe |      |     |     |     |             |
| Acetate                        | -    | 4-5 | 4-5 | 4-5 | -           |
| Cotton                         | -    | 4-5 | 4-5 | 4-5 | -           |
| Nylon                          | -    | 4-5 | 4-5 | 4-5 | -           |
| Polyester                      | -    | 4-5 | 4-5 | 4-5 | -           |
| Acrylic                        | -    | 4-5 | 4-5 | 4-5 | -           |
| Wool                           | -    | 4-5 | 4-5 | 4-5 | -           |



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### Alkaline

| -                              | Unit | (A) | (B) | (C) | Requirement |
|--------------------------------|------|-----|-----|-----|-------------|
| Change In Shade                | -    | 4-5 | 4-5 | 4-5 | -           |
| Staining On Multi-fibre Stripe |      |     |     |     |             |
| Acetate                        | -    | 4-5 | 4-5 | 4-5 | -           |
| Cotton                         | -    | 4-5 | 4-5 | 4-5 | -           |
| Nylon                          | -    | 4-5 | 4-5 | 4-5 | -           |
| Polyester                      | -    | 4-5 | 4-5 | 4-5 | -           |
| Acrylic                        | -    | 4-5 | 4-5 | 4-5 | -           |
| Wool                           | -    | 4-5 | 4-5 | 4-5 | -           |

Remark: Grey Scale Rating is based on the 5-step scale of 1 to 5, where 1 is worst and 5 is best.

### Sample Photo



### Remark:

1. Pass means the test sample met the requirement of the test item.
2. NA means not applicable.  
NT means not tested as per client's request.
3. A material list for each part of the product and a statement to announce the material complying with requirements of the standard are received from the manufacturer



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### Sample Photo(s):



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|                                   |                                                                                     |
|-----------------------------------|-------------------------------------------------------------------------------------|
| <p>Front view &amp; Back view</p> |   |
| <p>Test area &amp; Test sites</p> |  |

\*\*\*End of Report\*\*\*

