

Test Report

No.: GZHL1911047811CE

Date: Feb 20, 2020

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POWERSLIDE SPORTARTIKELVERTRIEBS GMBH
ESBACHGRABEN 1, 95463 BINDLACH, GERMANY

Sample Description : POWERSLIDE ONE BASIC ADULT TRI-PACK
Style / Item No. : PS-BS101
Buyer : POWERSLIDE SPORTARTIKELVERTRIEBS GMBH
Manufacturer : HYPRO INDUSTRIAL CO., LTD
Country of Origin : CHINA
Country of Destination : EUROPE, USA

As above test item and its relevant information regarding to the submission are provided and confirmed by the applicant. SGS is not liable to either the test item or its relevant information, in terms of the accuracy, suitability, reliability or/and integrity accordingly.

Range : C
Level : 1
Sample Receiving Date : Nov 15, 2019
Sample Resubmission Date : Nov 25, 2019
Test Performing Date : Nov 15, 2019 to Feb 19, 2020
Test Performed : EN 14120:2003+A1:2007(Exclude clause 5.4/7/8),
Analysis of Azo Dye,
To Determine the pH Value,
Color Fastness to Perspiration
Test Result(s) : For further details, please refer to the following page(s)

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch



scan to see the report



GZHL1911047811CE

Lei Wu
Authorized Signatory



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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.

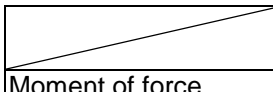
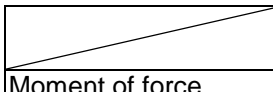
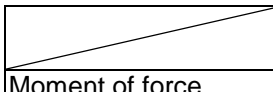
Test Results:

Clause	Test Method/Requirement	Result
4	Performance levels	
4.1	Level 1: Protectors intended to be suitable for normal roller sports.	---
4.2	Level 2: Protectors intended to be suitable for use in acrobatic roller sports.	
5	Requirements	
5.1	General performance requirements shall be based on 3 weight ranges as follows: a) range A : Users of up to 25 kg body weight ; b) range B : Users of body weight between 25 kg and 50 kg ; c) range C : Users of body weight above 50 kg. Combined protectors such as wrist protectors shall meet the requirements for each protector.	---
5.2	Ergonomics 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
5.3	Innocuousness 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.	Pass
5.4	Sizing 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



5.5	<p>Restraint</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 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>Abrasion resistance</p> <p>When tested in accordance with 6.5 the abrasion resistant layer of the protector shall not be perforated.</p>	Pass See annex 4																																								
5.7	<p>Impact strength</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 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	Impact performance for knee, palm and elbow protectors 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 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 e is the impact energy																			
5.9	Specific requirements for wrist protectors																		
5.9.1	Adjustment The restraint system shall be continuously adjustable. Testing in accordance with 6.1							Pass											
5.9.2	Stiffness Wrist protectors shall be sufficiently stiff that when tested according to 6.8 the extension of the artificial wrist joint is between $\boxed{A1} > 35^\circ \boxed{A1}$ and 55° . NOTE Extension of the wrist joint is the bending of the hand backwards from a position in a straight line with the forearm. Unit: N-m <table><tr><td rowspan="3"></td><td colspan="3">Range</td></tr><tr><td>A</td><td>B</td><td>C</td></tr><tr><td>Moment of force</td><td>2</td><td>3</td><td>3</td></tr></table>								Range			A	B	C	Moment of force	2	3	3	Pass See annex 3
	Range																		
	A	B	C																
	Moment of force	2	3	3															



5.9.3	Dimensions of stiffness elements 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 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	Marking		
	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	



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



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Model: PS-BS101

Range: C

Level: 1

Size: S

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	20	28	Range A: 30mm Range B: 50mm Range C: 60mm	Pass
		22	29		
		22	28		
Elbow	6	19	25	Range A: 20mm Range B: 40mm Range C: 50mm	Pass
		20	26		
		20	26		
Palm & Wrist	6	4	8	Range A: 20mm Range B: 20mm Range C: 20mm	Pass
		4	7		
		5	7		

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	84.5	Pass
		Length from the wrist towards the finger tip	62.0	
		Width in the palmer region	36.0	

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	43°	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	
Elbow	6	Not Perforated	Pass



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protector	7	Not Perforated	Pass
Palm & Wrist protector	6	Not Perforated	
protector	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	
Elbow	4	Not break or split	Pass
	5	Not break or split	
Palm & wrist	4	Not break or split	Pass
	5	Not break or split	

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	1.60	2.43	6	Pass
		2	2.28			
	2	3	0.80			
		4	2.13			
	3	5	1.22			
		6	6.52			
Elbow protector	1	1	2.37	3.19	4	Pass
		2	3.32			
	2	3	1.45			
		4	4.03			
	3	5	0.86			
		6	7.11			
Palm protector	1	1	1.66	1.81	3	Pass
		2	1.86			
	2	3	1.36			
		4	1.96			
	3	5	1.90			
		6	2.09			



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Model: PS-BS101

Range: C

Level: 1

Size: M

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	23	30	Range A: 30mm Range B: 50mm Range C: 60mm	Pass
		25	31		
		25	31		
Elbow	6	22	28	Range A: 20mm Range B: 40mm Range C: 50mm	Pass
		23	28		
		23	28		
Palm & Wrist	6	5	8	Range A: 20mm Range B: 20mm Range C: 20mm	Pass
		5	7		
		5	9		

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	82.0	Pass
		Length from the wrist towards the finger tip	63.5	
		Width in the palmer region	36.0	

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	50°	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	
Elbow	6	Not Perforated	Pass



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protector	7	Not Perforated	Pass
Palm & Wrist protector	6	Not Perforated	
	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	
Elbow	4	Not break or split	Pass
	5	Not break or split	
Palm & wrist	4	Not break or split	Pass
	5	Not break or split	

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	1.87	2.42	6	Pass
		2	2.52			
	2	3	0.95			
		4	2.01			
	3	5	1.38			
		6	5.79			
Elbow protector	1	1	2.46	3.22	4	Pass
		2	3.01			
	2	3	1.58			
		4	4.24			
	3	5	1.16			
		6	6.88			
Palm protector	1	1	1.82	1.97	3	Pass
		2	2.05			
	2	3	1.58			
		4	2.23			
	3	5	1.74			
		6	2.38			



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Model: PS-BS101

Range: C

Level: 1

Size: L

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	26	36	Range A: 30mm Range B: 50mm Range C: 60mm	Pass
		28	38		
		27	38		
Elbow	6	25	33	Range A: 20mm Range B: 40mm Range C: 50mm	Pass
		25	30		
		23	31		
Palm & Wrist	6	6	9	Range A: 20mm Range B: 20mm Range C: 20mm	Pass
		5	8		
		5	9		

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	82.5	Pass
		Length from the wrist towards the finger tip	62.5	
		Width in the palmer region	36.0	

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	47°	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	
Elbow	6	Not Perforated	Pass



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protector	7	Not Perforated	Pass
Palm & Wrist protector	6	Not Perforated	
protector	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	
Elbow	4	Not break or split	Pass
	5	Not break or split	
Palm & wrist	4	Not break or split	Pass
	5	Not break or split	

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	1.66	2.85	6	Pass
		2	3.18			
	2	3	1.16			
		4	1.90			
	3	5	1.46			
		6	7.74			
Elbow protector	1	1	1.95	2.56	4	Pass
		2	2.19			
	2	3	1.09			
		4	3.71			
	3	5	0.72			
		6	5.70			
Palm protector	1	1	1.90	1.89	3	Pass
		2	1.95			
	2	3	1.83			
		4	2.11			
	3	5	1.85			
		6	1.68			



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Model: PS-BS101

Range: C

Level: 1

Size: XL

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	33	45	Range A: 30mm Range B: 50mm Range C: 60mm	Pass
		32	44		
		33	45		
Elbow	6	28	40	Range A: 20mm Range B: 40mm Range C: 50mm	Pass
		28	41		
		29	41		
Palm & Wrist	6	6	9	Range A: 20mm Range B: 20mm Range C: 20mm	Pass
		6	9		
		7	8		

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	81.5	Pass
		Length from the wrist towards the finger tip	64.0	
		Width in the palmer region	36.0	

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	51°	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	
Elbow	6	Not Perforated	Pass



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protector	7	Not Perforated	Pass
Palm & Wrist protector	6	Not Perforated	
	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	
Elbow	4	Not break or split	Pass
	5	Not break or split	
Palm & wrist	4	Not break or split	Pass
	5	Not break or split	

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	1.75	2.73	6	Pass
		2	3.25			
	2	3	1.20			
		4	1.85			
	3	5	1.63			
		6	6.69			
Elbow protector	1	1	1.90	2.51	4	Pass
		2	2.34			
	2	3	1.21			
		4	3.20			
	3	5	0.95			
		6	5.46			
Palm protector	1	1	1.82	1.96	3	Pass
		2	1.90			
	2	3	1.67			
		4	2.27			
	3	5	1.80			
		6	2.30			



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

SGS Ref No.: CAN19-229919

Test Requested	Result
To determine the pH value content(s) in the submitted sample(s).	See Results
Entry 43 of Commission Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 - Azodyes	PASS

Test Results :.

Test Part Description :

SGS Sample ID	Description
CAN19-229919.001	Black fabric
CAN19-229919.002	Black fabric strap
CAN19-229919.003	Black elastic fabric sheet
CAN19-229919.004	Black thread
CAN19-229919.005	Black elastic strap

Remarks :

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (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	6.1	5.2	6.3

Test Item(s)	004	005
pH value	6.2	6.3

Notes :

- (1)Extraction medium: KCl solution
- (2)pH value of extraction medium: 5.0 - 7.5
- (3)Temperature of the extraction solution: 22±2°C


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Azo Dyes

Test Method : With reference to ISO 14362-1:2017, analysis was conducted with GC-MS/HPLC-DAD. Determination of 4-aminoazobenzene (CAS No.:60-09-3) with reference to ISO 14362-3:2017, analysis was conducted with GC-MS/HPLC-DAD.

Test Item(s)	CAS NO.	Unit	MDL	001	
				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	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



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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	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



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Dimethyl-4,4'-diaminodiphenylmethane

p-cresidine	120-71-8	mg/kg	5	ND	ND
4,4'-methylene-bis-(2-chloroaniline)	101-14-4	mg/kg	5	ND	ND
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 / 2,4-Toluyldiamine	95-80-7	mg/kg	5	ND	ND
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	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 / 2-Amino-4-nitrotoluene	99-55-8	mg/kg	5	ND	ND
4-chloroaniline	106-47-8	mg/kg	5	ND	ND
4-methoxy-m-phenylenediamine / 2,4-Diaminoanisole	615-05-4	mg/kg	5	ND	ND
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'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	mg/kg	5	ND	ND
p-cresidine	120-71-8	mg/kg	5	ND	ND
4,4'-methylene-bis-(2-chloroaniline)	101-14-4	mg/kg	5	ND	ND
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 / 2,4-Toluyldiamine	95-80-7	mg/kg	5	ND	ND
2,4,5-trimethylaniline	137-17-7	mg/kg	5	ND	ND
4-aminoazobenzene	60-09-3	mg/kg	5	ND	ND



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Test Report

No.: GZHL1911047811CE

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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	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

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) The ISO 14362-1:2017 methods will enable further cleavage of 4-aminoazobenzene to non-forbidden amines: aniline and 1,4-phenylenediamine, therefore, the test method of ISO 14362-3:2017 was employed to verify the presence of 4-aminoazobenzene.



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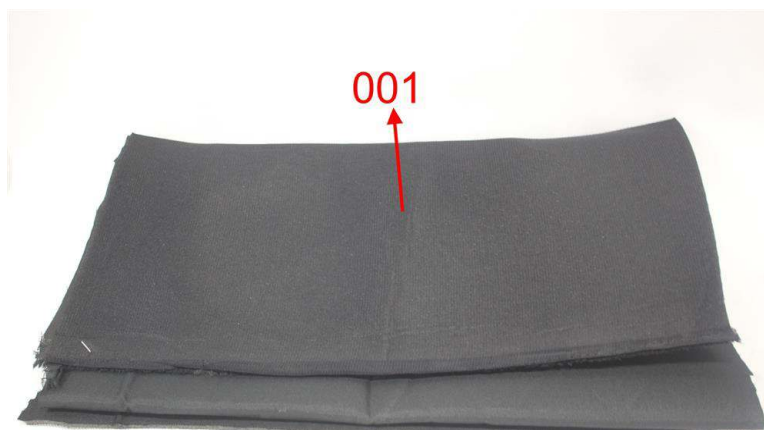
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- (3) Max. limit ≤ 30 mg/kg for each aromatic amine specified by entry 43 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2002/61/EC).
- (4) Whenever 4-aminodiphenyl (CAS 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.
- (5) 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.
- (6) 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.

Sample photo:

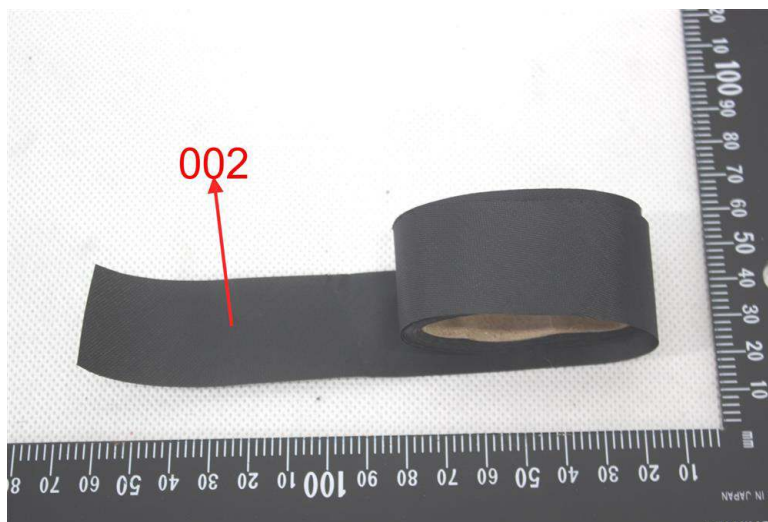


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III. Colour Fastness to Perspiration.

SGS Ref. No.: SL91949301181501TX

(A)BLACK PADDING, (B)BLACK EDGE FABRIC, (C)BLACK FABRIC, (D)BLACK THREAD, (E)BLACK STRAP

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	-

-	Unit	(D)	(E)	Requirement
Change In Shade	-	4-5	4-5	-
Staining On Multi-fibre Stripe				
Acetate	-	4-5	4-5	-
Cotton	-	4-5	4-5	-
Nylon	-	4-5	4-5	-
Polyester	-	4-5	4-5	-
Acrylic	-	4-5	4-5	-
Wool	-	4-5	4-5	-

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	-

-	Unit	(D)	(E)	Requirement
Change In Shade	-	4-5	4-5	-



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Date: Feb 20, 2020

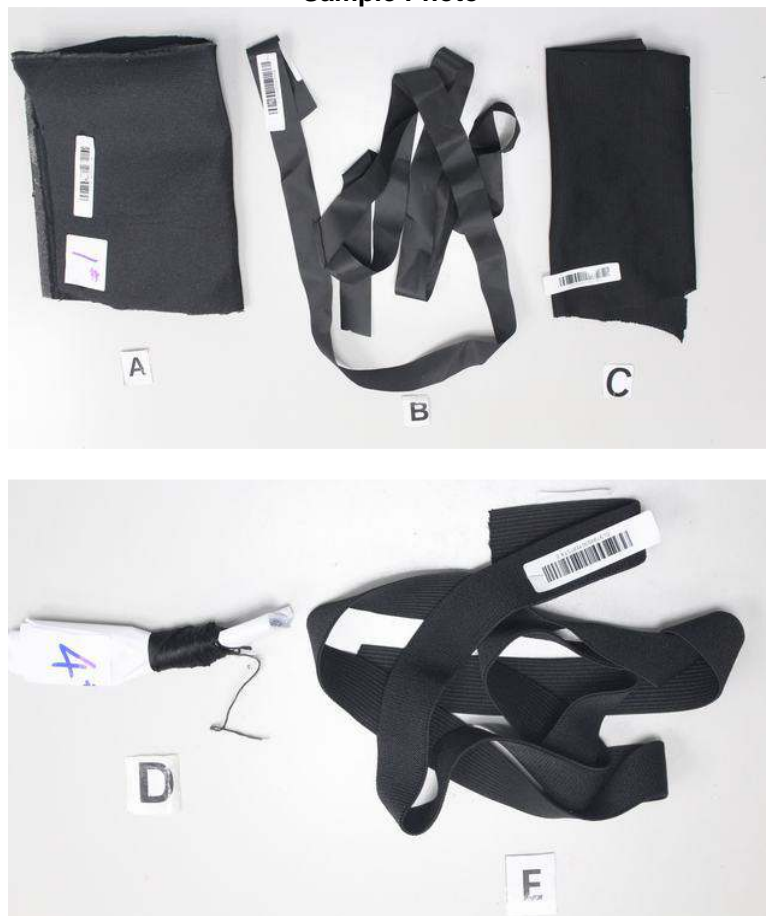
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Staining On Multi-fibre Stripe

Acetate	-	4-5	4-5	-
Cotton	-	4-5	4-5	-
Nylon	-	4-5	4-5	-
Polyester	-	4-5	4-5	-
Acrylic	-	4-5	4-5	-
Wool	-	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>Test area & Test sites</p>	
<p>Test area & Test sites</p>	

End of Report



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