



INTERNATIONAL TESTING CENTRE

TEST CERTIFICATE

Customer Name : MIPS International Pvt. Ltd.
Contact person : Mr.
Address : 40, Rabindra Sarani Kolkata - 700073.
Sample description: Safety Shoes (Size -8), Design- A
Specification : IS- 15298 (P-2) : 2016, Classification – I
Testing period : 07.10.2023 to 23.10.2023

Test report No. : 2K2310048
Date of Entry : 05.10.2023

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Reporting date: 23.10.2023

Laboratory Environment

Temperature : $27 \pm 2^{\circ}\text{C}$
 Relative Humidity : $65 \pm 5\%$
 The sample was conditioned for 48 hours.

S.No.	Test Name	Clause	Value	Requirement	Conformity
1.Design (5.2)					
a.	Design	5.2.1	Design - A	Design – A	Conforms
b.	Height of upper	5.2.2	< 113 mm	< 113 mm	Conforms
c.	Seat Region	5.2.3	Closed, no hole below 50 mm	Closed, no holes below the 50 mm height beneath the sole	Conforms
2.Test on Whole Footwear (5.3)					
a.	Construction	5.3.1.1	Yes	Insole can not be removed without damaging the footwear	Conforms
b.	Upper/Outsole bond	5.3.1.2	4.8 N/mm	4 N/mm (minimum)	Conforms
c.	Toe Protection (5.3.2) : General	5.3.2.1	Toe-cap has been incorporated in such a way that it can not be removed without damaging the shoe. The toecaps have a vamp lining.	Toe-cap shall be incorporated in such a way that it can not be removed without damaging the shoe. The toe-caps shall have a vamp lining .	Conforms
	Covering beneath the toe-cap		> 5.0 mm	> 5mm	Conforms
	Covering in opposite direction		>10.0 mm	> 10 mm	Conforms
d.	Internal Toe cap length	5.3.2.2	40.6 mm	39 mm (minimum)	Conforms
e.	Impact resistance – 200 Joules	5.3.2.3	15.0 mm No crack observed	14.0 mm (min.) toecap should not cracks on the test axis.	Conforms
f.	Compression resistance-15 kN	5.3.2.4	17.0 mm	14.0 mm (minimum)	Conforms
g.	Specific ergonomic features		5.3.4		
i.	Is the inside surface of the footwear free from rough ,sharp or hard areas that caused you irritation or injury ?		Yes	Yes/No	Conforms
ii.	Is the footwear free of features that you consider to make wearing the footwear hazardous?		Yes	Yes/No	Conforms
iii.	Can the fastening be adequately adjusted (if necessary)?		Yes	Yes/No	Conforms
iv.	Can the following activities be performed without problem:				
	Walking		Yes	Yes/No	Conforms
	Climbing stairs		Yes	Yes/No	Conforms
	Kneeling/crouching down		Yes	Yes/No	Conforms
h.	Slip resistance – 5.3.5	5.3.5.2	0.30 0.37	Coefficient of friction for Condition A(Forward heel slip) -0.28 Condition B(Forward flat slip) - 0.32	Conforms
	Ceramic floor with SLS (SRA)				

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S.No.	Test Name	Clause	Value	Requirement	Conformity
3.Test on Upper (5.4)					
A. Leather					
a.	General	5.4.1	> 50 mm	50 mm (min.)	Conforms
b.	Thickness	5.4.2	Not applicable for Classification - I		
c.	Tear strength	5.4.3	376 N	120 N (minimum)	Conforms
d.	Tensile strength	5.4.4	30.0 N/mm ²	15N/mm ² (minimum)	Conforms
e.	Flexing resistance	5.4.5	Not applicable for Leather upper		
f.	Water vapour permeability	5.4.6	0.98 mg/cm ² h	0.8 mg/cm ² h (minimum)	Conforms
	Water vapour coefficient		16.7 mg/cm ²	15 g/cm ² (minimum)	
B. Textile					
a.	General	5.4.1	> 50 mm	50 mm (min.)	Conforms
b.	Thickness	5.4.2	Not applicable for Classification - I		
c.	Tear strength	5.4.3	123 N	60 N (minimum)	Conforms
d.	Tensile strength	5.4.4	Not applicable for Textile		
e.	Flexing resistance	5.4.5	Not applicable for Class. I		
f.	Water vapour permeability	5.4.6	>0.8 mg/cm ² h	0.8 mg/cm ² h (minimum)	Conforms
	Water vapour coefficient		>15 mg/cm ²	15 mg/cm ² (minimum)	
4.Test on Vamp Lining (5.5) – Non Woven					
a.	Tear strength	5.5.1	46 N	15 N(minimum)	Conforms
b.	Martindale abrasion	5.5.2	No hole observed No hole observed	DRY-No hole till 25,600 cycles WET-No hole till 12,800 cycles	Conforms
c.	Water vapour permeability	5.5.3	>2.0 mg/cm ² h	2.0 mg/cm ² h(minimum)	Conforms
	Water vapour coefficient		>20 mg/cm ²	20.0 mg/cm ² (minimum)	
d.	pH & Chromium	5.5.4 & 5.5.5	Not applicable for Non Leather material		
5.Test on Quarter Lining (5.5) – Mesh					
a.	Tear strength	5.5.1	31 N	30 N(minimum)	Conforms
b.	Martindale abrasion	5.5.2	No hole observed No hole observed	DRY-No hole till 25,600 cycles WET-No hole till 12,800 cycles	Conforms
c.	Water vapour permeability	5.5.3	>2.0 mg/cm ² h	2.0 mg/cm ² h(minimum)	Conforms
	Water vapour coefficient		>20 mg/cm ²	20.0 mg/cm ² (minimum)	
6.Test on Seat region lining (5.5)					
a.	Martindale abrasion	5.5.2	No hole observed No hole observed	DRY-No hole till 51,200 cycles WET-No hole till 25,600 cycles	Conforms
7.Test on Tongue (5.6) – Same as Textile Upper					
8.Test on Insole & Insock – 5.7- Full insock Removable & water permeable					
a.	Thickness (insole)	5.7.1	>2.0 mm	2 mm (minimum)	Conforms
b.	Water absorption & Desorption (insole)	5.7.3	>70 mg/cm ² 100 %	70 mg/cm ² (minimum) 80 %(minimum)	Conforms
c.	Water absorption & Desorption (insock)	5.7.3	Not applicable for Water permeable Insock.		
d.	Abrasion resistance (insole)	5.7.4.1	No damage	400cycles (minimum)	Conforms

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S.No.	Test Name	Clause	Value	Requirement	Conformity
e.	Martindale abrasion (Insock)	5.7.4.2	No hole observed No hole observed	DRY-No hole till 25,600 cycles WET-No hole till 12,800 cycles	Conforms
f.	pH & Chromium VI	5.7.2 & 5.7.5	Not applicable for Non Leather material.		
9.Test on sole – 5.8 – PU					
a.	Design	5.8.1	Cleated Sole	Cleated or non-cleated	Conforms
b.	Thickness(Cleated Out sole)	5.8.1.1	>4.0 mm	$d_1 \geq 4.0$ mm	Conforms
c.	Cleated Area : at fore part at heel part	5.8.1.2	> 0.45 L > 0.25 L	0.45 x L (minimum) at fore part 0.25 x L (minimum) at heel part	Conforms
d.	Cleat height	5.8.1.3	>2.5 mm	$d_2 \geq 2.5$ mm	Conforms
e.	Tear strength	5.8.2	5.4 kN/m	5 kN/m (min.) density $\leq 0.9\text{g/cm}^3$	Conforms
f.	Abrasion resistance	5.8.3	215 mm ³	250 mm ³ (max.) density $\leq 0.9\text{g/cm}^3$	Conforms
g.	Flexing resistance (30,000 cycles)	5.8.4	No cut growth	4 mm (max) cut growth.	Conforms
h.	Hydrolysis Test (150,000 cycles)	5.8.5	No cut growth	6 mm (max) cut growth.	Conforms
i.	Interlayer bond strength	5.8.6	Not applicable for single layer sole		


Rajesh Mishra
 (Senior Technologist)
 Authorized signatory




Shailendra Saxena
 (Head -Physical Laboratory)
 Authorized signatory

*** END OF TEST REPORT ***

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Laboratory Environment

Temperature 27 ± 2°C
Relative Humidity 65 ± 5%
The sample was conditioned for 48 hours.

1. Test on Upper (Leather) - Grey

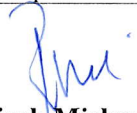
S.No.	Test Name	Clause	Value	Requirement	Conformity
Test on Upper (5.4)					
a.	Tear strength	5.4.3	270 N	120 N (minimum)	Conforms
b.	Tensile strength	5.4.4	24.0 N/mm ²	15 N/mm ² (minimum)	Conforms
c.	Water vapour permeability	5.4.6	5.2 mg/cm ² h	0.8 mg/cm ² h (minimum)	Conforms
	Water vapour coefficient		52.3 mg/cm ²	15 mg/cm ² (minimum)	

2. Test on Upper (Leather) - Black

S.No.	Test Name	Clause	Value	Requirement	Conformity
Test on Upper (5.4)					
a.	Tear strength	5.4.3	214 N	120 N (minimum)	Conforms
b.	Tensile strength	5.4.4	30.0 N/mm ²	15N/mm ² (minimum)	Conforms
c.	Water vapour permeability	5.4.6	1.10 mg/cm ² h	0.8 mg/cm ² h (minimum)	Conforms
	Water vapour coefficient		17.8 mg/cm ²	15 mg/cm ² (minimum)	

3. Test on Upper (Leather) - Green

S.No.	Test Name	Clause	Value	Requirement	Conformity
Test on Upper (5.4)					
a.	Tear strength	5.4.3	151 N	120 N (minimum)	Conforms
b.	Tensile strength	5.4.4	18.0 N/mm ²	15N/mm ² (minimum)	Conforms
c.	Water vapour permeability	5.4.6	1.2 mg/cm ² h	0.8 mg/cm ² h (minimum)	Conforms
	Water vapour coefficient		18.5 mg/cm ²	15 mg/cm ² (minimum)	


Rajesh Mishra
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(Head -Physical Laboratory)
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