Industrial Estate, Bangalore, Karnataka Location 1: A-151, 2C Main Road, 2<sup>nd</sup> Stage, Peenya Industrial Estate, Bangalore,

Karnataka

Location 2: Kushal Garden Arcade, B- Block, 2<sup>nd</sup> Floor, 1A, Peenya Industrial Area,

2<sup>nd</sup> Phase, Bangalore, Karnataka

**Accreditation Standard** ISO/IEC 17025: 2005

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**Test Method Specification** S.No. Product / **Specific Test Performed** Range of Testing / **Limits of Detection Material of Test** against which tests are performed

#### Location 2

# DOMESTIC ELECTRICAL ADDITANCES

1.	Vacuum Cleaner	Visual Inspection & Manual tests	General Requirement	Qualitative
		Markings	IEC 60335-1:2010 EN 60335-1:2012 IS 302 (Part 1): 2008 Cl. 7	
		Accessible parts	Cl. 8 Particular Requirement	
		Electrical Tests	IEC 60335-2-2:2009 EN 60335-2-2:2010 IS 302-2-2:1997	
		Power Input & current	Cl. 10	1 mW to 3000 W (AC/DC) 0 to 20 A (AC, 50/60Hz)
		Leakage Current & Electric Strength	Cl. 13 & 16	30 μA to 30 mA 0 to 5 kV (AC/DC) Time: 0.1sec to 200sec
		Protective Earthing Resistance (Provision for Earthing)	Cl. 27	Upto 1 $\Omega$
		Thermal Requirements Heating (Temperature Rise Test)	Cl. 11	Amb. to +200°C

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
Loca	tion 2			
	Vacuum Cleaner	Insulation Requirements Clearances and Creepage Distances, and Distances through Insulation	Cl. 29	0 to 300 mm
		Ball Pressure test	Cl. 30.1	0 to 300 mm
2.	Electric Iron	Visual Inspection & Manual tests	General Requirement IEC 60335-1:2010 EN 60335-1:2012 IS 302 (Part 1): 2008	Qualitative
		Markings	Cl. 7	
		Accessible parts  Electrical Tests	Cl. 8 Particular Requirement IEC 60335-2-3:2010	
		Power Input & Current	EN 60335-2-3:2002; A1:2005; A2:2008; A11:2010 IS 302-2-3:2007 Cl. 10	1 mW to 3000 W (AC/DC) 0 to 20A (AC, 50/60Hz)
		Leakage Current & Electric Strength	Cl. 13 & 16	30 μA to 30 mA 0 to 5 kV (AC/DC) Time: 0.1 sec to 200 sec
		Protective Earthing Resistance (Provision for Earthing)	Cl. 27	Upto 1 $\Omega$

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
Loca	tion 2			
	Electric Iron	Thermal Requirements Heating (Temperature rise Test)	Cl. 11	Amb to +200°C
		Insulation Requirements Clearances and Creepage Distances, and Distances through insulation	Cl. 29	0 to 300 mm
		Ball pressure test	Cl. 30.1	0 to 300 mm
3.	Toasters	Visual Inspection & Manual tests  Markings	General Requirement IEC 60335-1:2010 EN 60335-1:2012 IS 302: Part 1: 2008 Cl. 7	Qualitative
		Accessible parts	Cl. 8	
			Particular Requirement IEC 60335-2-9:2002; A1:2004; A2:2006 EN 60335-2-9:2003; A1:2004; A2:2006; A12:2007; A13:2010 IS 302-2-9:2009	

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
Loca	tion 2			
	Toasters	Electrical Tests Power Input & current	Cl. 10	1mW to 3000W (AC/DC) 0 to 20 A (AC, 50/60Hz)
		Leakage Current & Electric Strength	Cl. 13 & 16	30 μA to 30 mA 0 to 5 kV (AC/DC) Time: 0.1 sec to 200 sec
		Protective Earthing Resistance (Provision for Earthing)	Cl. 27	Upto 1 $\Omega$
		Thermal Requirement Heating (Temperature rise Test)	Cl. 11	Amb. to +200°C
		Insulation Requirement Clearances and Creepage Distances, and Distances through insulation	Cl. 29	0 to 300 mm
		Ball pressure test	Cl. 30.1	0 to 300 mm

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
Loca	tion 2			
4.	Food Mixers	Visual Inspection & manual tests	General Requirement IEC 60335-1:2010 EN 60335-1:2012	Qualitative
		Markings Accessible parts	IS 302: Part 1: 1979 Cl. 7 Cl. 8	
		<b>Electrical Tests</b>	Particular Requirement	1. W 2000W. (4.C/D.C)
		Power Input & current	IS 4250: 1980 Cl. 10	1mW to 3000W (AC/DC) 0 to 20A (AC, 50/60Hz)
		Leakage Current & Electric Strength	Cl. 13 & 16	30μA to 30mA 0 to 5kV (AC/DC) Time:0.1-200sec
		Protective Earthing Resistance (Provision for Earthing)	Cl. 27	Upto 1 Ω
		Thermal Requirements Heating (Temperature rise Test)	Cl. 11	Amb to +200°C
		Insulation Requirements Clearances and Creepage Distances, and Distances through insulation	Cl. 29	0 to 300 mm
		Ball pressure test	Cl. 30.1	0 to 300 mm

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
Loca	tion 2			
5.	Microwave Oven	Visual Inspection & Manual tests	General Requirement IEC 60335-1:2010 EN 60335-1:2012	Qualitative
		Markings Accessible parts	IS 302: Part 1: 2008 Cl. 7 Cl. 8	
		Electrical Tests  Power Input & Current	Particular Requirement IEC 60335-2-25:2010 EN 60335-2-25:2012 IS 302-2-25:2008	1 mW to 3000W (AC/DC) 0 to 20 A (AC, 50/60 Hz)
		Tower input to current	Cl. 10	0 to 20 11 (110, 30, 00 112)
		Leakage Current & Electric Strength	Cl. 13 & 16	30 μA to 30 mA 0 to 5 kV (AC/DC) Time: 0.1 to 200 sec
		Protective Earthing Resistance (Provision for Earthing)	Cl. 27	Upto 1 $\Omega$
		Thermal Requirements Heating (Temperature rise Test)	Cl. 11	Amb to +200°C
		Insulation Requirements Clearances and Creepage Distances, and Distances through insulation	Cl. 29	0 to 300 mm
		Ball pressure test	Cl. 30.1	0 to 300 mm

TUV SUD South Asia Pvt. Ltd., A-151, 2C Main Road, 2<sup>nd</sup> Stage, Peenya Laboratory Industrial Estate, Bangalore, Karnataka
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
Loca	tion 2			
6.	Electronic Clocks	Visual Inspection & Manual tests	General Requirement IEC 60335-1:2010 EN 60335-1:2012 IS 302: Part 1: 2008	
		Markings	Cl. 7	
		Accessible parts	Cl. 8	
		<b>Electrical Tests</b>	<b>Particular Requirement</b> IEC 60335-2-26:2002; A1:2008	1 - W - 2000 W
		Power Input & current	IS 302: Part 2: Sec 26: 1994 Cl. 10	1 mW to 3000 W (AC/DC) 0 to 20 A (AC, 50/60Hz)
		Leakage Current & Electric Strength	Cl. 13 & 16	30 μA to 30 mA 0 to 5 kV (AC/DC) Time: 0.1 sec to 200 sec
		Protective Earthing Resistance (Provision for Earthing)	Cl. 27	Upto 1 $\Omega$
		Thermal Requirements Heating (Temperature rise Test)	Cl. 11	Amb to +200°C
		Insulation Requirements Clearances and Creepage Distances, and Distances through insulation	C1. 29	0 to 300 mm
		Ball pressure test	Cl. 30.1	0 to 300 mm

TUV SUD South Asia Pvt. Ltd., A-151, 2C Main Road, 2<sup>nd</sup> Stage, Peenya Laboratory Industrial Estate, Bangalore, Karnataka Location 1: A-151, 2C Main Road, 2<sup>nd</sup> Stage, Peenya Industrial Estate, Bangalore, Karnataka Location 2: Kushal Garden Arcade, B- Block, 2<sup>nd</sup> Floor, 1A, Peenya Industrial Area, 2<sup>nd</sup> Phase, Bangalore, Karnataka **Accreditation Standard** ISO/IEC 17025: 2005 Discipline **Electrical Testing** Issue Date 13.06.2014 T-3010 **Certificate Number Valid Until** 24.08.2015 **Last Amended on Page** 8 of 14 S.No. Product / **Test Method Specification Specific Test Performed** Range of Testing / **Material of Test** against which tests are **Limits of Detection** performed Location 2 7. Qualitative **Room Heater Visual Inspection & Manual General Requirement** tests IEC 60335-1:2010 EN 60335-1:2012 IS 302: Part 1: 2008 Markings Cl. 7 Accessible parts Cl. 8 **Particular Requirement Electrical Tests** IEC 60335-2-30:2009 Power Input & current 1mW to 3000W (AC/DC) EN 60335-2-30:2009, A 11:2012 0 to 20A (AC, 50/60Hz) IS 302-2-30 Cl. 10 Leakage Current & Electric Cl. 13 & 16 30µA to 30mA Strength 0 to 5kV (AC/DC) Time: 0.1 to 200sec Protective Earthing Resistance Cl. 27 Upto 1  $\Omega$ (Provision for Earthing) **Thermal Requirements** Heating (Temperature rise Test) Amb to +200 °C Cl. 11 **Insulation Requirements** Clearances and Creepage Cl. 29 0 to 300 mm Distances, and Distances through insulation

Cl. 30.1

Ball pressure test

0 to 300 mm

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
Loca	tion 2			
8.	Table top fan	Visual Inspection & Manual Tests	General Requirement IEC 60335-1:2010 EN 60335-1:2012 IS 302 (Part 1): 2008	Qualitative
		Markings Accessible parts	Cl. 7 Cl. 8 Particular requirement	
		Electrical Tests  Power Input & current	IEC 60335-2-80 EN 60335-2-80 IS 302-2-80 Cl. 10	1mW to 3000W (AC/DC 0 to 20A (AC, 50/60Hz)
		Leakage Current & Electric Strength	Cl. 13 & 16	30µA to 30mA 0 to 5kV (AC/DC) Time: 0.1 to 200 sec
		Protective Earthing Resistance (Provision for Earthing)	Cl. 27	Upto 1 $\Omega$
		Thermal Requirements Heating (Temperature rise Test)	Cl. 11	Amb to +200°C
		Insulation Requirements Clearances and Creepage Distances, and Distances through insulation	Cl. 29	0 to 300 mm
		Ball pressure test	Cl. 30.1	0 to 300 mm

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### Location 2

9.	Electrical	Visual Inspection & Manual		Qualitative
	Equipment	tests	IEC 61010-31:2008 Edition 1.1	
	for Measurement,		EN 61010-1:2010	
	Control and	Markings	Cl. 5.0	
	Laboratory use			
		Accessible parts	Cl. 6.2	
		Terminals for external circuits	Cl. 6.6.2	

Circuits with terminals which are Cl. 6.6.3

Terminals for stranded conductors Cl. 6.6.4

Constructional requirements Cl. 6.9.1, 6.9.2 & 6.9.3

Requirements according to type of equipment

Cl. 6.11.3.1, 6.11.3.2

Requirements for the disconnecting devices

hazardous live

Cl. 6.11.4

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
Loca	tion 2			
	Electrical Equipment for Measurement, Control and	Test for fuse holders Mains voltage selection devices	IEC 61010-31: 2008 Edition 1.1 EN 61010-1:2010 Cl.14.4 Cl.14.5	
	Laboratory use	Electrical tests Power Input & Current	Cl.5.1.3	1mW to 3000W (AC/DC 0 to 20A (AC, 50/60Hz)
		Protective Bonding impedance	Cl.6. 5.2.4 & 6.5.2.5	Upto 1 $\Omega$
		Dielectric strength/High Voltage test	Cl.6.8, 6.8.3 6.8.3.1 & 6.8.3.2	0 to 5 kV (AC/DC) Time: 0.1 to 200 sec
		Capacitance Discharge	Cl.6.10.3	Upto 100 V
		Voltage measurements of accessible parts	Cl.6.3	Upto 400 V
		Current measurements of accessible parts	Cl.6.3	Upto 400 mA
		Insulation requirements Creepage distances, clearances and Comparative tracking Index	Cl.6.7, 10.5.1	0 to 300 mm

Industrial Estate, Bangalore, Karnataka
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
Loca	tion 2			
	Electrical Equipment for Measurement, Control and	Ball pressure test	IEC 61010-31: 2008 Edition 1.1 EN 61010-1:2010 Cl.10.5.3	0 to 300 mm
	Laboratory use	<b>Humidity conditioning</b> Humidity test	Cl.6.8.2	-40 to +180 °C Upto 95% RH
		Thermal requirements Temperature rise Test	Cl.10	Amb to +200 °C
		Mechanical requirements Impact Test	Cl.8.2.2	Steel sphere: Mass: 500 g dia: 50 mm
II. L	AMPS, LUMINARIE	ES AND ACCESSORIES		
1	Table Lamna &	Vicual Increation & Manual		

1.	Table Lamps &	Visual Inspection & Manual		
	Floor Lamps	tests	General Requirement	Qualitative
	-		IEC 60598-1	
		Marking	Cl. 3	
		Accessible parts	Cl. 8	
		•	Particular Requirement	
			IEC 60598-2-4	
			IEC 60598-2-1	

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Specific Test Performed

Location 2: Kushal Garden Arcade, B- Block, 2<sup>nd</sup> Floor, 1A, Peenya Industrial Area,

Test Method Specification

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S No Product /

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5.NO.	Material of Test	Specific Test Performed	against which tests are performed	Limits of Detection
Loca	tion 2			
Loca	Table Lamps & Floor Lamps	Electrical tests	General Requirement IEC 60598-1	Upto 1 Ω
	Floor Lamps	Protective Earthing resistance	Cl.7	Opto 1 S2
		Insulation Resistance Test & Electric Strength Test	Particular Requirement IEC 60598-2-4 IEC 60598-2-1 Cl.10.2	IR: $0.1 \text{ M}\Omega$ to $1 \text{ G}\Omega$ 0 to 5 kV Time: $0.1$ to 200 sec
		Thermal requirements Temperature rise test	Cl.12.4 & 12.5	Amb to +200°C
		Thermal conditioning Humidity test	Cl.9.3	-40 to +180 °C Upto 95% RH
		<b>Insulation requirement</b> Creepage and clearances	Cl.11.2	0 to 300 mm
		Ball pressure test	Cl.13.2.1	0 to 300 mm

Range of Testing /

Laboratory	TUV SUD South Asia Pvt. Ltd., A-151, 2C Main Road, 2 <sup>nd</sup> Stage, Peenya
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S.No.	Product /	Specific Test Performed	Test Method Specification	Range of Testing /
	Material of Test		against which tests are	Limits of Detection
			performed	

### **Location 2**

## III. ELECTRICAL MATERIALS

1.	Insulating Material	Needle Flame Test	IEC 60695-11-5:2004	Flame height: Upto 12mm
			TO 11000 (D 0 / O. 0) 0000	

Flame exert angle: IS 11000 (Part 2 / Sec2) 2008 Adjustable: 0°, 20°, 45° Temp: 100 to 800°C

Time: 0.1 to 200 sec

Glow wire Test IEC 60695-2-10:2013 0 to 200 sec

IS 11000 (Part 2 / Sec1) 2008 Upto 960°C

1 N