



#### **TEST REPORT**

ULR No.: TC645521000007304

Report No.--2111100033

Issue Date --- 01-12-2021

**Customer Name** : Multipower Earthing Solutions Private Limited.

S NO 35/1, SHED NO 05, Narhe, Khedekar

Industrial Estate Pune, Maharashtra, 411041.

Sample Particulars: Copper Bonded Rod-17.2mm Dia. X 3Mtr. Long

**Test Requested** : Salt Spray Test Sample Receipt Date

Customer Ref. No.

Sample Drawn By

: 10-11-2021

: ----

: By CUSTOMER

**TEST RESULT** 

Date of Testing

: 11-11-2021- 30-11-2021

**SALT SPRAY TEST:-**IS:9844:1981

Test Method

: Tested in accordance with IS:9844:1981 Standard practice for

operating Salt Spray Apparatus.

**Test Apparatus** 

Salt Spray Chamber

No. of Test Specimen Type of Salt used

Test condition

NaCl (M.W. 58.44) with minimum assay 99.9%, Total impurities ≤ 0.1%

S No.	Parameter	Actual
1	Salt Sol. Conc.	5 % wt
2	Chamber Temperature	(35 ±2)°C
3	pH of fog solution	6.5-7.2
4	Fog Collection	1-2 ml/hr
5	Test duration	500 hours

#### Observation:-

S. No.	Test Duration	Observation
1.	After 500 hrs.	Observation No white rust No real real real real real real real real
	7.10. 000 1113.	No white rust, No red rust observed on the surface of specimen.

CHECKED BY Surya Pratap

(Sr. Engineer Testing)

1. Sample will be retained for Tensile Test only for three months.

2. Sample will be retained for Chemical Composition only for one month.

3. The results listed refer only to the tested sample and applicable parameters. Endorsement of product is neither inferred nor implied.

4. This report cannot be used as evidence in a court of law without the written approval of the lab.

5. Certificate shall not be reproduced except in full, without the written approval of the laboratory.

6. Any complaint about the report should be intimated within 7 days.

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



Testing Service For Spectro Analysis, Mechanical Test & Metallurgical all Analysis

### **TEST REPORT**

Report No.--2112030039

Issue Date --- 10-12-2021

**Customer Name** 

: Multipower Earthing Solutions Private Limited.

S NO 35/1, SHED NO 05, Narhe,Khedekar

Customer Ref. No.

: ----

Industrial Estate Pune, Maharashtra, 411041. Sample Particulars : Ground Earth Enhancement Compound

Sample Receipt Date

: 03-12-2021

**Test Requested** : ROHS Test

Sample Drawn By

: By CUSTOMER

### **TEST RESULT**

**Date of Testing** 

: 03-12-2021-10-12-2021

TEST(S) REQUESTED : ROHS TEST FOR Pb, Cd, Hg, Cr6+, PBB & PBDE

Test Item(s):	Unit	Test Protocol	Results(ppm)	MDL	Limi
Cadmium(Cd)	mg/kg	AAS/Work Instruction No. BCS/Cd/01	BDL	10	100
Lead (Pb)	mg/kg	AAS/Work Instruction No. BCS/Pb/01	BDL	10	1000
Mercury (Hg)	mg/kg	AAS/Work Instruction No. BCS/Hg/01	BDL	10	1000
Hexavalent Chromium (CrVI) #	mg/kg	AAS/Work Instruction No. BCS/Cr/01	BDL		
Sum of PBBs	mg/kg	IEC 62321:2008	DDI		
Monobromobiphenyl	mg/kg	IEC 62321:2008	BDL	-	1000
Dibromobiphenyl	mg/kg		BDL	10	-
Tribromobiphenyl		IEC 62321:2008	BDL	10	-
Tetrabromobiphenyl	mg/kg	IEC 62321:2008	BDL	10	-
Hexabromobiphenyl	mg/kg	IEC 62321:2008	BDL	10	-
Pentabromobiphenyl	mg/kg	IEC 62321:2008	BDL	10	-
Heptabromobiphenyl	mg/kg	IEC 62321:2008	BDL	10	_
	mg/kg	IEC 62321:2008	BDL	10	-
Octabromobiphenyl	mg/kg	IEC 62321:2008	BDL	10	
Nonabromobiphenyl	mg/kg	IEC 62321:2008			
Decabromobiphenyl	mg/kg	IEC 62321:2008	BDL BDL	10	-
Sum of PBDEs	mg/kg	IEC 62321:2008	BDL	10	-
Monobromodiphenyl ether	mg/kg	IEC 62321:2008		-	1000
Dibromodiphenyl ether	mg/kg	IEC 62321:2008	BDL	10	-
Tribromodiphenyl ether	mg/kg	IEC 62321:2008	BDL	10	-
Tetrabromodiphenyl ether	mg/kg	IEC 62321:2008	BDL	10	-
Pentabromodiphenyl ether	mg/kg	IEC 62321:2008	BDL	10	-
Hexabromodiphenyl ether	mg/kg		BDL	10	-
leptabromodiphenyl ether	mg/kg	IEC 62321:2008	BDL	10	-
Octabromodiphenyl ether	mg/kg	IEC 62321:2008 IEC 62321:2008	BDL	10	-
	3.13	120 02021.2000	BDL	10	-

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Testing Service For Spectro Analysis, Mechanical Test & Metallurgical all Analysis

### **TEST REPORT**

port No2112030039			Icci	In Date	10-12-2021
Nonabromodiphenyl ether		IEC 62321:2008	BDL	10	10-12-2023
Decabromodiphenyl ether	mg/kg	IEC 62321:2008	BDL	10	-

#### Note:

- (a) mg/kg = ppm; 0.1wt% = 1000ppm
- (b) BDL= Below detection limit.
- (c) MDL = Method Detection Limit.
- (d) -= not regulated
- (e) # = a. Positive means the presence of CrVI on the tested areas
  - b. Negative means the absence of CrVI on the tested areas

For corrosion protection coatings on metals: Information on storage conditions and production date of the tested sample is unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

\*\*\* End of report\*\*\*

CHECKED BY Anirudh Kumar (Assistant Manager)

1. Sample will be retained for Tensile Test only for three months.

2. Sample will be retained for Chemical Composition only for one month.

3. The results listed refer only to the tested sample and applicable parameters. Endorsement of product is neither inferred nor implied.

4. This report cannot be used as evidence in a court of law without the written approval of the lab.

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6. Any complaint about the report should be intimated within 7 days.

7. Test has been subcontracted to BCS approved lab.



Testing Service For Spectro Analysis, Mechanical Test & Metallurgical all Analysis

### **TEST REPORT**

Report No.--2112030040

**Customer Name** 

: Multipower Earthing Solutions Private Limited.

Customer Ref. No.

Issue Date --- 10-12-2021

S NO 35/1, SHED NO 05, Narhe, Khedekar

Industrial Estate Pune, Maharashtra, 411041.

Sample Receipt Date

: 03-12-2021

Sample Particulars : Ground Earth Enhancement Compound **Test Requested** : Sulphur Content Test

Sample Drawn By

: By CUSTOMER

### **TEST RESULT**

**Date of Testing** 

: 03-12-2021-10-12-2021

Sulphur Test:-

Protocol Used:-IEC 62561-7 Clause -5.3.1 &2, ISO: 14689-1, ISO: 4689-3

Parameters	Specification		
	Specification	Observation	Decula
Sulphur	<2.0%		Result
	2.070	0.06%	Satisfactory
		0.00%	Satisfact

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

**CHECKED BY** Anirudh Kumar (Assistant Manager)

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Testing Service For Spectro Analysis, Mechanical Test & Metallurgical all Analysis

### **TEST REPORT**

Report No.--2112030041

: Multipower Earthing Solutions Private Limited.

Customer Ref. No.

Issue Date --- 10-12-2021

S NO 35/1, SHED NO 05, Narhe,Khedekar

Industrial Estate Pune, Maharashtra, 411041. Sample Particulars : Ground Earth Enhancement Compound

Sample Receipt Date

: 03-12-2021

**Test Requested** 

**Customer Name** 

: Determination of Resistivity

Sample Drawn By

: By CUSTOMER

### **TEST RESULT**

**Date of Testing** 

: 03-12-2021-10-12-2021

### **Determination of Resistivity:-**

Protocol Used:-IEC 62561-7 Clause -5.4.3, ASTM G-57-95.

Parameters	Specification		
	Specification	Observation	D 1.
Resistivity	0.2 Ohm-m		Result
	0.2 011111-111	0.042	Satisfactory

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

**CHECKED BY Anirudh Kumar** (Assistant Manager)

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Testing Service For Spectro Analysis, Mechanical Test & Metallurgical all Analysis

### **TEST REPORT**

Report No.--2112030042

**Customer Name** 

: Multipower Earthing Solutions Private Limited.

Customer Ref. No.

Issue Date --- 10-12-2021

S NO 35/1, SHED NO 05, Narhe, Khedekar

Industrial Estate Pune, Maharashtra, 411041. Sample Particulars : Ground Earth Enhancement Compound

Sample Receipt Date

: 03-12-2021

**Test Requested** 

: Thermal Stability

Sample Drawn By

: By CUSTOMER

### **TEST RESULT**

Date of Testing

: 03-12-2021-10-12-2021

Thermal Stability Test:-

**Protocol Used** :-IEC: 62561-7:2012

Condition	Unit	Test Temperature	Test Result
-30°C to -10°C	Ω.m		0.025
-10°C to 0°C	Ω.m		
0°C to 10°C			0.047
10°C to 60°C			0.028
	-30°C to -10°C -10°C to 0°C	-30°C to -10°C Ω.m -10°C to 0°C Ω.m 0°C to 10°C Ω.m	-30°C to -10°C Ω.m -20°C -10°C to 0°C Ω.m -5°C  0°C to 10°C Ω.m 5°C

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

**CHECKED BY Anirudh Kumar** (Assistant Manager)

1. Sample will be retained for Tensile Test only for three months.

2. Sample will be retained for Chemical Composition only for one month.

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Testing Service For Spectro Analysis, Mechanical Test & Metallurgical all Analysis

### **TEST REPORT**

Report No.--2112030043

: Multipower Earthing Solutions Private Limited.

Customer Ref. No.

Issue Date --- 10-12-2021

**Customer Name** 

S NO 35/1, SHED NO 05, Narhe,Khedekar Industrial Estate Pune, Maharashtra, 411041.

Sample Particulars : Ground Earth Enhancement Compound

Sample Receipt Date

: 03-12-2021

**Test Requested** 

: Corrosion Resistance Test

Sample Drawn By

: By CUSTOMER

### **TEST RESULT**

**Date of Testing** 

: 03-12-2021-10-12-2021

### Corrosion Resistance Test:-

Protocol: -- IEC 62561-7 clause -5.5.1 & 5.5.5, ASTM G:59-97

Parameter	Specification	01	
Polarization Posista		Observation	Result
Polarization Resistance	>4Ω x m2	12.5Ω x m2	Satisfactory

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

CHECKED BY **Anirudh Kumar** (Assistant Manager)

NOTE: - 1. Sample will be retained for Tensile Test only for three months.

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