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26th of March, 2013

M.S.T.C. TEST REPORT T13-00173/0003

Company:	Electric Control Products
Sample Description:	Safe-T-Drift STD-P – orange belt misalignment switch enclosure
Intended Use:	Non-Defined Applications [Refer: MDG3608, Section 7]
Sample No.:	T13-00173/0003

SUMMARY

The material **complied** with the *Antistatic Properties (Electrical Resistivity)* requirements of MDG3608, 7.2.2.1.

Analysed by:

Checked by:

Authorised by:

G. Slater
Manager
Mine Safety Technology Centre

ANTISTATIC PROPERTIES (ELECTRICAL RESISTIVITY)

General applications

Sample: Safe-T-Drift STD-P – orange belt misalignment switch enclosure

Results:



Fig. 1 – MDG3608, C5.1 - 'Rear' face



Fig. 2 – AS/NZS 60079.0 - 'Front Face'

i) *Method of Analysis: MDG3608, C5.1 (Electrical Resistance of Flat Surfaces Test)*

Test Piece	Electrical Resistance (MΩ)	
	'Front' Face	'Rear' Face (see Fig. 1)
1	Not able to be tested	258
2	Not able to be tested	237
Mean	-	248 MΩ

Notes:

- a) Conditioned at 23°C and 50% relative humidity for > 2 hours in an unrestrained state.
- b) Tested at ambient temperature of 22°C with 66% relative humidity.
- c) Conductivity solution applied between electrodes and sample surface.

Any variation from Standard/Test Method: - Relative humidity during conditioning below 60%.
- One face of sample tested only due to undersize samples.

Requirements:

The mean value for the Electrical Resistance on the surface of the material shall not be greater than 300 MΩ (300 x 10⁶ ohms).

ii) *AS 60079.0:2012 (Explosive atmospheres – Equipment - General requirements)*

Test Piece	Surface Electrical Resistance (see Fig. 2)
1	151 MΩ
2	145 MΩ
Mean	148 MΩ

Notes:

- a) Conditioned at (23 ± 2)°C and (50 ± 5)% relative humidity for > 24 hours.
- b) Tested at ambient temperature of 22°C with 55% relative humidity.

Any variation from Standard/Test Method: None.

Requirements:

The surface Electrical Resistance of the material shall not be greater than 1 GΩ (1,000 MΩ).

Sample Status:

The material **complied** with the requirements for *Antistatic Properties (Electrical Resistivity)* of MDG3608, 7.2.2.1.