

Handled by, department

Ingvar Karlson

Electronics

+46 10 516 54 94, ingvar.karlson@sp.se

 Score BV  
Janet Mulder  
Feithspark 5  
9356 BX TOLBERT  
Netherlands

## Test of foot rests regarding ESD protective properties

### 1 Client

Score BV, Tolbert, Netherlands

### 2 Test objects

Foot rests made of black conductive plastic and black painted metal with the following type designations:

Basic 950 ESD

Basic 951 ESD

Basic 952 ESD



Three foot rests of each type arrived at SP 2008-03-14.

### 3 Commission

Tests for ESD-approval according to IEC 61340.

### 4 Performance and result

The measurements were performed by Ingvar Karlson 2008-03-25 according to IEC 61340-5-1, edition 1.0, 2007 and IEC 61340-2-3, first edition (SP-method 2472, issue 4 with appendix 3, issue 5).

The test objects were conditioned during more than 48 h in 23 °C ±2 °C and 12 % RH ±3 % RH. The measurements were performed in the same climate.

Instrument: SP inv. No. 501419; instrument uncertainty less than ± 1%.

#### SP Technical Research Institute of Sweden

Postal address  
SP  
Box 857  
SE-501 15 Borås  
SWEDEN

Office location  
Västeråsen  
Brinellgatan 4  
SE-504 62 Borås  
SWEDEN

Phone / Fax / E-mail  
+46 10 516 50 00  
+46 33 13 55 02  
info@sp.se

This document may not be reproduced other than in full, except with the prior written approval of SP.

SP inv. No. 502920; instrument uncertainty less than  $\pm 3$  V.

#### 4.1 Resistance to ground

The foot rest was placed on a stainless steel plate during the measurements. The resistance to ground was measured between a stainless steel cylinder electrode ( $\text{Ø}$  65 mm; 2.5 kg), placed on the foot plate and the stainless steel plate.

The measurements were performed at 10 VDC. Conductive rubber was used between the electrode and the test material.

Six measurements were performed on each test object.

Instrument: SP inv. No. 502589 (instrument uncertainty less than 1%).

##### Result

All measured resistance values were less than  $1.0 \times 10^5 \Omega$ .

Requirement of all resistance values less than  $10^9 \Omega$  was fulfilled.

#### 4.2 Measurements according to SP-Method 2472, rev 2, section 7.3.

Resistance values were measured at 10 V and 100 VDC from all exposed parts of the test objects, to grounding point were performed.

Parts having a resistance to ground higher than  $10^9 \Omega$  were measured regarding electrostatic potentials. The potentials were measured 2 s after a slight touch with the hand or cloth. The measurements were performed with a metal plate ( $\text{Ø}$  20 mm, 2 pF) simulating a small sensitive device (instrument SP inv. No. 501781; instrument uncertainty  $< \pm 1\%$ ).

##### Result

No electrostatic potentials higher than 5 V were measured.

The requirement that a product in an EPA must not accumulate and keep an electrostatic voltage higher than 100 V for longer than a maximum of 2 s was fulfilled.

#### 4.3 Marking

The test objects were marked with ESD-symbol, manufacturers name and type designation.

### 5 Summary

Requirements for ESD-approval according to IEC 61340-5-1, edition 1.0, 2007 were fulfilled.

The test result applies to the tested objects only.

**SP Sveriges Tekniska Forskningsinstitut**  
**Electronics - Product Safety**



Anders Nilsson  
Technical Manager



Ingvar Karlson  
Technical Officer



**FOR ESD PROTECTIVE PRODUCTS ACCORDING TO IEC 61340**

**Validity of the approval**

Until 2011-03-25.

**Holder of the approval**

Score BV, Tolbert, The Netherlands

**Category of product**

Foot rests

**Products**

Manufacturer/ supplier	Type designation	Description
Score BV	Basic 950 ESD	Foot rests made of black conductive plastic and black painted metal
	Basic 951 ESD	
	Basic 952 ESD	

**Documentation for approval**

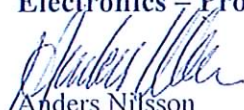
Test report F8 00360.

The ESD-approval does not include any requirements regarding electrical safety properties. If work will be performed close to live voltages, requirements according to national regulations shall be obeyed.

**Conditions for approval**

General conditions, according to SP-Method 2472, for approval and registration of approved products with regard to ESD-protection qualities.

**SP Sveriges Tekniska Forskningsinstitut  
Electronics – Product Safety**

  
Anders Nilsson  
Technical Manager

  
Ingvar Karlson  
Technical Officer

SP Technical Research Institute of Sweden