19 May 2014
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Cosign.: SFP

Test report

Customer
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Test method

Two samples of rubber floor mats tested for compliance with the requirements for use in **DS EN 61340-5-1** on requirements for personnel grounding. The samples **Ergomat Nitril CON** and **Ergomat Plano CON** measure 48 cm x 33 cm and 39 cm x 30.5 cm respectively.
All personnel must be grounded or equipotentially bonded when handling ESD sensitive equipment. Personnel performing standing operations can be grounded by a flooring-footwear system. According to DS EN 61340-5-1, the total resistance of the system shall not exceed 35 MΩ. It further refers to DS EN 61340-4-5 for measurement method: The resistance is measured from a metal plate under the rubber floor mat, through the operator standing on the rubber floor mat to a hand electrode. The measurement has been carried out including and excluding safety footwear. Due to the high conductivity of the rubber floor mats, a lower test voltage than specified has been used. It is our assessment that this will not influence the measured resistance. The measurement is done with the test operator standing on both feet, on one foot and moving around giving the interval in the table.

Test equipment and result

Test date: 5 May 2014, Equipment: Agilent 2400 source meter, copper plate and hand electrode.
The measurements were carried out at 23 °C +/-2 °C and 24 +/-5 % RH

	Ergomat Plano CON		Ergomat Nitril CON	
	Maximum	Minimum	Maximum	Minimum
With footwear	13 MΩ	9 MΩ	24 MΩ	12 MΩ
Without footwear	45 kΩ	28 kΩ	150 kΩ	50 kΩ

The footwear clearly provides the greatest contribution to the resistance. The floor mat itself is a factor one hundred lower in resistance than the combined measurement. Humidity is higher than the 12 % RH allowed in the standard. Humidity has a major impact on the surface resistance whereas it only influences volume resistance to a very small degree. Therefore, it is our assessment that it will not influence the results of the test.

It is our conclusion that the rubber floor mats **Ergomat Nitril CON** and **Ergomat Plano CON** are able to form part of a flooring-footwear system in accordance with **DS EN 61340-5-1**. However, as described in DS EN 61340-4-5, the installed floor covering must always be subject to testing once installed.

Signature

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