


AN / TO Hr. Georg Lübeck Hans Kolb Wellpappe Dr.-Lauter-Str. 2 87700 Memmingen	VON / FROM Department / DES IP ESD	 OP BE TTI RPT MUC Am Campeon 1-12 85579 Neubiberg	
	Bearbeiter / Name		Reinhold Gärtner
	Standort / Location		Neubiberg
	Tel.: + 49 (0)89 234 - 23754 Fax: + 49 (0)89 234 - 9552117		

Ihre Zeichen und Ihre Nachricht vom
Your ref. and your message of

Unsere Zeichen / Our reference

Ort und Datum / Location and Date

Neubiberg, 2013-07-30

Bericht / Report on ESD safe cardboard boxes – Corstat

Auftraggeber
Customer:

Hr. Lübeck
Hans Kolb Wellpappe GmbH & Co. KG
Dr.-Lauter-Str. 2
87700 Memmingen

Ihr Auftrag Nr.
Your order no.:

Email

Bauteile Typ / Menge
Device type / Qty

Corstat cardboard boxes / 2 samples

Durchzuführender Test
Test requested:

Surface resistance test at 12% r.h. and 50% r.h. according to IEC 61340-2-3
Energy bag test according to IEC 61340-4-8
Tribocharging test

Prüfort / Test location:

OP BE TTI RPT MUC, 85579 Neubiberg, Am Campeon 1-12

Labor Versuchsnummer
Lab Tracking no.:

Durchführung / Performance:

Schritte / Steps:

- Surface resistance test at 50% r.h.
- Tribocharging test at 50% r.h.
- Energy bag test at 50% r.h.
- Conditioning of cardboard boxes at 12% r.h. and 23⁰C for 24h
- Surface resistance test at 12% r.h.
- Tribocharging test at 12% r.h.



verwendete Anlagen / Equipment used:

Typ / Type	Hersteller / Manufacturer	Nummer / Number
Resistance meter	Warmbier	Metriso 2000
Energy bag tester	Self made	
Electrostatic voltmeter	TREK Inc.	344

verwendete Hilfsstoffe / Auxiliary substances used: keine / none

Test Start / Test start: 25.07.2013

Test Ende / Test end: 30.07.2013

Ergebnis / Result:

Measurement of surface resistance acc. to IEC 61340-2-3:

Corstat (test voltage 10V)

a) at 50% rel. humidity: $2.7 \times 10^4 \Omega - 4.4 \times 10^4 \Omega$

b) at 12% rel. humidity: $2.7 \times 10^4 \Omega - 4.1 \times 10^4 \Omega$

Energy Bag Test acc. to IEC 61340-4-8 (tests done at 50% rel. Luftfeuchte):

energy coupled into the Corstat carton: 26.7 nJ – 27.8 nJ

Check of the chargeability during rubbing:

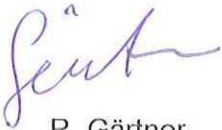
Corstat: At 50% as well as at 12% rel. humidity no charge could be generated during rubbing.

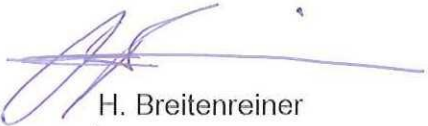
Ergebnisbewertung / Result assessment:

Corstat cardboards **meet** the surface resistance requirements of IEC 61340-5-3 for **dissipative** packing materials on the inner and outer side

Corstat cardboards **meet** the requirements of IEC 61340-5-3 for **electrostatic discharge shielding** packing (< 50 nJ)

Anlage / Attachment: keine / none


signed R. Gärtner
(Senior Principal ESD Protection)


signed H. Breitenreiner
(Lab Manager)

