

R E P O R T

18TH0427_P1

**concerning the electrostatic charge hazard
of
the splash guard band type SUREBAND Clear**

Türkheim, 2018-10-17



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Editor



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Responsible person

This document consists of: 6 pages text

The test results relate only to the items under test.

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Report concerning practical test

Practical tester:

Nils Eusterbrock

Signature:



Client:

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Address:

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1 Kind of test

Test for transferred charge according to IEC 60079-32-2:2015, Ed. 1, subchapter 4.11

2 Test sample

<i>Sample No.</i>	<i>Sample description / Serial No. / Picture</i>	<i>Tested (date)</i>
A	splash guard band type SUREBAND Clear	2018-09-25

3 Testing documents

- IEC 60079-32-2:2015
- IEC 60079-32-1:2013

4 Performance of test and results

Transferred charge according to IEC 60079-32-2:2015, Ed. 1, subchapter 4.11

The sample A was tested according to the regulations of IEC 60079-32-2, subchapter 4.11, for electrostatic charging respective transferred charge. The tests were carried out on 2018-09-18. Surface area size of the test sample: (around) 1300 cm².

Test equipment:	Temperature and relative humidity:	Climate Measurement Device, type Klima Logg...pro (next calibration: Feb. 2019, int. no. 1190)
	Electric charges:	Coulombmeter, type Schnier HMG 11/02 (next calibration: March 2019, int. no. 687)
	HV-generator:	Schnier HER 26/01 HV-generator (int. no. 688)
	Test materials:	<ol style="list-style-type: none"> 1. 1st positive: cotton 2. 1st negative: polyethylene 3. 2nd positive: polyamide 4. leather glove 5. HV electrode
Test assembly and procedure:	<p>According to 4.11. Short description:</p> <p>The test sample had an intact clean surface and was laid on a plate of untreated wood. After rubbing the test samples surface with the test materials specified above for (10 ± 1) s, the test sample was lifted at least 20 cm away from the table. The surface charges generated were measured by the coulombmeter by slowly moving the electrode towards the sample until a discharge occurred.</p> <p>Last, the sample was charged by positioning the corona electrode slightly above the test samples surface with small circular motion. After 10 s the electrode was removed from the sample and the surface charges were measured.</p> <p>For each test material (see above), the test was performed ten times. The maximum values measured for each material was taken as the measurement result.</p>	
Test environment 24 h before and during the test:	Temperature:	(23 ± 2) °C 21.0 °C at test start
	Relative humidity:	(25 ± 5) % 20 % at test start

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Measurement results:	1.cotton	0 nC
	2. polyethylene	0 nC
	3. polyamide	0 nC
	4. leather glove	0 nC
	5. HV- electrode	0 nC
Test result:	Pass for zone 0 explosion group IIC and zone 20 explosion group IIIC.	

5 Annex

5.1 Maximum acceptable transferred charge according to IEC/TS 60079-32-1:2013, Ed.1

The following table shows a summary of all applicable threshold limits, according to TS 60079-32-1:2013, table 4. This table is for information only. For more information see subchapter 6.3.9 of IEC/TS 60079-32-1:2013, Ed. 1.

Explosion Group	EPL Ma EPL Mb Mining	EPL Ga Zone 0	EPL Gb Zone 1	EPL Gc Zone 2	EPL Da Zone 20	EPL Db Zone 21	EPL Dc Zone 22
I	60 nC	-	-	-	-	-	-
IIA	-	25 nC	60 nC	60 nC	-	-	-
IIB	-	10 nC	25 nC	25 nC	-	-	-
IIC	-	No measurabl edischARGE	10 nC	10 nC	-	-	-
III	-	-	-	-	60 nC ^a	200 nC ^a	200 nC ^a

^a Values only valid for spark discharges from unearthed conductive or dissipative parts

NOTE 1 The limits for Zone 1 and Zone 21 ensure that incendive discharges should not occur during normal operation. The limits for Zone 0 and 20 are further reduced to account for abnormal situations and the high level of safety required for these zones.

NOTE 2 For the explanation of EPL see IEC 60079-0 or Annex E.

NOTE 3 All of the values contain a certain safety margin. Recent work indicates that the value hitherto used for IIB contains a lower safety margin than all other values. To equalize all safety margins the values for IIB have been reduced from 30 nC to 25 nC.