

Deutsche Akkreditierungsstelle GmbH
German Accreditation Body

Annex to the Accreditation Certificate D-PL-11300-01-00
according to DIN EN ISO/IEC 17025:2005

Period of validity: 20.01.2012 to 19.01.2017

Holder of certificate:

KraussMaffei Technologies GmbH
Bereich Reaktionstechnik - Automotive Testing
Krauss-Maffei-Straße 2, 80997 München

Tests in the fields:

environmental simulation tests for mechanical and climatic aging of technical products

Abbreviations used: see last page

Within the given test area, the laboratory - without being required to inform and obtain prior approval from Deutsche Akkreditierungsstelle GmbH - is permitted to use standard test methods or equivalent test methods that are not specifically stated in the accreditation certificate. The listed test methods are given only as examples.

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Test Kind	Measurement category	Measurement range		Best Measurement Capability	Testing Standard
Thermal Shock Test	Temperature (upper range)	+50 to +220	[°C]	1,75 K	e.g. IEC 68-2-14
	Temperature (lower range)	-70 to +70	[°C]	1,75 K	
Mechanical Shock Test	Acceleration	0 to ± 100	[g]	3 %	e.g. IEC 68-2-27
Thermal Humidity Cycling	Temperature	-70 to 125	[°C]	1,75 K	e.g. IEC 68-2-38
	Rel. Humidity	11 to 95	[% r.H.]	2 %	
Saltspray Test	Temperature	20 to 65	[°C]	1,75 K	e.g. IEC 68-2-52
	Brine concentration	1 to 5	[%]	10 % of measurement range	
	Brine dispensation	0.0125 to 0.0250	[ml/hcm ²]	20 % of measurement range	
Simultaneous Vibration Temperature Test	Acceleration (Sinus)	to 50	[g]	3 %	e.g. IEC 68-2-53
	eff. Acceleration	to 50	[g _{eff}]	3 %	
	Frequency	5 to 2,000	[Hz]	5 ‰	
	Temperature	-40 to +120	[°C]	1,75 K	
	Rel. Humidity	11 to 95	[% r.H.]	2 %	
Solar Simulation Test	Temperature	10 to 90	[°C]	1,75 K	e.g. DIN 75220
	Rel. Humidity	11 to 60	[% r.H.]	2 %	
	Irradiance Indoor	750 to 910	[W/m ²]	28 W/m ² (max. instrumental error)	
	Irradiance Outdoor	900 to 1,100	[W/m ²]	28 W/m ² (max. instrumental error)	
Low Pressure Test	Low Pressure	> 100	[mbar _{abs}]	1 mbar _{abs}	e.g. IEC 68-2-13
Dust Test	Pressure	500 to 600	[kPa]	5 % of measurement	e.g. ECE R16
Drop Test	Height	to 4	[m]	1 mm	e.g. IEC 68-2-32
Abrasion Test	Force (Mass)	0.01 to 20	[kg]	0.02 % of weigh value	e.g. VW PV 3569
	Time (Cycles)	from 1	[min]	2 sec	
Insulation Test	Resistance	9 to 9,000	[MΩ]	1.4 %	e.g. AK-LV 01 sec. 7.4.3

abbreviations used:

ECE	Economic Commission for Europe
IEC	International Electrotechnical Commission
AK-LV	Arbeitskreis Liefervorschrift
VW PV	Volkswagen Prüfvorschrift