

Intertek C&E Management System		Page 1 of 6
Work Instruction (Inspection)		Document No.: WI-R-EMEA-CERT-INSP-PCS017
EMEA CERTIFICATION SCHEMES - PRODUCT CONTROL SPECIFICATIONS		
Issue Date:	Revision Date: 27 Dec 2022	Approved by: Fredrik Wennersten
	Effective Date: 1 Jan 2023	

1.0 Purpose

Product Control Specifications (PCS) specify the requirements for routine inspections, tests, Product Verification Tests and sample selection for products certified under an Intertek EU Type 5 certification scheme (including GS, S, BEAB, ASTA, ENEC, BAUART and TICK MARK). They are for use by manufacturers and by factory inspectors.

2.0 Scope

Products: Household and similar appliances
Standards: EN 60335-1 and EN 60335-2-xxx
Marks: GS, S, BEAB, ENEC, BAUART and TICK Mark

3.0 Routine inspections and tests

3.1 General

The following requirements apply to most products.

Variations may be permitted by prior, written agreement from the certification body.

The factory should have a quality plan defining all inspections and tests on materials, components and completed products as appropriate.

Completed products shall be marked to confirm satisfactory completion of all required testing.

Any products which fail inspection or testing shall be segregated and not allowed to continue through the process until rectified and re-inspected or retested.

Products shall not be released until the testing equipment has been checked again following a production batch.

Records of inspections and test should be maintained and held for at least two years.

Records shall include:

- Type of product
- Date of test
- Place of manufacture
- Quantity tested
- Number of failures and actions taken

Intertek C&E Management System		Page 2 of 6
Work Instruction (Inspection)		Document No.: WI-R-EMEA-CERT-INSP-PCS017
EMEA CERTIFICATION SCHEMES - PRODUCT CONTROL SPECIFICATIONS		
Issue Date:	Revision Date: 27 Dec 2022	Approved by: Fredrik Wennersten
	Effective Date: 1 Jan 2023	

3.2 Required inspections and tests

Inspection/test	Test parameters	Sampling plan
Earthing continuity for class I appliances by an ac or dc source with a no load voltage not exceeding 12V.	10A between earthing terminal or contact of a plug and each of the accessible metal parts which have to be earthed for safety reasons. <ul style="list-style-type: none"> - < 0.2 Ω for appliances having a supply cord - < 0.1 Ω for other appliances 	100%
Dielectric strength, basic insulation class III appliances	400 Vac or 600 Vdc, 1 second No flash-over or breakdown Leakage current not to exceed 5 mA. (may be increased up to 30 mA for appliances with high leakage current.)	100%
Dielectric strength, basic insulation class I appliances	1000 Vac or 1500 Vdc, 1 second No flash-over or breakdown Leakage current not to exceed 5 mA. (may be increased up to 30 mA for appliances with high leakage current.)	100%
Dielectric strength, between live parts and accessible metal parts separated from live parts by double or reinforced insulation	2500 Vac or 3750 Vdc, 1 second No flash-over or breakdown Leakage current not to exceed 5 mA. (may be increased up to 30 mA for appliances with high leakage current.)	100%
Functional test	If incorrect operation might result in a hazard, the correct operation is checked for example by electric measurement, by verifying the functional device, such as switches and manually-operated controls, and by verifying the direction of rotation of motors.	100%
Integral plugs (i.e. incorporated in the appliance)	- Fixing of pins, pull-test with 40N - rear edges of metal-pins well rounded	At the beginning of a batch, at appropriate steps and at the end of a batch

Particular requirements for blankets, pads, clothing and similar flexible heating appliances

~ Note: After printing or download, this document is no longer under control and shall be used for reference only. ~

Intertek C&E Management System		Page 3 of 6
Work Instruction (Inspection)		Document No.: WI-R-EMEA-CERT-INSP-PCS017
EMEA CERTIFICATION SCHEMES - PRODUCT CONTROL SPECIFICATIONS		
Issue Date:	Revision Date: 27 Dec 2022	Approved by: Fredrik Wennersten
	Effective Date: 1 Jan 2023	

EN 60335-2-17 and EN 50106, Standard Sheet 50106-2-17		
Inspection/test	Test parameters	Sampling plan
Addition Dielectric strength, reinforced insulation	Dielectric strength test between live parts and accessible parts of the flexible part 2500Vac+X or 3750Vdc+X. X is derived from test procedure described in EN 50106	100%
Functional test	- Resistance of heating element within specified limits - no current flow if control is in Off-position	100%

Particular requirements for storage water heaters EN 60335-2-21 and EN 50106, Standard Sheet 50106-2-21		
Inspection/test	Test parameters	Sampling plan
Pressure test with water, air or other gas	If water is used: - 0.7 MPa, for closed water heaters or 1.1 times rated pressure for those having a rated pressure > 0.6 MPa. - 0.3 MPa, for cistern-fed water heaters - 0.15 MPa for open-outlet water heaters - 0.03 MPa, for cistern-type water heaters When air or gas is used, the pressure has to be sufficient to reveal any leakage. During the test no leakage shall occur Deviation: Sweden (Ordinance AFS 1990:15) All closed water heaters must be tested with 1.5 times rated pressure.	100%

Particular requirements for microwave ovens, including combination microwave ovens EN 60335-2-25 and EN 50106, Standard Sheet 50106-2-25

~ Note: After printing or download, this document is no longer under control and shall be used for reference only. ~

Intertek C&E Management System		Page 4 of 6
Work Instruction (Inspection)		Document No.: WI-R-EMEA-CERT-INSP-PCS017
EMEA CERTIFICATION SCHEMES - PRODUCT CONTROL SPECIFICATIONS		
Issue Date:	Revision Date: 27 Dec 2022	Approved by: Fredrik Wennersten
	Effective Date: 1 Jan 2023	

Inspection/test	Test parameters	Sampling plan
Marking and instruction	- Warnings concerning microwave energy are on the relevant cover. - Appliance is provided with instruction corresponding to it.	100%
Functional test	microwave generation ceases when the door is opened	100%
Microwave leakage at rated voltage and max. microwave power	< 50 W/m ² at any point in a distance of approximately 5cm from the external surface.	100%

Particular requirements for battery chargers EN 60335-2-29 and EN 50106, Standard Sheet 50106-2-29		
Inspection/test	Test parameters	Sampling plan
Addition Dielectric strength, between input and output circuits	2500 Vac or 3750 Vdc, 1 second No flash-over or breakdown Leakage current not to exceed 5 mA.	100%

Particular requirements for instantaneous water heaters EN 60335-2-35 and EN 50106, Standard Sheet 50106-2-35		
Inspection/test	Test parameters	Sampling plan
Pressure test with water, air or other gas	If water is used: - 0.7 MPa, for closed water heaters or 1.1 times rated pressure for those having a rated pressure > 0.6 MPa. - 0.15 MPa for open-outlet water heaters When air or gas is used, the pressure has to be sufficient to reveal any leakage. During the test no leakage shall occur Deviation: Sweden (Ordinance AFS 1990:15) All closed water heaters must be tested with 1.5 times rated pressure.	

Particular requirements for portable heating tools and similar appliances
--

~ Note: After printing or download, this document is no longer under control and shall be used for reference only. ~

Intertek C&E Management System		Page 5 of 6
Work Instruction (Inspection)		Document No.: WI-R-EMEA-CERT-INSP-PCS017
EMEA CERTIFICATION SCHEMES - PRODUCT CONTROL SPECIFICATIONS		
Issue Date:	Revision Date: 27 Dec 2022	Approved by: Fredrik Wennersten
	Effective Date: 1 Jan 2023	

EN 60335-2-45 and EN 50106, Standard Sheet 50106-2-45		
Inspection/test	Test parameters	Sampling plan
Addition Dielectric strength, between input and output circuits (if construction incorporates input and output circuits)	2500 Vac or 3750 Vdc, 1 second No flash-over or breakdown Leakage current not to exceed 5 mA.	100%

For full details of the routine electrical safety testing in production, see EN 50106.

4.0 Product Verification Tests/Periodic testing (refer to CIG 021 clause 4.8)

Product verification tests are in addition to the production line inspection and routine tests and are performed on samples taken randomly from the production line.

The manufacturer is responsible for conducting or arranging for the following periodic testing to be completed. Records shall be available for review during factory inspection visits.

Certification Mark	Frequency	PVT/periodic testing required
S		PVT is not mandatory, but it is recommended to demonstrate ongoing compliance with EU Directives. The following PVT is recommended: <ul style="list-style-type: none"> • Tests below
GS, S, ENEC, BAUART and TICK Mark	Annual	For each basic type certified, the following tests according to the product standard or as specified: <ul style="list-style-type: none"> • Marking (Clause 7) • Protection against electric shock (Cl. 8) • Moisture resistance. (Only waterproof appliances) (Cl. 15) • Abnormal operation (Cl. 19) • Mechanical Strength (Cl. 21) • Creepage distances, clearances and distance through insulation. (Cl. 29) • Comparison of used components with the approved version. (See list of critical components in test report / CDF) • Appliances with integral plug: <ul style="list-style-type: none"> ○ Dimensions including front and rear edges of metal pins ○ Rotation test on pins with 0.4 Nm for one minute ○ Pull test on pins at temperature of 70°C., 40 N for plugs rated 2.5 A. 50 N for plugs rated > 2.5 A • For Microwave ovens:

~ Note: After printing or download, this document is no longer under control and shall be used for reference only. ~

Intertek C&E Management System		Page 6 of 6
Work Instruction (Inspection)		Document No.: WI-R-EMEA-CERT-INSP-PCS017
EMEA CERTIFICATION SCHEMES - PRODUCT CONTROL SPECIFICATIONS		
Issue Date:	Revision Date: 27 Dec 2022	Approved by: Fredrik Wennersten
	Effective Date: 1 Jan 2023	

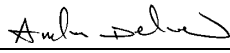
		o EN 60335-2-25 cl. 22.105 Failure of door interlock.
--	--	---

5.0 Surveillance testing by the Certification Body

If required, samples are selected during the factory inspection and the manufacturer should send these to the address provided. If samples are required but not available at the time of the inspection, the manufacturer should send these as soon as they become available. If there is no stock or production, the manufacturer should advise the certification body that samples will not be provided due to no production.

The certification body will arrange for the required testing to be completed. This will be charged to the manufacturer or Licence holder. A report of the testing will be provided.

Certification Mark	Surveillance testing requirements
GS, S, BEAB, BAUART and TICK Mark	Regular selection of samples is not required. Samples may be required if any deviations to the type tested or non-compliance with the product standard are suspected
ENEC	Samples for product surveillance are selected by the inspector at the time of factory inspection, to be sent to Intertek Semko AB.

Document History				
Revision No.	Date	Changes	Name & Title	
			Author	Approving Official
1	11/02/2015	Original issue	Bernhard Miedtank/ R W Hayward	
2	9 Feb 2022	Corrected information about PVT is not a requirements for S-mark certification Scheme, and DC/AC voltage test parameters	Anders Åhman	Fredrik Wennersten
3	27 Dec 2022	Additional information about the dielectric strength for double or reinforced insulation	Anders Åhman	Fredrik Wennersten

End of Document

~ Note: After printing or download, this document is no longer under control and shall be used for reference only. ~