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## 1. OBJECTIVE

This document presents the complementary criteria of “Product Certification Standards” – 700-RC-01 to obtain and maintain license to use the Conformity Brand in the scope of SBAC or TÜV Rheinland do Brasil Ltda.

## 2. APPLICATION FIELDS

This document applies for products that are included in the scope of the standard / requirements referred to below.

## 3. ADDITIONAL DOCUMENTS

- **700-RC-001 – Certifications Standards**
- **5590-MA-001 – Trademark Manual**
- EUROPEAN DIRECTIVE 2011/65/EU of June 24, 2015 – regarding the restriction to the use of determined hazardous substances in electric and electronic equipment – recast.
- COMMISSION DECISION 2015/863/EU of March 18, 2015 – regarding the establishment of maximum concentration values for certain hazardous substances in electric and electronic equipment.
- EUROPEAN DIRECTIVE 2012/19/EU of February 14, 2014 – regarding waste of electric and electronic equipment (WEEE).
- IEC 62321 – Procedures to Determine the Levels of the six regulated substances (Lead, Mercury, Cadmium, Hexavalent Chromium, Polybromide Biphenyl (PPB), and Polybromide Diphenyl Ether (PBDE) in Electric and Electronic Products.
- EPA3050 B – Acid digestion for sediments, muds, and soils.
- EPA 3051 – Acid digestion by microwaves.
- EPA 3052 – Acid digestion by microwaves for silicon-based matrixes, organic matrixes, and other complex matrixes.
- EPA 3060 A – Alkaline digestion for Hexavalent Chromium.
- EPA 3540 C – Procedure to extract “non-volatile” and “semi-volatile” organic components from solids such as muds, soils, and residues.
- EPA 7473 – Mercury in solids and solutions by thermal decomposition, amalgamation, and atomic absorption spectrophotometry.

#### 4. DEFINITIONS

The following definitions were adopted in this document:

RoHS Directive Compliance Statement	Declaration based on ISO 17050, issued by the manufacturer or its representative, stating that the substances restricted by RoHS are not contained in the parts, materials, and components described in the statement.
Product Family	Individual product units are considered as in the same family if: they use the same materials, from the same suppliers; have been manufactured at the same plant and with the same manufacturing process, with possible variations in dimensions (if they comply to normative).
RoHS Certificate	Certificate issued by a third party, stating that the part, material, component, or product does not contain the restricted RoHS substances.
Test Report	Test report issued by a laboratory, according to the defined methodology, comprised of a detailed analysis and reporting the concentration values of RoHS substances in the part, material, or component involved in the test report.
Bill of Materials – BOM <u>and Supplier</u>	List of materials (BOM) with all items that comprise the equipment, devices, or sub-assemblies. The list of materials may be simpler, with only Materials and Quantities used to manufacture a part of the equipment, device, or sub-assembly. The list of materials must contain the description of the part or material, designation or specification, the quantity used, and the supplier or manufacturer.
Homogeneous Material	The homogeneous material is comprised of one or more substance in a uniform composition throughout its extension, and cannot be mechanically divided into different materials.
Uniform Material	Plastic or metal with identical composition throughout its extension.
Component	Mostly electric or electronic components such as resistors, capacitors, integrated circuits, keys, etc.
Part	Mostly non-electric parts like plastic belts, insulation screws, tubes, and other mechanical parts.
Material	Mostly uniform materials such as steel, plastic, mica, etc.
Screening Test Method, according to the definition of the IEC draft procedure.	The screening may be carried out in a qualitative or quantitative way. The qualitative screening will indicate whether or not the substance is present, but should not provide accurate information on the concentration of such substance. The "quantitative screening" generates results that express the concentration of the present substance(s). The "qualitative screening" may be carried out by direct reading (non-destructive) or by a mechanic preparation phase of the sample in a first moment (destructive). The screening of representative samples of many uniform materials (such as plastics, alloys, glass) may be done in a non-destructive way, while in more complex samples (such as assembled printed circuit boards), the mechanical preparation of the sample may be necessary. The mechanical preparation of the sample is mandatory for the "quantitative screening". The mechanical preparation of the sample is the same for the quantitative and qualitative screenings, as well as for the verification test procedure. It consists of cutting, grinding, and homogenization of the sample. In this document, "screening" shall refer to the qualitative test, according to Clause 7 of the IEC draft document.
Verification Test Method	The test procedure to verify the sample is carried out with several analytical methods related to the regulated substances and materials in the sample, which may be plastic, metals, or electronics in the form of assembled PWBs or components. The use of verification test procedures will ensure results with fewer errors, which therefore require more resources to be carried out. This verification test document is understood as the chemical analysis carried out with analytical equipment, except for X-Ray.
Critical parts, components, and materials	Components, parts and materials classified as medium to high risk of containing restricted substances. The classification is based on the historic use of such substances and on the knowledge acquired during the tests.
Non-Critical Parts, Components, and Materials	Components, parts, and materials classified as low risk of containing restricted substances. The low-risk classification is based on the historic use of such substances in these parts.

## 5. ACRONYMS

The assessment of the conformity of a product family must follow the definitions contained in this document:

### 5.1 – ANALYSIS OF THE TECHNICAL DOCUMENTATION

The following documents must be submitted to analysis:

- Bill of Materials (BOM) **and Supplier**
- Data sheets of parts, materials, and components, if they have.
- **Test Reports** of critical parts, materials, and components.

### 5.2 – INITIAL FACTORY ASSESSMENT

The factory assessment verifies the quality control requirements contained in the Factory Inspection Report – CIG 23, regarding the items of NBR ISO 9001-2000, as shown in the table below.

Requirement	Standard Item
Records control	4.2.4
Production control	7.5.1 and 7.5.2
Acquired product verification	7.4.3
Product identification and traceability	7.5.3
Product preservation	7.5.5
Control of measurement and monitoring devices	7.6
Treatment of Claims	8.2.1
Product measurement and monitoring	8.2.4
Non-compliant product control	8.3
Corrective action	8.5.2

In addition to the items above, in the case of certification of the RoHS management model, the requirements of standard IECQ-HSPM-QC 080000 are verified.

### 5.3 – INITIAL TESTING

The initial tests are all tests contained in the standard mentioned in item 3, IEC 62321, and may be complemented by the EPA standards, also referred to in item 3.

The examinations, results, and reports must be carried out and recorded, and it would be better identify the analyzed product by photos.

### 5.4 – USE OF TESTING LABORATORIES

The tests must be carried out in Laboratories accredited by an Accreditation Body that is a signatory of multilateral agreements of mutual recognition, such as ILAC, EA, or IAAC.

**Tests reports are acceptable by laboratories accredited by an Accreditation Body that is a signatory of multilateral agreements of mutual recognition, such as ILAC, EA, or IAAC, issued within up to one year from the current year of analysis/certification shall be accepted, since the client declares that any component of product and the suppliers was modified since this date.**

TÜV may accept tests carried out by uncertified third-party's laboratories, provided they have been evaluated and approved by TÜV Rheinland, based on ISO 17025 or the annex to NIT DICOR 021 (INMETRO'S DOCUMENT). Tests carried out in first-party's laboratories must be followed by a TÜV's specialized auditor or technician.

Test Report by Laboratories accredited in the CB SCHEME system issued within up to three years from the current year of analysis/certification shall be accepted.

### 5.5 – MAINTENANCE AUDIT

The maintenance audit is carried out as described in item 5.2 every **12 months**, at least. The quality records are verified throughout the auditing.

It is very important to note:

- Control of measurement and monitoring devices: the instruments used must have valid and updated calibration.
- Corrective action: actions must be taken regarding the NC found in previous auditing and maintenance tests.

- Treatment of Complaints: all complaints and returns made by clients must be treated accordingly.

### 5.6 – MAINTENANCE TESTING

The critical materials defined in the initial tests (look item 5.3), acquired for each specific product, must be tested and identified in order to ensure traceability (look item 5.9).

The products must be tested with the same methods as the initial tests (look item 5.3).

The samples of these products must be collected randomly during the Maintenance Audit, by the auditor. If it has any NON CONFORMITY in the tests, the client must to answer regarding the actions to solve, and send new samples to laboratory, indicated in 5.4 item .

### 5.7 – INCOMING PRODUCTS VERIFICATIONS

The manufacturer must have a procedure to verify all acquired materials, mostly the materials defined as critical materials.

The manufacturer may use test reports from its suppliers, provided that the data relate to the received lot and that these reports were generated by testing laboratories (look item 5.4). **And can also make use of the declaration of conformity of its suppliers**

The following tests must be carried out:

- Applicable verifications: chemical composition of materials, evidencing the analysis of restricted substances.
- Records of these tests must be stored and maintained to be verified by the auditor.

We recommend that acquired materials compliant with RoHS be identified in a way that is clear and different from all other products/materials that do not comply with the RoHS. For example, using a label on the individual or collective packaging with the wording "RoHS Compliant".

### 5.8 – TESTS DURING PRODUCTION

5.8.1 In appropriate phases of the productive process, the parts, components, and materials related to the product must be submitted to appropriate:

- Verifications of markings / labels and identifications.
- Records must be kept.

Important: In the case of simultaneous production of RoHS-compliant and non-compliant products, we recommend they be identified specifically for that purpose (see item 5.9).

5.8.2 Non-compliant product: a procedure must be established and implemented to comprehend all phases of the process, from incoming to shipment, for control, identification, segregation, arrangement, corrective actions, and recording of analyses of non-compliant products to ensure that only RoHS-compliant products are delivered to the client. Also, all necessary actions must be considered in case of withdraw of non-compliant products placed in the market.

#### 5.9 – TRACEABILITY

Each product must have an individual identification, either on the primary or collective packaging, according to item 6. There must be a system to identify and correlate the product and its parts that enables the traceability back to the raw-material, in other words, that it is possible the access to all quality records, including drawings of parts, specifications, bill of materials, certificates/reports from suppliers, incoming inspection records, inspection records during the production process, maintenance tests, and all other records related to the product.

#### 5.10 – CHANGES TO CERTIFIED PRODUCTS

The manufacturer must develop and implement a procedure to provide appropriate treatment to changes performed in certified products, objects that the OCP be informed and can analyze the impact of this change and the needing of tests, and proceed to approval this change.

#### 5.11 – QUALITY RECORDS

The quality records of each product or product family originated in items 5.1, 5.3, 5.6, 5.7, 5.8, 5.9, and 5.10 must be protected and stored in appropriate media. These must be stored as long as the products are active.

## 6 – CERTIFICATION IDENTIFICATION

Each product or product family must receive individual identification.

The brand must not be used in business cards, and TÜV must approve formally the use of the brand in marketing material, office material, and any other use according to 5590-MA-001-E - Trademark Manual.

### 6.1) RoHS Product Certification Label – based on items of ISO 9001:2008 (item 5.2)



6.2) QMS RoHS Certification Label – based on Items of IECQ/ QC 080000- Management System for hazardous substances in electrical and electronic components – Requirements.



## 7 – SUSPENSION AND CANCELLATION

**For suspension and cancellation of the Rohs Certificate following the established rules in the Certification Standards. – 700-RC-001.**

## 8 - EFFECTED CHANGES

- Change in encoding of the document and in item 6 mentioned the 5590-MA-001-E - Trademark Manual.

- Review in item 5.4 USE OF TESTING LABORATORIES, 5.5 MAINTENANCE AUDIT, 5.7 INCOMING PRODUCTS VERIFICATIONS and inclusion of item 7 SUSPENSION AND CANCELLATION.