(Attachment 1)

Method for Reporting Non-containing of ELV/RoHS 10 Substances and Evidence Preparation

NTN positions non-containing of ELV/RoHS 10 substances (lead, mercury, cadmium, hexavalent chromium, PBB, PBDE, DEHP, BBP, DBP, and DIBP) is a critical quality attribute, and we require its confirmation upon acceptance. You should report non-containing of these substances to NTN as part of quality assurance.

1. Method for reporting non-containing

1.1 Documenting in shipping inspection standard and confirming non-containing with evidence

- Clearly state "Non-containing of ELV/RoHS 10 substances confirmed" in your shipping inspection standard.
- For new products and when design/process changes, obtain appropriate individual evidence for all components from your suppliers, or conduct analysis within your company (including outsourced analysis). (We recommend obtaining evidence issued by raw material manufacturers tracing back through the supply chain.)
- Prepare evidence for substances which require evidence for each category of procured items in accordance with **Table 2** of Section **5.3** of the main text (refer to Section **2** of this Attachment for the preparation method).

It should be noted that in some cases we request the suppliers to perform more rigorous non-containing confirmation depending on the risk of the ELV/RoHS 10 substances mixing in or as requested by our customers.

1.2 Reporting the result of non-containing confirmation written in the test result report

- Based on the result of confirmation described in the previous section, report the result of ELV/RoHS 10 substance confirmation using the test result report for each lot.
- It is not required to obtain new evidence if no change is made to the process, etc.

[1] Record the result of evidence-based non-containing confirmation in your test result report
(Attach the table shown below to the report and check applicable boxes. If the test result report has no space to include the table, you may submit this table as an attachment to the report.)

Item	Result (check the applicable boxes and fill the names of substances in spaces)	
Result of ELV/RoHS 10 substance non-containing confirmation	☐ New ☐ Existing	☐ Non-containing confirmed in all the composing parts based on the evidence ☐ Non-containing confirmed based on the evidence except for _____ as instructed by NTN
	☐ Change ☐ Process changed	☐ No change ☐ Non-containing confirmed in the composing parts, to which change was made, based on the evidence

Alternatively, it may be accepted that only the items necessary for delivery are extracted for simplification and they are added to the test result report, provided that the following requirements are met.

- Obtain agreement of the department, to which products are delivered, in advance.
- Indicate in your procedure, etc., that the full table will be provided as an attachment when additional reporting for the omitted items is required (for "new products" and "when change is made" in the example shown below).

[Example of simplification]

Item	Confirmation	
Result of ELV/RoHS 10 substance non-containing confirmation	☐ Existing	☐ Non-containing confirmed in all the composing parts based on the evidence

[2] At the time of the first delivery of new items and design/process-changed items, attach the "List of ELV/RoHS 10 Substance Evidences (Form 4)," and the evidence which serves as its basis

Any products to be delivered, for which no result of non-containing confirmation is provided, are considered to be rejected and not accepted by NTN, except in cases where the special provisions for reduced description provided in the following section apply.

1.3 Exception for reduced description of non-containing confirmation

- For products to be supplied to NTN, which meet **[Requirement 1]** or **[Requirement 2]** below, it is accepted that the result of non-containing confirmation is added in or attached to the test result report only when new products are delivered for the first time or changes are made to the design or process.
- It is not required to add the result for each lot.

[Requirement 1] (Both [1] and [2] must be met)

[1] Target items

Products to be supplied to NTN, which have been formed by any of the forging, turning, grinding, and heat-treatment steps or the combination of them from the materials/formed & fabricated materials supplied by NTN

[2] Regular submission of report form

"Check Sheet for Environmentally Hazardous Substance Control System (Form 2)" and "Non-inclusion Certification of NTN-prohibited Substances (Form 3)" shall be submitted to NTN once a year.

[Requirement 2]

For sub-materials and process materials, the "Non-inclusion Certification of NTN-prohibited Substances (Form 3)," "List of ELV/RoHS 10 Substance Evidences (Form 4)" and evidence to support it are submitted in advance, and the materials are "Accepted" by the business site to which you deliver. (For the acceptance status at the business site, contact the purchasing department of each business site.)

2. Evidence preparation method

2.1 Precautions for when preparing evidence

- The analysis method for ELV/RoHS 10 substances will, in principle, follow IEC 62321*; make sure to check the latest version.
- Any alternative methods may be accepted if deemed appropriate by us.
- If the products to be supplied to NTN consist of multiple components or are composite materials, each of the homogeneous materials of the composing element shall be measured.
- An analytical instrument to be used shall be optimized in advance. The standard specimens (selected specimens suitable for measurement, sample constitution/shape, etc.) shall be measured to obtain the working curve and checked for any variation in instrument (σ value), etc. Make sure that the instrument is in a state of being able to provide sufficient measurement assurance for the required measurement based on the result of the checking.

*IEC62321: "Determination of certain substances in electrotechnical products"
International standards established by International Electrotechnical Commission (IEC) regarding test measurement for RoHS analysis.

2.2 Analysis flow and analysis method

- The analysis flow is shown in **Fig. 1**, the target substances and analysis method in **Table 1**.
- First, conduct screening analysis, and perform high-precision analysis for samples that had higher values than the control value to determine the final acceptance. (Alternatively, you may perform high-precision analysis without conducting screening analysis.)
- Make sure the quantification limit of your analysis method is lower than the control value in **Table 1**.
- For model numbers for specific customers, data from screening analysis is not acceptable. Data from high-precision analysis shall be submitted as requested by NTN.

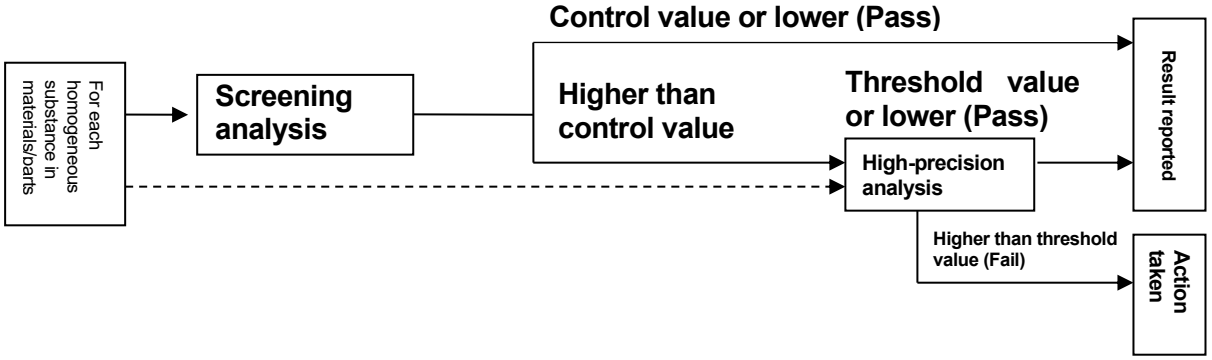


Fig. 1 Analysis flow (When our company separately specifies the method of analysis, follow the instructions)

Table 1 Target substances and analysis methods

<table>
<tr><th>Target substance</th><th>Main screening analysis method</th><th>High-precision analysis method</th><th>Control value</th><th>Threshold value*2</th></tr>
<tr><td>Lead (Pb)</td><td rowspan="6">X-ray fluorescence analysis (XRF)*1</td><td rowspan="3">(1) Inductively coupled plasma atomic emission spectrometry (ICP-AES)
(2) Inductively coupled plasma mass spectrometry (ICP-MS)
(3) Atomic absorption spectrometry (AAS)</td><td>500ppm
Resins: 100 ppm</td><td>1000ppm</td></tr>
<tr><td>Mercury (Hg)</td><td>500ppm</td><td>1000ppm</td></tr>
<tr><td>Cadmium (Cd)</td><td>75ppm
Resins: 20 ppm</td><td>100ppm</td></tr>
<tr><td>Hexavalent chromium (Cr^{6+})</td><td>Diphenylcarbazide absorptiometry</td><td>500ppm</td><td>1000ppm</td></tr>
<tr><td rowspan="2">Two types of specific brominated flame retardants
PBB, PBDE</td><td rowspan="2">Solvent extraction – Gas chromatography mass spectrometry (GC/MS)</td><td>500ppm</td><td>1000ppm</td></tr>
<tr><td>500ppm</td><td>1000ppm</td></tr>
<tr><td>Four types of phthalatesDEHP, BBP, DBP, DIBP</td><td>Thermal desorption – Gas chromatography mass spectrometry (TD-GC/MS)</td><td>500ppm</td><td>1000ppm</td></tr>
</table>

***1** Confirm the total amount of chromium in the case of hexavalent chromium; confirm the total amount of bromine in the case of PBB and PBDE; and perform separate high-precision analysis for samples with a value higher than the control value.

***2** For packaging materials, the total amount of lead, mercury, cadmium, and hexavalent chromium is 100 ppm or lower, and the amount of the phthalates is 1000 ppm or lower each.

2.3 External analysis organization

If the analysis is to be outsourced, request it to an analysis organization accredited under ISO 17025 [JIS Q 17025]. Some customers do not accept evidence produced by non-accredited analysis organizations. In that case, re-measurement by an accredited analysis organization will be required.

2.4 Evidence preparation method

For all components, obtain appropriate individual evidence from your suppliers, or analyze them in accordance with Sections **2.2** and **2.3** above (including in-house analysis and outsourced analysis). (To reduce the burden of expense on your company, it is highly recommended that you obtain evidence from raw material manufacturers in the upstream of the supply chain.)

The format of evidence may be obtained from your suppliers or analysis organizations, or output from your own analysis equipment. However, be aware that we may ask you to re-submit the evidence when the information is insufficient.

Summarize the evidence information by component in **Form 4** as information for each product.