molex | Instruction for Metal Strip Sample collection from suppliers

1. **SUBJECT:**

   This
   document defines the essential criteria for metal strip samples provided by Molex Suppliers.

2. **SCOPE:**

   The document defines the essential criteria for metal strip samples provided by Molex Suppliers. It is intended to guide both Molex Suppliers and supporting entities within Molex in providing metal
   strip samples that will be tested for data generation for engineering purposes.

3. **PURPOSE:**

   The purpose of this document is to guide Molex Suppliers as well as supporting entities within Molex providing metal strip samples which will be tested for data generation for engineering purposes. The requirements outlined include aspects such as sample size, sample quantity, additional documentation needed for identification of the samples, sampling frequency and the designated shipping location.

   In summary, the document serves as a comprehensive guide for Molex Suppliers and supporting entities to ensure that metal strip samples are provided in a manner that meets Molex's requirements for testing and evaluation, supporting the generation of reliable engineering data.

4. **COMPLIANCE:**

   This document defines shipping of the metal sample to Molex from metal strip suppliers/ Manufacturers in a proper streamlined process. Therefore, we expect support & adherence from procurement, quality & metal suppliers as per the defined process.

5. **REFERENCE:**

DOCUMENT NUMBER	DESCRIPTION
2090580042	Individual Metal Strip, Wire, Rod, Bar and Tube Specifications
2090580043	Geometric Conditions and Tolerances for Metal Strips
2090580044	Metal Strip Surface Conditions and Requirements
2090580045	Molex Metal Strip Packing Standards
2090580047-0060	Material Alloy Specifications

6. **DEFINITIONS:**

ITEM	DEFINITION
	Not applicable

7. **PROCEDURE:**

7.1. Select the sample(s) from a Master/Mother coil (Full width Coil) matching the Molex Raw Material part number or coil from a Metal lot intended to produce Molex part numbers.
The sample(s) should be cut at full coil width:

- At final thickness
- Final temper condition
- In the unplated/bare condition, just prior to the plating and/or slitting process.

7.1.1. Sample Identification & Dimensions:

The sheets should be individually identified with the Molex Raw Material Part Number - Alloy, Temper, thickness and Location. You are required to prepare the sheets of dimension 250mm X 250mm (Minimum of 3 sample sheets are required, however more sample sheets may be required upon specific request). Sheet should be selected from each edge and center portion (Edge-Centre-Edge) and information is also welcome to check the variability of properties across the width.

❖ The sample shall have matching identification to the COC (Certificate of Compliance) which is provided with the order shipment to Molex.

The COC should at least include:

- Molex Raw Material Part Number
- Molex Specification number with revision version as provided by the Molex Purchase Order.
- Properties as outlined on the Molex Specification for this Part Number (i.e., Mechanical properties such as Tensile Strength, Yield Strength, Elongation, Young's Modulus, etc.)
- In some Special requests Molex will ask for the raw data/stress-strain points

❖ When a master/mother coil can provide multiple part numbers (Identical alloy, temper & thickness), the supplier should identify all the part numbers that this sample submission refers to.

Note: Molex recognizes that material plated in either HTD / HALT will have mechanical properties that differ from the unplated material prior to the process.

7.1.2. Sampling Frequency: Sampling frequency will be determined by the Molex team engaging the supplier and is largely dependent on the nature of the project.

7.1.3. Sample Condition – Sample shape and surface should adhere to the requirements given in 2090580043 - Geometric Conditions and Tolerances for Metal Strips and 2090580044 - Metal Strip Surface Conditions and Requirements. Deviation from these requirements will result in the sample being rejected and the need for a replacement.

7.1.4. Sample Packaging – Sample Packaging is left at the discretion of the supplier, with the condition that samples are adequately protected for international transportation and handling to avoid damage to both the samples and personnel handling them. A limitation of 10 kg per package is to be followed.

7.2. Ship to location:

Molex India Pvt Ltd
No. 61-P, 62 & 63, KIADB Aerospace Park
Singahalli Village, Budigere Post
Bengaluru, Karnataka-562129
To the attention: Palaksha PA

7.2.1. The data collection process for metal strips will be conducted in response to missing data in the Molex material database and will be performed upon request by the Molex engineering community and its established practices.

- The supplier is responsible for performing their own testing and providing the data to the Molex material testing team in Bengaluru in the form described above. Additional data beyond what has been outlined above can be requested in special cases.
- The supplier will be responsible for collecting the sample(s) and shipping the same along with corresponding documentation to the material testing team in Bengaluru.

7.3. Materials Engineering will be responsible for the analysis, data storage and reporting to the supplier of the results whenever necessary.

7.4. EVALUATION

Molex personnel will assess the documentation and will test the material provided. Molex reserves the right to share the test results with the supplier. Sample Requirement non-conformance will be recorded if a material sample is unable to meet the requirements as defined by its corresponding Molex Raw Material Specification as well as the instructions given in this document. A bias allowance of 10% is in place to account for Testing bias for their minimum and maximum range.

8. SUMMARY OF CHANGES:

Revision	Summary of Changes	Author	Approver	Release Date
A	Initial Release	Mahesha A	Daniel Molla	5/17/2024
B	Included “2090580043” for strip requirements in sampling and included packaging specifications under 5. Reference Documents.	Elijah Resnick	Daniel Molla	2/11/2026