## Molex Vision

We make a connected world possible, by working together as a global team to enable technology that transforms the future and improves people's lives.

## Molex Quality Policy

We are committed to meeting customer, quality, regulatory and service requirements while maintaining the effectiveness of the QMS.

- *Customers* are our primary focus
- *People* are our most valued asset
- Suppliers and customers are *long-term business partners*
- *Continual Improvement* is essential to success
- *Zero defects* is our goal!

The supplier is considered to have accepted the requirements stated in this manual if there is no written feedback within 21 calendar days after receiving.

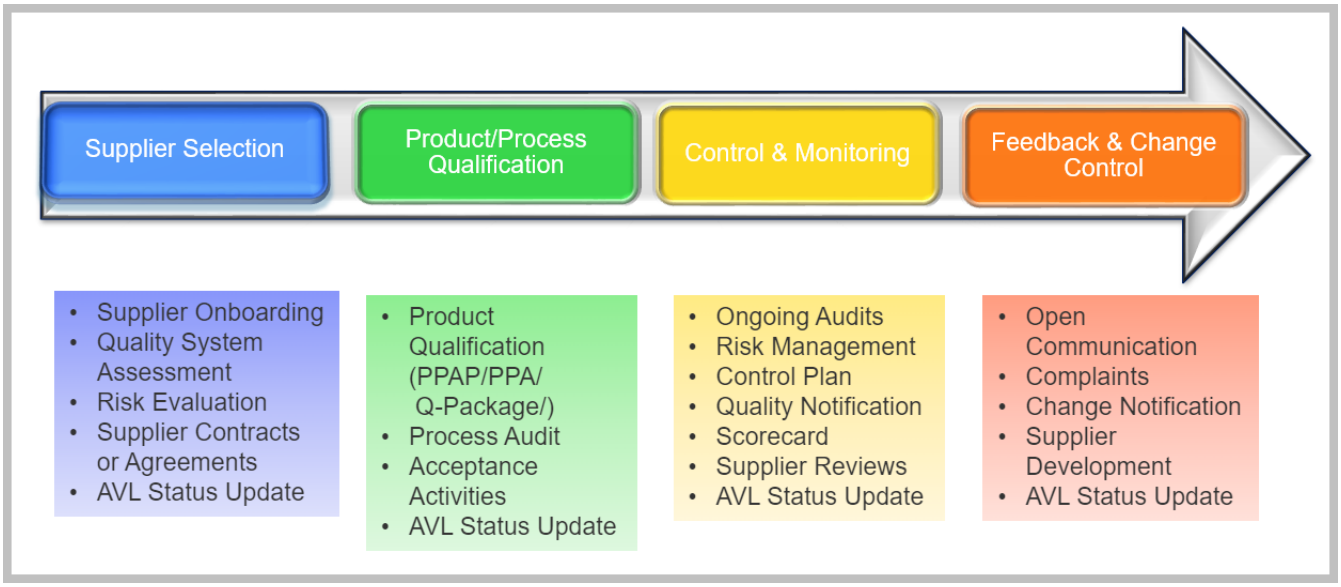
| Supplier Requirement Manual At A Glance | | | | |
|---|---|---|---|---|
| **1** | | **General** | | |
| **Management Systems** | | **Automotive** | **Healthcare/ Medical** | **All Others** |
| Quality | ISO9001 or equivalent | Minimum ISO9001 required with the ultimate objective of being compliant to IATF16949 | Required unless exempted by Molex | Required |
| Environment | ISO14001 or equivalent | Recommended unless required by Molex | At minimum, implement controls based on ISO14000 unless certification is required by Molex | At minimum, implement controls based on ISO14000 unless certification is required by Molex |
| Occupational Health & Safety | ISO45001 or equivalent | Recommended unless required by Molex | At minimum, implement controls based on ISO45000 unless certification is required by Molex | At minimum, implement controls based on ISO45000 unless certification is required by Molex |
| Other standards | | Upon Molex Request | | |
| Regulatory / Statutory | | Mandatory | | |
| Corporate Social Responsibility and sustainability | | Molex Communicated Requirement | | |
| Other General Requirements | | Recycling, Responsible Minerals, Product Compliance / Material restrictions, EDI, Customer Specific Requirements, Product Safety, Infrastructure, Security, Counterfeit Prevention, Molex Property Disposition, Risk Management & Contingency Plans | | |
| **2** | | **Documentation** | | |
| Suppliers shall have a documented QMS in place that is compliant with applicable standards/regulations, | | | | |
| **3** | | **Supplier Selection and Control** | | |
| Identified as Potential Supplier → Onboarding Process Supplier Portal → Complete onboarding Documents → Supplier audit → Registered into AVL → Periodic Assessment according to plan → Updates Scorecard for supplier disposition | | | | |
| **4** | | **Product Process Approval** | | |
| Industry based Quality Planning & deliverables | | | | |
| **5** | | **Control & Monitoring** | | |
| **All supplier products and services** | | ▪ Identifiable and traceable<br>▪ verified with reliable measurement systems and apparatus that are calibrated and maintained as required | | |
| **Nonconformity / Deviations** | | ▪ Communication to Molex for approval with follow up rectification required.<br>▪ Any conditional acceptance is controlled | | |
| **6** | | **Feedback & Change Control** | | |
| **Feedback** | | Mutually open communication for best timely support | | |
| **Change Control** | | All changes subjected to Molex approval before implementation | | |
| **7** | | **Continuous Improvement** | | |
| ▪ Molex may request improvement plan from Supplier base on situations<br>▪ Supplier drives own improvement initiatives and share the knowledge<br>▪ Molex will support suppliers on improvement | | | | |
| **8** | | **Procurement and Delivery** | | |
| **Molex – Suppliers Agreements** | | NDA, MGA, QA | | |
| **Inventory Management** | | **Control:** against damage, deterioration, contamination, | **Implement:** FIFO, controlled labelling, and packaging | |

**Supplier Management System Overview**

Molex strives to enable technology that creates value for our customers, the company, partners, and society. To achieve this vision, we must create virtuous cycles of mutual benefit with our suppliers. The success of the Molex vision depends on aligning our business with industry leading innovative solutions provided by trusted suppliers that deliver maximum value and profitable growth.

By leveraging supplier relationships, Molex gains access to new technologies, reduces costs, and ensures supply continuity. Molex is committed to long term relationships with suppliers in driving a zero-defect quality culture and has developed a holistic Supplier Management Program (see Fig. 1) which includes processes for supplier selection, product/process qualification, ongoing controlling & monitoring, and timely communication for change control and improvement.

*Figure 1 Supplier Management Lifecycle*




## 1 General

The supplier requirement manual is to contribute to the implementation of a joint quality, environment, occupational safety and health strategy on the basis of the standards and rules listed in this document.

### *1.0 Purpose*

The objective of this document is to ensure smooth processes between Molex and our suppliers and to minimize costs. The Molex supplier requirement manual is a supplier's commitment to ISO9001:2015 Section 5.1.2 Customer Focus. The requirements defined in this document do not represent any limitation to the rules and standards referred to or to legal requirements. A comprehensive continual improvement committed to the fulfillment of ISO9001:2015 Section 10.3 Continual Improvement must be introduced within the supplier's organization with the intention to achieve zero defect target along the entire supply chain through cooperation and partnership. Molex reserves the right to revise this manual at any time without prior notice. The latest version is available at Molex supplier portal* under Reference Documents.

*Molex supplier portal is used for collaboration between Molex and its suppliers. All suppliers are required to register at Molex supplier portal (**https://www.molex.com/supplier/login.jsp**). Contact Molex Procurement Representative for details on how to register.

### *1.1 Role*

Global Supplier Quality (GSQ) is responsible for the maintenance of this document.

### *1.2 Scope*

The Supplier Requirement Manual is valid for the supply of all production materials and software. It is also valid for services that affect customer requirements such as sub-assembling, sequencing, sorting, rework, washing, outsourced production processes and calibration services. It applies to all suppliers along the supply chain providing products to Molex.

It is also applicable for customer directed suppliers (directed buy). Molex suppliers are expected to extend the requirements of this Supplier Requirement Manual to their own suppliers and sub-suppliers.

## *1.3 Business Language*

All communications will be conducted in English unless otherwise requested by Molex. Unless otherwise specified by Molex, documents including product realization documents shall be written in English. In addition, they may display the native language of the supplier of the Molex receiving plant if common to both.

## *1.4 Management Systems*

All suppliers are required to comply with applicable local laws and regulations. All Molex selected suppliers are also required to be certified with the following management systems according to the defined sector specific requirements by an accredited certification body. The supplier will conform to the requirements stated under 'All Other Sectors' by default unless advised by Molex. Molex will communicate to the supplier which sector they have been categorized under.

*Table 1 Management Systems and Standards*

| Management systems | | Automotive Sector | Medical / Healthcare sector | All Other Sectors |
|---|---|---|---|---|
| Quality | ISO9001 or Equivalent | Minimum ISO9001 required with the ultimate objective of being compliant to IATF16949 | Required unless *exempted by Molex | Required |
| Environmental | ISO14001 or equivalent | Recommended unless required by Molex | Implement controls based on ISO14000 without certification unless certification is required by Molex | Implement controls based on ISO14000 without certification unless certification is required by Molex |
| Occupational Health and Safety | ISO45001 or equivalent | Recommended unless required by Molex | Implement controls based on ISO45000 without certification unless certification is required by Molex | Implement controls based on ISO45000 without certification unless certification is required by Molex |
| Any additional certifications required by Molex | | Molex will communicate to suppliers | | |

*Requests for exemption shall be communicated to Molex by supplier and subjected to Molex approval.

The effectiveness of the Quality Management system should be reflected by the following with the goal of Zero Defect.

- Continuous and verifiable improvement of processes, procedures and products
- Delivered quantity
- Delivery reliability
- Statistical driven, prompt and effective implementation of operations, corrective and preventive actions
- All level communications and feedback
- Appropriate and timely processing of new and revised projects

Suppliers are also required to define and be compliant with applicable industry standards and regulations. On top of Suppliers' internal definitions, industry specific requirements applicable to each supplier will be communicated through documents including, but not limited to, this Supplier Requirements Manual, Purchase Orders, Terms and Conditions, Quality Agreements (QA), Master Goods Agreements (MGA), Contracts or all other documents considered essential to objectives of Molex. Suppliers who are expected to obtain/maintain their certifications to applicable industry standards shall inform the Molex Quality Representative if their certification is suspended, revoked, or not renewed within 2 business days. Such suspension or revocation may result in the supplier status being reviewed for Molex's Approved Vendor List (AVL). All goods from the affected suppliers in transition without official notification of acceptance by Molex shall be returned at the suppliers' cost. In the case where Molex discovers supplier violation of certification requirement, Molex is entitled to inform the respective certification body of such violation. It is the supplier's responsibility to keep Molex updated of the status for each certification. Suppliers shall inform Molex at least 3 months prior to the certification expiration if no recertification is planned.

## 1.5 Regulatory and Statutory Compliance

All suppliers shall adhere to and pass down all applicable statutory and regulatory requirements to their suppliers in the entire supply chain. The supplier shall apply the legal requirements of the production location and of the country of use during the product development phase to all products, processes or services both internal and external. This process shall be completed latest during the project deliverables submission

## 1.6 Government Regulatory Compliance, Corporate Social Responsibility & Sustainability

Molex expects all suppliers and their sub-suppliers to treat their workers and employees fairly and with dignity and respect, maintain safe working conditions, and conduct manufacturing activities in an environmentally responsible manner.

Suppliers shall submit a completed social responsibility self-assessment questionnaire during onboarding (***Social Responsibility Risk Assessment Form for New Vendor Onboarding***[1]) The questionnaire results are used to initially evaluate the supplier's social responsibility management system implementation. In some cases, a supplier may be required to participate in on-site social responsibility audit conducted by a qualified audit team to verify compliance to social responsibility requirements.

## 1.7 Molex Code of Conduct for Suppliers

Molex requires all suppliers to conform to the ***Molex Code of Conduct for Suppliers*** (Code). Molex also expects the supplier to issue this Code to its suppliers to ensure their conformance to the Code.
The Code outlines the following social responsibility requirements:

- Labor and Human Rights Requirements
- Environmental, Health and Safety (EH&S) Management Requirements
- Respectful Workplace Requirements
- Ethics Requirements
- Proper Use Assets and Ideas Requirements

Written acknowledgement to the Code in the format specified by Molex (i.e., online acceptance acknowledgement or signed ***Molex Code of Conduct for Suppliers Certification Form***) is required for all suppliers. This acknowledgement confirms compliance not only from the supplier at each of its facilities supplying components, materials or services to Molex, but also its suppliers. Failure to comply with the Code is justification for Molex to terminate its contract with the supplier and may result in blockage from Molex's AVL. All goods in transition will also be returned at supplier's cost.

## 1.8 Quality Objectives

The supplier shall ensure that quality objectives to meet Molex requirements are defined, established, maintained and reviewed for relevant functions, processes and levels throughout the organization. In the context of quality planning, the supplier is expected to develop a "Zero-Defect Strategy" and take all necessary actions in order to achieve the "Zero Defect" target. If the quality performance has a potential to impact the safety, quality or delivery of products, the supplier shall inform immediately all possibly impacted Molex receiving plants and other involved parties in the supply chain to Molex.

## 1.9 Environmental, Occupational Health and Safety

Effective environmental, occupational health and safety management, which ensures compliance with the respective applicable regulations and improves continuously and efficiently the environmental, occupational health and safety conditions of the supplier, is an essential contribution towards supply security. Molex is committed to the protection of the environment, the occupational health and safety of our suppliers and sub-suppliers. We therefore expect our suppliers to show voluntary commitment to environmental protection and implementation of occupational health and safety requirements with the necessary management system.

Molex never accepts noncompliance, unsafe behaviors, or unsound environmental practices for the sake of production or financial objectives and expects the same for our suppliers. Suppliers shall conform to Molex's ***Global Environmental, Health and Safety (EH&S) Policy***.

[1] ***Blue and Italicized text*** refers to a Molex document listed in section 9 References

## *1.10 Recycling*

Effective responsible recycling management system ensures compliance with the respective applicable regulations and protects the environment as it enhances responsible redesignation of wastes. Molex will communicate to the supplier if there is a requirement on the certifications for responsible recycling.

## *1.11 Responsible Minerals*

Suppliers of materials and/or components that contain minerals referenced in the ***Molex Responsible Minerals Sourcing Policy*** shall have a policy to ensure they do not directly or indirectly finance, or benefit armed groups or contribute to serious human rights abuses in the Conflict-Affected and High-Risk areas. Suppliers shall exercise due diligence on the source and chain of custody of these minerals and make their due diligence measures available upon request and ensure compliance to ***Molex Responsible Minerals Sourcing Policy.***

## *1.12 Product Compliance / Material Restrictions*

Suppliers shall comply with the ***Molex Chemical Substances Specification (MCSS) for Products and Packaging*** to ensure compliance to all applicable laws, regulations including import regulations, environment, Material safety and customer requirements regarding prohibition or restriction of specific substances in products and manufacturing, including labeling for recycling and disposal. Suppliers are required to provide the following information if applicable:

- Full disclosure of Bill of Substance via Molex Data Collection Tool (DCT) or International Material Data System (IMDS)
- Declaration of Non-Use (DoNU)
- Substance Test Reports for the RoHS and Halogen (bromine/chlorine) substances
- Safety Data Sheets
- XRF screening results for each shipped lot to Molex based on the commodity type and perceived compliance risk to Molex
- Applicable REACH compliance related documentation upon request
- Energy consumption and emissions

## *1.13 Electronic Data Interchange (EDI) Requirements*

EDI is the exchange of data between businesses in a standard electronic format. It accelerates business cycles, increases data accuracy, enhances document security, reduces cost, and strengthens business relationships. Molex suppliers should be capable of receiving and sending EDI transactions. As an alternative to EDI, suppliers may use the Web-EDI Service or other more advanced tools. Molex expects suppliers to take all necessary measures to support electronic data interchange and carry out transactions via Molex's web-based applications and communications. Suppliers are responsible for maintaining up to date contact information in the vendor information network All suppliers shall access the Molex web-based applications to stay up to date.

## *1.14 Customer Specific Requirements*

Suppliers and their sub-tier suppliers shall have an effective process to flow-down Molex requirements including Molex's customer specific requirements (CSRs), product requirements and project requirements. The flow-down process shall include all applicable technical requirements, drawings, specifications, regulatory requirements, quality, environment, occupational safety and health management system requirements, documentation and control of special characteristics and processes, and CSRs from Molex and Molex customers.

## *1.15 Product Safety*

Product safety and product liability are significant for Molex. The supplier has producer responsibility (product liability) for their parts and processes, including parts or processes from sub suppliers which Molex purchases. Therefore in order to prevent product liability risks, it is the responsibility of the supplier and sub-supplier to do everything in their power, in terms of organization and technical matters, to guarantee the product safety. The supplier shall have a documented process for the management of 'product safety' related products and manufacturing processes. The supplier shall designate a product safety representative to be in charge of all the tasks required to ensure product safety. Furthermore, the supplier shall apply these requirements to all the sub suppliers.

### *1.16 Infrastructure*

Suppliers shall determine, provide and maintain the infrastructure necessary for the realization of products and services to Molex. Maintenance of the infrastructure shall include implementation of workplace organization to promote efficiency and eliminate waste.

### *1.17 Security*

Suppliers shall have adequate measures and policies in place for all aspects of security. Physical documents, hardware, software, premises, and shipments shall be secured in a manner to prevent unauthorized access.

Data breaches can have serious consequences, including loss of reputation, fines, and even criminal charges. Suppliers shall prevent unintentional disclosure and only grant limited access of digitally stored and/or physically stored data/information to users based on the "need-to-know" principle.

In the event of a data breach, Molex must be notified immediately.

### *1.18 Counterfeit Prevention*

Molex requires suppliers and their suppliers at all tiers to only procure and use parts obtained from the original manufacturers or their authorized suppliers to ensure the genuineness.

Suppliers shall implement inspection, test, and authentication to prevent counterfeits, and shall notify Molex when suspect counterfeits are encountered. Materials and products built with counterfeit components are considered nonconforming by Molex.

### *1.19 Molex Property Disposition*

All tools for manufacturing, testing or inspection equipment belonging to Molex or customers of Molex shall be permanently marked to clearly identify that they are property of Molex or of the customer of Molex. These tools shall only be used for Molex products unless prior permission is provided from Molex in writing.

### *1.20 Risk Management & Contingency Plans*

Risk management is essential for achieving the effectiveness of any plan, process, or system. Suppliers shall apply risk-based thinking throughout their organization, from strategic business planning to daily task management, to enable shifting their focus from a fire-fighting mode to a prevention mindset.

Suppliers are required to have in place a Business Continuity Plan/Contingency Plan to address events such as a pandemic, natural disasters, supply chain disruptions, utility interruptions, workplace accidents, fire, labor shortages, equipment failure, and any other potential risk events that could cause business disruption to Molex. The plan should focus on protecting employees, maintaining operations, and alternate supply in the event of enforced closures and extend to its supply chain. Key elements such as Emergency Management Team Members, Business Recovery Process/Resource, Recovery Goals and Alternative Options for Business Continuity shall be included. The plan should be reviewed/updated//exercised/tested periodically to identify potential problems or gaps with corrective actions taken as necessary to ensure uninterrupted supply to Molex. Any changes concerning the contingency plans shall be documented and are subjected to the change management process. Molex shall be informed immediately in the event of an actual disaster. In this case, suppliers shall provide Molex access to Molex's tools and/or their replacements including linking up Molex to contacts of the sub-suppliers who provide these affected resources.

Suppliers should incorporate risk-based management throughout the product lifecycle. Suppliers are expected to provide support and rapid responses to delivery and quality issues. An escalation process shall be defined with clear responsibility to resolve issues and be communicated throughout the whole organization.

## 2 Documentation

Suppliers shall have a documented QMS in place that is compliant with applicable standards/regulations,

Molex requires the minimum retention years for records after production as the following:
Automotive/Medical: 20 years
Industrial/Commercial products: 5 years

Aerospace/defense products: 40 years (10 years for off-the-shelf material/parts)
Suppliers should refer to sector specifics for detailed information on retention periods

Suppliers shall control and retain QMS documents and records in controlled conditions in order to prevent deterioration, destruction, or loss, and shall be readily available upon request from Molex. Suppliers are expected to have a document control process that manages the life cycle of QMS documents. Supplier shall also ensure changes to QMS documents are implemented to proper change process. Suppliers shall comply with retention requirements from applicable QMS, regulatory, and/or customer specific requirements.

# 3 Supplier Selection and Control

## *3.0 Supplier Selection*

Molex chooses potential suppliers based on quality, technology, location, cost, compliance, and capability to gain or maintain its competitive edge. A supplier shall obtain approved status through Molex's new supplier selection process and be added to (if not already on) the Molex Approved Vendor List (AVL) before being eligible to receive a production Purchase Order. Once being identified as a potential supplier, the supplier will follow the onboarding process by requesting access to Molex supplier portal, getting registered, completing a list of required documents based on its category and supplier type and submitting them to Molex Procurement Representative or SCS-Procurement@molex.com for Molex to conduct an assessment of the relevant supplier location. The qualification process may include a process audit if the product or customer requirements necessitate it. The Molex quality representative will communicate Molex's expectations and supplier dispositions during supplier audits.

## *3.1 Supplier Control*

### 3.1.1 Scorecard

The scorecard provides measurements of performance to provide evidence of the supplier's conformance to Molex's strategic global procurement objectives and drives continuous improvement at both the supplier and at Molex. Suppliers should keep in contact with Molex to get the latest updates on the performance scorecard.

### 3.1.2 Audits

Molex reserves the right to carry out audits and assessments on relevant systems, processes, products or any Molex defined requirement, with a Molex representative, customer or third party appointed by Molex if necessary after prior notification. Suppliers shall have capabilities to support all forms of audits as required by Molex. Suppliers are responsible for initiating and completing corrective actions for any findings resulting from above assessment in a timely manner.

### 3.1.3 Supplier Audit Planning

The supplier shall issue an audit program which defines the regular execution and the extent of internal and external audits including sub supplier audit. Suppliers shall have qualified auditors to fulfill the standards defined in the audit program.

### 3.1.4 Sub-Tier Supplier Control

Molex suppliers are responsible for the development of their own sub suppliers including customer mandated sub-Tier and Molex defined high-risk suppliers (e.g. Plating, PCB & flex etc.) on their necessary processes, competence and resources to manage sub suppliers. Molex suppliers shall monitor their sub supplier's performance and carry out timely rectification and improvements when necessary. They shall ensure that the sub suppliers comply with all the requirements contained in this supplier requirement manual. Change of a sub-supplier can only be implemented upon prior approval by Molex. All sub-tier Plating, and any Molex required suppliers shall be on the Molex AVL. Suppliers shall ensure sub tier suppliers comply with all the requirements contained in this supplier requirement manual

## *3.2 Supplier AVL Status Update*

Suppliers including customer mandated sources identified as high risk are expected to work with Molex Representative on their Quality Improvement Plan (QIP) such as Chronic Supplier Improvement (CSI) plan. The Supplier's AVL status will be reviewed if the QIP does not provide the necessary results within a Molex defined timeframe. When using customer mandated/approved sources, suppliers are responsible to ensure the quality of customer mandated/approved sources (purchased products, tools, gauges, etc.).

# 4 Product/Process Approval

## *4.0 New Product Development*

Molex involves its suppliers as early as possible in the product development cycle. Utilizing the concept of concurrent engineering, joint effort is focused on compliance to customer and regulatory/legal requirements and design for manufacturability. Suppliers are expected to participate in efforts to further reduce the costs of individual components.

In the case of being responsible for product design, suppliers are expected to meet the requirements defined in applicable regulations/standards. Suppliers are expected to actively communicate and stay updated with Molex and relevant authorities on the applicable standards and regulatory requirements.

## *4.1 Product Description*

All issues identified during the product description process will be tracked by means of an agreed action plan. Dimensions not described in the 3D models or 2D prints but necessary from a production engineering point of view shall always be determined, specified and agreed with Molex in order to avoid interferences and problems with manufacturing and assembly.

## *4.2 Feasibility Studies*

Suppliers shall analyze all technical documents as well as the purchasing terms and conditions and this supplier requirement manual as part of a contract review. The requirements are to determine and confirm:

- Design feasibility (for suppliers with design responsibility)
- Manufacturing & Measurement ability
- Achieve and sustain process capability for special characteristics
- Design, process, costs, packaging and shipping
- Volume and timing ability

## *4.3 Project Plan*

The supplier shall create a project plan for all new product development based on the Molex specified requirements. The project plan shall address the specified project milestones, schedule and deliverables that are agreed with Molex.

## *4.4 Design For Manufacturing*

The supplier shall participate in all design for manufacturing activities. All Molex requirements for the realization of the Design for Manufacturing shall be considered, included and reviewed with Molex for feasibility. All personnel, plant, facilities, tools, fixtures and equipment necessary for manufacturing are to be planned during the design for manufacturing and procured to meet the contracted volume

## *4.5 Design For Environment*

Whenever considered necessary by Molex, the supplier shall participate in all design for environment activities. Supplier shall define a list of necessary actions that aims to reduce the impact of product design upon the environment throughout the whole product life cycle. A minimum of the following shall be considered during design for environment activities.

- Material and Extraction
- Production
- Transport, distribution and packaging
- Product use
- End of product life
- Disassembly, disposal and recycling

## *4.6 Inspection Planning*

For suppliers responsible with design and development, the supplier shall define internal project/product related quality objectives for measurement and evaluation of the achieved quality. The supplier shall also monitor the Molex defined specifications at all times to meet the quality objectives defined by Molex. The supplier shall participate in all inspection planning activities to meet the quality objectives. All measurement and inspection tools, fixtures, equipment and external inspection and testing service providers necessary for manufacturing of all stages are to be planned, capability proven, approved by Molex and procured to meet the product requirements.

The supplier shall create an inspection plan based on the defined quality objectives for measurement and evaluation of the achieved quality with a control plan. This inspection plan shall include all characteristics to be inspected with appropriate inspection equipment, frequency and sample size.

## *4.7 Special Characteristics Identification & Agreement*

Molex describes product and service requirements on the technical drawings, specifications, FMEA and relevant purchasing documents. Special Characteristics are characteristics with higher risks which require special consideration. Deviations in these characteristics can seriously affect product safety, product lifetime, assembly capability, product functionality, quality and can violate official or legal regulations. All characteristics shall be complied with. A special characteristic is any feature of a material, process, part, assembly, or test that has a significant influence on product form, fit, function or any other expected deliverable, as identified and specified by Molex. When considering special characteristics, suppliers should implement a mental model of flowing from Design FMEA to Process FMEA to control plan to inspection plan to Statistical process control. Special Characteristics are specified by Molex and documented on the drawings and / or specifications. Special Characteristics shall also include, but are not limited to, all relevant regulatory and statutory requirements.

It is the responsibility of suppliers to ensure that all drawings and specifications used to manufacture the product are the latest revision according to the Molex Purchase Order (PO). If suppliers do not have the latest revision, they need to obtain it from Molex Procurement before they manufacture the product. An agreement on special characteristics should be documented using ***Molex Supplier Special Characteristic Agreement***.

## *4.8 Personnel Capacity / Qualification Requirements*

Personnel need to be planned in a timely manner for both the project and production. Planning shall be performed in such a way that sufficient capacity is available at the start of both project management and production. Personnel including temporary personnel are to be trained according to the prevailing conditions.

## *4.9 Manufacturing Release*

The supplier shall release all manufacturing and assembly stations before production release. The release shall be performed using a suitable checklist. The deviations, results and release shall be documented. A production release can only take place when all the results are successful.

## *4.10 Process flow Charts*

The supplier shall provide a process flow chart for the whole process chain from receiving to shipping. This process flow chart shall be presented to Molex for review. Any failure mode effects analysis, and any type of control plan shall align with the process flow chart

## *4.11 Control Plan*

Suppliers are expected to consider the inclusion of control plan whenever necessary. The control plan presents a planning tool for preventive process security. It is implemented by a team through systematic analysis of production, test and operations processes. This team should be made up of its process owner and multi-disciplinary functions across the organization including external providers whenever necessary. The results from all Product/Process FMEAs, lessons learned with similar process and products, application of improvement methods shall be taken into consideration in the control plans.

## *4.12 Failure Mode and Effects Analysis (FMEA)*

Whenever necessary, the Design/Process Failure Mode and Effects Analysis (FMEA) shall be carried out and updated to examine possible risks and their evaluations. These risks shall be minimized with appropriate measures in a timely manner. A FMEA should be used at a minimum for all phases of the product life cycle such as design, production, assembly, packaging, transport, customer usage, recycling, disposal, bypass/skip process. In addition, environment, lesson learnt, technical cleanliness should also be considered. All FMEAs shall be used as a continuous improvement tool.

Automotive suppliers: see Automotive FMEA section 11.0.2 for additional requirements.

### *4.13 Capability Studies*

Suppliers are expected to consider the inclusion of capability studies for identified critical characteristics or whenever necessary considered by Molex. The supplier shall agree to conduct machine capability study and process capability study according to an agreed method with Molex.

**Minimum requirements for capability indices (unless otherwise stated by Molex):**

| | |
|---|---|
| Cm/Cmk | 1.67 |
| Pp/Ppk | 1.67 |
| Cp/Cpk | 1.33 |

If the minimum process capability is not met prior to the first production, a corrective action plan shall be developed by the supplier and submitted to Molex for approval; this corrective action plan will require 100% inspection or other means as agreed upon with Molex. The corrective actions stipulated in the corrective action plan shall remain in place until capability can be demonstrated to Molex or Molex specific exit criteria are fully met and sustained.

### *4.14 Test Planning / Development Release*

Suppliers with responsibility for product design shall create and execute a plan, according to which the design (development results) will be tested to ensure that it meets the design specifications. The difference between planning and realization (gap analysis) shall be evaluated. The development release shall be confirmed and agreed with Molex.

### *4.15 Manufacturing Prototype / Concept Parts / First Off Tool*

For prototype/concept parts/first off tool parts, an inspection report specified by Molex with the necessary extent of documentation in the individual case shall be submitted with the first delivery and in the event of modifications. All drawing characteristics or the extent of the modification shall be verified on quantities agreed with Molex

### *4.16 Release of Product and Process Development*

The supplier shall evaluate and document its releases for individual stages of product and process development. The results of these evaluations at each stage shall be described in the requested planning documents and agreed with Molex.

### *4.17 Product Approval Requirements*

Suppliers shall meet Molex product approval requirements with Molex agreed deliverables. Any discrepancy or omission of Molex product approval requirements shall be communicated to Molex at the supplier's initiation. The deliverables shall be documented according to industry specific requirements or defined by Molex. Any discrepancy to the deliverables is subjected to Molex approval.

### *4.18 First Article Inspection (FAI) Requirements*

Whenever required by Molex, suppliers shall submit FAI according to the relevant Molex drawings or specifications and to be conducted with a Molex agreed quantity.

### *4.19 Capacity Verification Run at Rate (R@R)*

The purpose of Run-at-Rate is to demonstrate that Molex requirements for supplier capacity are met at peak demand, to provide evidence that the supplier can produce the required volumes to specification with existing capacity and to identify potential process weaknesses. Suppliers shall verify at the supplier's initiation with Molex if Run-at-Rate is necessary and the methodology to execute it

### *4.20 Safe Launch*

The supplier shall create and align with Molex a safe launch plan prior to transfer to production according to relevant Molex Safe launch procedures. The safe launch plan focusses on the smooth transition of a defect free product development output into on time pilot launch.

The minimum requirements of a safe launch plan include the Molex jointly agreed product characteristics matrix, purchase contract, design records, quality planning meeting, duration, inspection, deviation management, exit criteria and relevant pre-launch expectations. These serve as base documents to reference for creation, execution, and reporting during the safe

launch activity. This also applies to all sub suppliers who have an impact on these features and requirements and agreements.

## 5 Control and Monitoring

### *5.0 Identification and Traceability*

Suppliers shall have processes that identify and trace products from incoming material receiving to final product delivery to Molex. Labels for products and shipping shall meet requirements specified by Molex. Traceability to the lot/batch is expected. Suppliers shall be able to link process data to traceability data in case of product nonconformity. Suppliers shall respond with traceability results within 24 hours of getting an inquiry from Molex.

### *5.1 Measurement System Analysis*

Molex expects suppliers to develop and maintain capable, accurate, and stable measurement methods and systems. Suppliers shall conduct Gage Repeatability and Reproducibility (Gage R&R) for all measurement systems whenever necessary according to the prevailing standards. Molex reserves the right to specify the MSA study and methodology, and suppliers shall comply with and fulfill all Molex MSA requirements.

### *5.2 Calibration and Maintenance*

All measuring and monitoring equipment, including customer or supplier owned inspection/test equipment, tooling department equipment used to qualify or maintain production tooling shall have their calibration and maintenance planned and executed by qualified personnel. Test software that is used to measure product quality shall be validated. All calibration shall be traceable to national or international standards. Records shall be maintained for all calibration and maintenance activities including reaction to out of calibration results.

### *5.3 Control of Samples*

Suppliers shall have a defined process for sample retention with at minimum the following:

- Appropriate storage conditions
- Identification of sample
- Retention period as defined by Molex
- Removal from system after retention period

### *5.4 Non-Conformity Communication and Resolution*

Suppliers shall immediately notify and receive written approval from Molex prior to shipping any non-conforming material/product. Supplier shall inform Molex immediately when they detect that any discrepant material has been shipped to Molex or the customer. If material received from the supplier is not suitable for use, a return or sort/rework at the supplier's expense will be requested, and/or supplier shall cooperate with Molex entity to quickly resolve the issue when needed. Suppliers will be liable for the associated cost caused by the supplier non-conforming material/product or missed shipment. If Molex incurs cost of failure at the customer that is attributable to defective supplier material, charge backs will be made to cover failure costs imposed by the end customer. Molex has full authorization to debit charge back cost against the supplier's accounts receivable.

### *5.5 Supplier Quality Notification*

The Supplier Quality Notification (QN) is how Molex notifies suppliers of non-conformities or missed deliveries. The number of QNs issued to the supplier and timeliness in resolving QNs will be used as part of the supplier performance (Scorecard). The 8D problem-solving technique shall be used by suppliers using ***Molex Supplier 8D Standard Form*** unless otherwise specified. Suppliers shall go to Molex supplier portal to update the QN and submit required documentation within the timelines specified in the following Table. Any timeframe extension must be communicated to and agreed with Molex.

*Table 2 Molex 8D Action Timeline Requirements*

| 8D Action | Timing* |
|---|---|
| Complete and return sections D1 – D3 to Molex | Within 24 hours of receipt of QN |

| 8D Action | Timing* |
|---|---|
| Complete and return sections D4 – D5 to Molex<br>Note: Target dates and individuals responsible to implement planned corrective actions shall be shown. | 10 calendar days |
| 8D Closure | Within 28 calendar days of QN receipt |
| ***Reduced timing may be required depending on Molex customer requirements** | |

### *5.6 Deviations*

Suppliers shall use ***Molex Supplier Deviation Request for Approval Form*** to request written approval from Molex. Written Molex approval is required prior to any follow up implementation. Any product shipped with deviated characteristics must be identified with a Molex agreed method.

### *5.7 Control of Reworked and Repaired Products*

The supplier shall inform and get approval from Molex before executing any rework/repair and have a documented process and conduct a risk analysis (FMEA is recommended) for reworked and repair of products. Any repair or rework not included in the agreed control plan during the product development phase is considered as process change.

### *5.8 Disposition of Nonconforming Products*

All suppliers shall have a documented process for disposition of nonconforming products including production parts, production trials, engineering samples that are not subjected to rework or repair. For product not meeting requirements including any components not sent directly to Molex, suppliers shall verify that the product to be scrapped is rendered unusable prior to disposal unless otherwise agreed with Molex.

### *5.9 Controlled Shipping*

Different Control Shipment Levels (CSL) may be applied to suppliers based on the non-conforming situation. Suppliers may be placed under one of two controlled shipping levels (CSL1 or CSL2):

*Table 3 Control Shipping Requirements*

| Criteria | CSL1 | CSL2 |
|---|---|---|
| Initiation | Requested by Molex | Escalation when unsatisfactory performance after 3 months in CSL1 |
| Implementation | Supplier Implements in addition to production sorting | Supplier implements additional inspection/sorting by external company validated by Molex with CSL1 criteria |
| Location | In dedicated zone outside production line | In dedicated zone outside production line |
| Control | Molex provide control instruction | Molex provide control instruction |
| Training | Supplier provide to operator | Supplier provide to external company and operator |
| Performance monitored by | Supplier | External company communicates with Molex and supplier |
| Conformity | Enforced and ensured by supplier | Enforced by Molex appointed panel of inspection / sorting companies, ensured by supplier. |
| Cost | Inspection/sorting cost will be borne by the supplier. | Inspection/sorting cost will be borne by the supplier. |
| Exit | By Molex approval | By Molex approval |

## 6 Feedback & Change Control

### *6.0 Open Communication*

Open communication between Molex and suppliers is vital to our partnership. Suppliers shall allow Molex's employees or representatives access to all manufacturing facilities and/or their suppliers in which products for Molex are being produced with reasonable advance notice from Molex. It is the supplier's responsibility to ensure Molex is timely and adequately informed of all necessary entry requirements to supplier's and sub supplier's premises. Suppliers and sub suppliers shall be

willing to exchange information including quality data and collaborate on new product development or problem solving for Molex. Suppliers are to be available for technical support within the context of discussions at any Molex defined location. Communication concerning Molex products between the supplier, sub supplier and customers of Molex shall exclusively take place in agreement with Molex.

## *6.1 Escalation*

The supplier shall have an escalation system agreed with Molex to ensure communication of all issues are timely and adequate in all necessary aspects.

## *6.2 Supplier Request for Change*

Suppliers shall have a documented process to control and implement changes that impact product reliability and safety, product realization and manufacturing processes. Unless exempted by Molex, suppliers shall notify Molex of ANY proposed changes including:

- Specification change
- Material change
- Process change
- Location or address change
- New or modified molds, dies, assembly equipment
- Restart production following period of dormancy (more than 1 year)
- Supplier change
- Test method or inspection change
- Component change
- Upgrade or rearrangement of tools or equipment
- Packing specification change
- ERP system change
- Change in minimum order quantity (MOQ)
- Obsolescence
- Supplier's sourcing changes
- Outsourcing
- Loss of certification
- Business ownership change

The effects of any changes including changes caused by sub-suppliers shall be assessed, verified and validated by the supplier to ensure compliance with Molex requirements prior to implementation. Suppliers shall not implement any such changes without written approval by Molex. Molex will reject material/product shipped with unauthorized changes. All costs and expenses incurred to Molex as a result of unauthorized changes will be borne by the supplier.

Suppliers shall notify Molex in writing with a minimum of 9 months unless otherwise advised by Molex prior to the implementation of any change.

Regarding discontinuation of manufacture and/or sale:

- Any Standard Product, including any Product that Molex purchases from any authorized distributor of supplier, the Supplier shall provide Molex with at least twelve (12) months advance written notice,
- Any Non-Standard Product, including any Product that Molex purchases from any authorized distributor of supplier, the supplier shall provide Molex with at least twenty-four (24) months advance written notice.
- Longer notifications may be required depending on end customer requirements.

Molex will specify the requirements for the approval of the change which may include a process audit, material qualification, documentation and any Molex customer specific or regulatory requirement.

Unless otherwise advised by Molex, suppliers shall login to Molex supplier portal (https://www.molex.com/supplier/login.jsp) and enter the proposed change notification directly into the online html form. If the supplier does not have access to login to Molex supplier portal, the supplier should contact the Molex Procurement Representative to request the access. When not able to use Molex Supplier Portal, supplier can submit the change request to procurement CoE (SCS-Procurement@Molex.com) using ***Molex Supplier Change Request Approval Form***.

## 7 Continuous Improvement

Continuous improvement (CI) is the ongoing effort to improve products, services, or processes by constantly reviewing and improving effectiveness, efficiency, and flexibility. These efforts can target 'incremental' improvement over time or 'breakthrough' improvement all at once. Suppliers are responsible for identifying, initiating, and driving their own internal continuous improvement efforts to meet or exceed Molex expectations. Results shall be reviewed periodically to identify gaps and initiate improvement. Any changes resultant from the continuous improvement is subjected to change management.

### *7.0 Quality Improvement Plan*

Supplier shall present a QIP to Molex at Molex's request or with the supplier's initiation that meets the targets and requirements stated in that QIP. Once the QIP has been accepted by Molex, Supplier is responsible for implementing the QIP. The effectiveness of the implemented activities within the QIP shall be evaluated on regular basis by both Supplier and Molex. For the Chronic Supplier Improvement (CSI) initiative, Molex may jointly develop the action plans with the supplier and monitor its effectiveness.

### *7.1 Supplier Development*

Based on supplier performance, audit results, and risk analyses, Molex will identify suppliers of new and existing products/services that need supplier development assistance and provide support. The focus of supplier development is to partner with targeted suppliers to help them solve specific problems, to increase their capabilities to effectively drive continuous improvement on their own, and to improve their quality management system.

The types of support provided by the Molex can be divided into four categories:

- Solving Specific Chronic Problems:
    - The GSQ team is highly skilled at facilitating complex problem-solving efforts, by applying the best combination of methodologies (DMAIC, Kaizen Events, Design for Lean Six Sigma, PDCA, PDSA, etc.), tools, and level of rigor demanded by the situation.
- Developing Supplier CI Capabilities:
    - GSQ provides training and application support across an extensive portfolio of topics in areas such as Problem Solving and Improving Production Capabilities (from individual tools to entire methodologies), Developing a CI Culture, and Innovation; all to help Suppliers develop and accelerate their internal CI capabilities.
- Continuous Improvement Program Leadership:
    - In situations when a Supplier has significant deficiencies in their ability to consistently supply quality product or services to Molex due to poor process performance across a wide cross-section of the Supplier's business, the GSQ team can provide the needed program leadership. GSQ works hand-in-hand with Supplier leadership, to rapidly reduce risk and achieve immediately needed improvements, while supporting the deployment of the necessary processes and systems to ensure required performance and continuous improvement over the long-term.
- Quality Management System Improvement for suppliers of automotive products or services with the ultimate objective of certification to IATF 16949:
    - Molex supplier quality organization identifies areas where the supplier can improve their QMS to meet the Minimum Automotive Quality Management System Requirements for Sub-Tier Suppliers (MAQMSR), and with the ultimate objective to be certified the Automotive QMS Standard.

The GSQ team will engage with existing and new suppliers needing assistance, as well as in situations with existing or new products.

### *7.2 Lessons Learned*

Suppliers shall have a process to document and share knowledge, generally gained by experience within the organization.

# 8 Procurement & Delivery

## *8.0 Agreements*

### 8.0.1 Non-Disclosure Agreement

Depending on the level of technology or information disclosed, Molex will inform suppliers if they need to sign a Non-Disclosure Agreement (i.e., Confidentiality Agreement) with Molex to ensure confidentiality.

### 8.0.2 Master Goods Agreements (MGA)/Quality Agreements (QA)

New suppliers added to the Molex AVL should sign either a Master Goods Agreements (MGA) or Quality Agreements (QA) with Molex.

### 8.0.3 Purchasing Agreement/Purchase Orders

Product acceptance samples shall be specified on the Purchase Order. Suppliers shall ensure that all requirements specified on the Purchase Order are met. Molex requires that all Purchase Orders (POs) be acknowledged with quantity and promise date by a Molex acceptable method.

### 8.0.4 Delivery

Supplier shall commit to achieve 100% on-time delivery based on mutually agreed to lead time

## *8.1 Inventory Management*

Suppliers are expected to have systems in place to ensure that damage, deterioration, contamination, or other adverse effects do not occur during the handling and storage of products.

### 8.1.1 FIFO

Suppliers shall have a system to ensure Molex plants receive product following FIFO. Suppliers shall ensure implementation and management of effective FIFO of stock rotation from incoming of raw material throughout the production process and shipments.

### 8.1.2 Vendor Managed Inventory

The goal of Vendor Managed Inventory (VMI) is to build a mutually beneficial relationship where the supplier has real-time visibility of Molex demand forecast and both sides can control the flow of the goods more smoothly and accurately. Suppliers shall build and reserve stock for Molex based on Molex's forecast. The quantity to be kept in stock will be defined and negotiated with the supplier. Goods shall be procured and reserved in a controlled location (consignment location or hub). Hub stock may be at Molex requested location (external hut) or within supplier warehouse (internal hub). VMI remains as supplier's inventory until it is released to Molex or as otherwise agreed to.

### 8.1.3 Shelf-Life

The supplier shall determine the shelf life of products and advise Molex of the information. Suppliers shall maintain a documented system for using, storing, and controlling items with limited shelf or storage life. The system shall include a method of identifying and controlling such items to ensure expired items were not used in products shipped to Molex and that items shipped meet remaining shelf-life requirements. All products not meeting shelf-life requirements shall be handled as nonconformity.

## *8.2 Logistics*

In principle, Molex establishes a logistics agreement with the supplier. Regardless of whether such an agreement was made or not, the following minimum requirements apply unless a variance has been explicitly agreed.

### 8.2.1 Planning of Packaging Including Labelling

The supplier is responsible for packaging their components and to improve packaging if it is not fit for its intended purpose. The packaging must be designed and verified in such a way to ensure that it is sufficiently robust to withstand any form of shipment required by Molex and arrive on time without damage or contamination. The planned type of packaging must be agreed with Molex on the supplier's initiative in sufficient time before any form of production.

All incoming materials must be identified according to Molex specifications. All hazardous materials must be packed according to relevant statutory, environmental, occupational health and safety requirements

### 8.2.2 Corrosion Prevention

All products which could be impaired by interaction with the environment shall be protected appropriately. Approval for use of the planned corrosion inhibitors whenever necessary shall be coordinated in a timely manner with Molex on the supplier's initiative and documented

### 8.2.3 Material Flow

The supplier shall ensure batches are not mixed up and to be able to trace batches, raw parts, parts purchased from sub suppliers and parts from supplier's own production. Supplier shall ensure the traceability of their products from Molex all the way back to their sub suppliers.

### 8.2.4 Cleanliness

The supplier is responsible for the cleanliness of both the parts and the packaging and shall take cleanliness specifications of Molex into consideration. Packaging shall protect the parts against contamination. All packaging materials shall be recyclable, reusable or returnable whenever possible. If required, the supplier shall ensure that the packaging for electronic parts conforms to Electro-Static Discharge & Moisture Sensitive Device specific requirements.

## 9 References

| Doc Name | Location |
|---|---|
| ***General Terms and Conditions of Purchase for Goods and/or Services*** | Molex supplier portal<br>**https://www.molex.com/Supplier/login.jsp** |
| ***Molex Chemical Substances Specification (MCSS) for products and packaging*** | |
| ***Molex Code of Conduct for Suppliers*** | |
| ***Molex Code of Conduct for Suppliers Certification Form*** | |
| ***Molex Responsible Minerals Sourcing Policy*** | |
| ***Molex Declaration of Non-Use (DoNU) Form*** | |
| ***Molex Global Environmental, Health and Safety (EH&S) Policy*** | |
| ***Molex Supplier 8D Standard Form*** | |
| ***Molex Supplier Change Request for Approval Form*** | |
| ***Molex Supplier Deviation Request for Approval Form*** | |
| ***Molex Supplier Special Characteristic Agreement*** | |
| ***Social Responsibility Risk Assessment Form for New Vendor Onboarding*** | |

## 10 Terms and Definitions

| Terms | Definitions |
|---|---|
| 8D | 8 Disciplines |
| APQP | Advanced Product Quality Planning |
| AIAG | Automotive Industry Action Group |
| AVL | Approved Vendor List |
| cGMP | Current Good Manufacturing Practices |
| CSI | Chronic Supplier Improvement |
| CSR | Customer Specific Requirement |
| EDI | Electronic Data Interchange |
| EH&S | Environmental, Health and Safety |
| FAI | First Article Inspection |
| FAIR | First Article Inspection Report |
| FIFO | First In First Out |
| FMEA | Failure Mode and Effects Analysis |
| GMP | Good Manufacturing Practices |
| GSQ | Global Supplier Quality |
| IATF | International Automotive Task Force |
| IMDS | International Material Data System |
| MCSS | Molex Chemical Substances Specification |
| MGA | Master Goods Agreements |
| MOQ | Minimum Order Quantity |

| Terms | Definitions |
|---|---|
| MSA | Measurement System Analysis |
| NDA | Non-Disclosure Agreement |
| PCB | Printed Circuit Board |
| PO | Purchase Order |
| PPF | Production Process & Product Approval (VDA) |
| PPAP | Production Part Approval Process (AIAG) |
| Procurement Representative | Refers to the responsible Molex Category team, Commodity team, Procurement team, buyer and/or sourcing functions |
| QA | Quality Agreements |
| QIP | Quality Improvement Plan |
| QMS | Quality Management System |
| QN | Quality Notification |
| Quality Representative | Refers to the responsible Supplier Quality Engineer, Quality Engineer, Quality Manager, Quality Assurance and/or other quality function |
| R&R | Repeatability and Reproducibility |
| REACH | Registration, Evaluation, Authorization and Restriction of Chemicals |
| RoHS | Restriction of Hazardous Substances |
| SPC | Statistical Process Control |
| Suppliers | External organizations that<br>- design or manufacture products sold by Molex or<br>- deliver materials, components, or software incorporated into Molex products or<br>- provide services that are required to manufacture Molex products |
| VDA | German Association of the Automotive Industry (Verband der Automobilindustrie) |
| VMI | Vendor Managed Inventory |
| XRF | X-Ray Fluorescence |

## 11 Appendix A – Sector Specific Requirements

### *11.0 Automotive Sector Specific Requirements*

Suppliers of products and materials to Molex that are used in automotive products are required to meet the IATF16949 requirements which includes the following :

#### 11.0.1 Pre-Production Activities and Expectations

Suppliers are expected to utilize the planning procedures from AIAG APQP / VDA MLA unless otherwise specified by Molex for all new product development. The Supplier is required to provide documented evidence to the completion and results of all activities at various gates in the process.

#### 11.0.2 Failure Mode and Effects Analysis (FMEA)

Suppliers shall use the AIAG VDA FMEA method for projects launched in 2023 and later unless exempted by Molex.

#### 11.0.3 Statistical Process Control

Suppliers shall monitor process performance using appropriate statistical techniques in accordance with the AIAG SPC Manual. Additional areas where statistical techniques can be used are Gage R&R studies, defect analysis, and continual improvement activities. All results shall be documented and made available upon request by Molex.

#### 11.0.4 Design of Experiment

Suppliers shall use appropriate analytical techniques to improve capability and for problem resolution. Examples of analytical techniques are Design of Experiment (DOE) and benchmarking. Results shall be documented and made available upon request by Molex.

#### 11.0.5 Laboratory Requirements

Suppliers using internal and external metrology laboratories shall comply with ISO/IEC 17025 requirements including a documented laboratory scope and lab technician proficiency qualifications.

### 11.0.6 Measurement System Analysis

Suppliers shall perform measurement system analysis (MSA) in accordance with the AIAG MSA Manual. Other methods may also be implemented by the Supplier with approval from Molex.

### 11.0.7 Preventive and Predictive Maintenance

To ensure delivery capability, a system for preventive and predictive maintenance on production equipment and tooling that complies to prevailing QMS requirement shall be developed by the supplier. A maintenance plan shall be set out which includes the maintenance intervals and the extent of the maintenance. Consistent execution shall be documented in writing. In addition to defining preventive maintenance intervals, a contingency plan shall be established for all processes that can influence the ability to deliver.

### 11.0.8 Production Part Approval Process (PPAP – AIAG) / PPF (VDA2)

PPAP / PPF purpose is to provide the evidence that all customer engineering design record and specifications requirements are properly understood by the manufacturer and the manufacturing process has the potential to produce product consistently meeting these requirements during an actual production run at the quoted production rate.

Suppliers shall submit the deliverable package in accordance with the current AIAG PPAP / PPF (VDA2) unless otherwise specified by Molex. Documentation shall include Molex Special Characteristics Agreement, as appropriate, and packaging plan. Supplier PPAP / PPF is subjected to Molex approval.

PPAP submission levels shall be per the following table unless otherwise specified.

*Table 4 PPAP Level*

| Commodity | Submission |
|---|---|
| Plastic Resins | AIAG PPAP / PPF (VDA2) or otherwise specified by Molex |
| Metal Raw Materials | AIAG PPAP / PPF (VDA2) or otherwise specified by Molex |
| Precious Metal | Bulk Material PPAP |
| All other commodities | AIAG PPAP / PPF (VDA2) or otherwise specified by Molex |

The external provider shall conform to the requirements of retention period for automotive products as required in IATF16949:2016 section 7.5.3.2.1 Record Retention with the agreed requirements met. Any changes to retention policy must be agreed to by Molex.

### 11.0.9 Initial Samples

Initial samples are products manufactured and tested under series production conditions. The test results on all characteristics must be documented within the initial sample report. All the test criteria and quantity of parts to be documented shall be agreed with Molex. The initial samples shall be submitted to Molex within a Molex agreed timeframe with an agreed inspection report.

#### 11.0.9.1 Purpose of Initial Samples

The PPAP / PPF is required if any of the following changes apply at the supplier or sub supplier:

- Product is ordered for the first time
- Sub-supplier change
- Affected characteristics after product/drawing/process/tooling change
- Following a production stop
- Following an interruption after business on hold
- Change in production location
- Change in inspection/test method

#### 11.0.9.2 Initial Sampling deviation

Initial samples with the report and documentations may only be submitted if all specifications are fulfilled. In case of deviations, the supplier shall obtain a written waiver from Molex. Deviated initial samples without an official waiver from Molex shall not be processed and all costs pertaining to administer logistics and disposal shall be charged to supplier.

### 11.0.10 Layout Inspection and Functional Verification / Requalification

All products shall be subjected to layout inspection and functional verification (requalification) based on the requirements of initial sampling unless agreed otherwise with Molex. The results shall be documented and be available for Molex review. Frequency of the layout inspection and functional verification shall be commodity specific unless otherwise specified by Molex. The layout inspection and functional verification / requalification shall be planned and presented with the initial sample inspection and be included in the control plan. All deviations are subjected to the requirements in Section 11.0.8.2 Initial Sampling deviation.

## *11.1 Medical/Healthcare Sector Specific Requirements.*

This supplier requirement manual is supplemented by the additional requirements for the Medical/Healthcare sector specific Philips Medisize Supplier Manual. Suppliers shall be updated with the latest version of the Philips Medisize Suppliers Manual at the Supplier's initiative with the relevant Molex Quality representative. In case of conflict, this supplier requirement manual shall take precedence. The supplier shall comply to the following management system standards by a recognized, independent and accredited certification body base on the type of product / service provided.

| Product and Service Provided | Standard |
|---|---|
| Calibration services and laboratories | ISO/IEC17025 |
| Sterilization services | ISO11135 |
| Supplier of products with animal tissues and their derivatives | ISO22442 |
| Supplier of medical devices | ISO13485 |
| All Others unless exempted by Molex | ISO9001 |

In addition, suppliers are expected to follow Good Manufacturing Practices (GMP).

Suppliers shall notify Molex within one business day of the initiation of any regulatory inspections, or regulatory actions related to product supplied to Molex or the facility in which that product is manufactured, packaged, stored, or tested. Suppliers shall notify Molex in advance of any pre-announced regulatory agency inspections or regulatory actions associated with product supplied to Molex or the facilities in which it is produced. Suppliers must provide Molex with regulatory inspection cGMP observations with the potential to impact the production of Molex product. Molex must be considered regarding responses to observations related to Molex products prior to submission to the regulatory agency.

Any additional requirements will be communicated by individual Molex Business Unit or Molex site. Questions regarding these requirements should be directed to the Business Unit or site making the request.

### 11.1.1 Regulatory Authorities Supplier Evaluations

Supplier will assist as needed in supporting Molex audits by notified bodies or regulatory authorities. Supplier shall provide representatives of regulatory authorities and notified bodies with such documentation, information and reasonable access to facilities and personnel as needed by regulatory authorities and notified bodies. This includes copies of all requested documentation related to Product design, manufacturing processes, material/device history records, Specifications, Sub-Tier Suppliers, proof of manufacturability (including packaging and labeling), regulatory approvals, regulatory, notified body, or ISO audits/inspections, and other communications with regulatory or ISO authorities that may be generally or specifically related to Product.

Supplier shall immediately notify Molex in writing as soon as Supplier becomes aware of any findings issued by any regulatory authorities and/or notified bodies that would in any way impact Product. Supplier shall promptly take action to correct any of those nonconformities within a time frame agreed upon with Molex in writing.

### 11.1.2 Materials of Concern Compliance

Global regulatory authorities and customer requirements pertaining to materials used in Molex's products that are considered medical devices requires Molex to gather and store information about the composition of products from suppliers. In order to comply with regulations for specific sales geographies, Supplier must communicate the composition of any Product provided to Molex upon request. Supplier is responsible for understanding the composition of the Product supplied to Molex.

## *11.2 Aerospace and Defense Sector Specific Requirements*

Suppliers may be requested to provide a full or partial First Article Inspection Report at the start of production or when any of the following occur:

- Lapse in production for two years or as specified by Molex
- Change in manufacturing process
- Change in material or change in material source
- Change in manufacturing location
- Change or modified tooling
- Changes to product design
- Change in inspection methods

Changes in product design include any change which affects the revision/mod level of the product. Additionally, a copy of the initial FAIR may be requested on first shipment to Molex. First Article Inspection Report submissions shall meet AS9102 requirements or as specified by Molex. Specific requirements for submission will be communicated to the supplier by Molex.

### 11.2.1 Foreign Object Debris / Damage Prevention

Product suppliers must have a program for prevention, detection, and removal of foreign objects. The program should meet the following requirements as applicable:

- Foreign Object Debris prevention must be implemented in all areas as applicable and Foreign Object Debris training awareness must be given.
- Parts must be protected from handling damage in all areas; material handling awareness training must be provided to all employees and handling standards documented.
- Supplier must document all Foreign Object Debris incidents and perform 8D.
- Metrics must be documented if Foreign Object Debris incidents occur.

Internal auditing of Foreign Object Debris prevention in all critical areas must be conducted and documented

### 11.2.2 Aerospace Specific Material Certificate of Conformance

Unless otherwise specified by PO/contract, a supplier must provide adequate certification of conformance for all materials and processes specified on the purchase order or contract, for each shipment. Where available, these may be submitted electronically. Suppliers are responsible for all PO terms and conformity characteristics per the PO/contract accepted. Suppliers delivering a product which includes sub-contracted processes, all such processes must be indicated on the direct supplier's certificate of conformance. When required by contract, components procured from a supplier holding an applicable Airworthiness Approval from their local regulatory authority, those components are to be supplied with the applicable Airworthiness Tag/Certification. This is particularly important for proprietary parts that may not be readily inspected/tested on receipt.

The certificate of conformance will contain at a minimum:

- the process(s) performed,
- the specification number,
- revision level,
- purchase order number,
- part number,
- lot size,
- sample size,
- applicable process specifications/controls
- applicable test results
- material test results
- serial numbers where applicable to contract
- Shelf life and expiry date

## 12 Summary of Changes

| Revision | Summary of Changes | Author | Release Date |
|---|---|---|---|
| A | Initial release based on QEHS-699000-401 Rev E to be compliant to current standards | LanAnh Nguyen | 18-Jan-2021 |
| B | Updated PCoE email in section 3.1. Added Supplier QMS development in section 7.1. | LanAnh Nguyen | 25-Jan-2022 |
| C | Global review and unification of Molex divisions | LanAnh Nguyen, Winston Seetoh | 22-Sep-2022 |