



Polymer Technologies Inc.  
Engineering Sound Solutions™

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# **POLYMER TECHNOLOGIES, INC.**

## **SUPPLIER QUALITY SYSTEM**

## **REQUIREMENTS**



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## **A. General**

### **1. Purpose:**

1.1. Polymer Technologies Inc is dedicated to becoming a leader in the energy management marketplace through achieving total customer satisfaction in an environment of prevention and continual improvement. This is accomplished with accountable and responsible employees and suppliers working together, dedicated to ensuring satisfaction of internal and external customers.

1.2. This Supplier Quality System Requirement is provided to communicate the Supplier Quality Assurance Requirements in order to achieve these goals. Any questions regarding the contents of this manual should be directed to the Quality Manager at PTI (302-738-9001).

**2. Scope:** This document serves as the general quality requirements for Polymer Technologies' suppliers and their sub-tiers. It is intended to define the requirements necessary to ensure that all products and services delivered comply with specified requirements for quality, reliability, integrity and safety.

Suppliers must demonstrate and maintain compliance with these requirements in order to be eligible to receive orders from Polymer Technologies. Failure to comply may result in the disqualification of the supplier.

### **3. Information:**

3.1. The supplier shall notify Polymer Technologies, Inc. (PTI) Purchasing Department when nonconforming product is found. Non-conforming Product shall be identified with lot number, serial number, and date of manufacturing.

3.2. The supplier shall notify PTI whenever a change in product or process definition is contemplated before the change is made. PTI must approve all changes.

3.3. As required, the supplier shall flow down to their sub-tier suppliers the applicable requirements in the purchase order, including key characteristics.

3.4. PTI, PTI's customer or customer's representatives, and regulatory agencies shall be afforded the right to verify at the supplier's facilities that subcontracted product conforms to specified requirements.

3.5. PTI shall have the right to inspect and audit at the supplier's premises, including review of the required documentation. When this is to occur, PTI will state the intended verification arrangements and method of product release in the purchase order.

3.6. PTI may, at their discretion, delegate verification of the product to the supplier. When this delegation has been made, the supplier shall provide required objective evidence of this verification.



- 3.7. The supplier shall provide objective evidence of the quality of the product (documentation, certificate of conformity, certificate of analysis, test reports, statistical records, process controls, inspection records) as outlined on PTI's purchase order for each shipment.
- 3.8. As required, the supplier shall use customer-approved special process sources.
- 3.9. As required, the supplier shall use specially qualified personnel in the process for this purchase order.
- 3.10. The supplier shall maintain a satisfactory quality management system.
- 3.11. All records related to the Supplier's product shall be kept on file by the Supplier for a minimum period of 10 years unless otherwise contractually stated.
- 3.12. It is expected that all suppliers adhere to all regulatory and statutory requirements.
- 3.13. It is PTI's expectation that suppliers, their employees, sub-suppliers and any other parties involved with the execution of PTI's work operate with a code of ethics and comply with the applicable laws. These may include but are not limited to the following:
- Forced Labor, Human Trafficking and Slavery
  - Child Labor
  - Working Hours
  - Wages and Benefits
  - Freedom of Association and Collective Bargaining
  - Nondiscrimination
  - Working Environment
  - Environmental Impact
  - Anti-Bribery and Anti-Corruption
- 3.14. **PTI suppliers and sub-tier suppliers shall ensure that persons involved in the performance of this work are aware of:**
- **their contribution to product or service conformity**
  - **their contribution to product safety**
  - **the importance of ethical behavior**

## **B. Supplier Sourcing Requirements**

- 1. Purpose:** To define the process for selection of new Suppliers and the ongoing evaluation and development of current Suppliers.
- 2. Scope:** These guidelines apply to all suppliers.
- 3. Information:**



3.1. The minimum requirement to become a Supplier to PTI is ISO 9001 certification. If the Supplier does not meet this minimum requirement, the Supplier can be added or retained as an approved Supplier with management approval and an ongoing satisfactory supplier rating. If a Supplier does not meet the minimum requirements, an on-site quality survey may be conducted.

3.2. The Supplier specifically mandated by a customer to supply a specific part or service cannot be used beyond this special approval without securing full approval through the PTI Supplier Evaluation process.

3.2.1 The Supplier must adhere to all Purchase Order terms and conditions.

3.3. All Suppliers must meet the minimum performance standards. A Supplier Performance Report is issued quarterly to the supplier.

3.4. It is the Supplier's responsibility to store all production tooling in a suitable environment and to maintain the tooling in good working order. Any customer (PTI) owned tooling must be clearly identified as such.

## **C. Material Control**

**1. Purpose:** To define the process for Suppliers to respond to production material requirements.

**2. Scope:** These guidelines apply to all current and proposed new production material Suppliers of Polymer Technologies Inc.

### **3. Information:**

3.1. The supplier shall ensure that items shipped are effectively preserved, protected, and packaged to guard against damage, degradation, or loss during shipment. This is to be accomplished in accordance with best commercial practice unless otherwise specified on the PO. The supplier shall implement production and packaging practices that ensure detection and removal of foreign objects and debris.

3.2 The Supplier is responsible to maintain traceability of product and materials through all stages of production including at sub-tier processing sources. Supplier's system shall ensure that products are traceable back to the raw material batch or lot from which they were made.

3.3. The Supplier must follow the instructions on the purchase order unless other arrangements have been made.

3.4. Flow Down Requirements - The Supplier shall flow down all applicable product, regulatory, and quality requirements to the Supplier's sub-tiers, including key characteristics where applicable. The Supplier is responsible for ensuring and validating the compliance of the Supplier's sub-tiers and maintaining documented evidence of such.

3.5 Obsolescence – The supplier shall notify Polymer Technologies when parts are becoming obsolete. Notification shall be in advance so that we have time to identify and qualify a replacement.



3.6. Aerospace Suppliers – If the supplier is supplying an item that could be used within Aerospace requirements (note: these part numbers will begin with an **RAS9-** prefix) the following criteria will apply.

3.6.1 Boeing’s Acceptance Authority Media or AAM. The AAM states that the supplier shall plan and execute production and service provisions under controlled conditions. Controlled conditions shall include, as applicable, evidence that all production and inspection/verification operations were completed as planned, or as otherwise documented and authorized. AAM is a media used to record the status of these operations on product or product records during and upon completion of the development, manufacturing, modification, repair, and support processes. Per AS9100D, Section 8.5.2, when acceptance authority media are used (e.g., stamps, electronic signatures, password) the organization shall establish appropriate controls for the media.

3.6.2 Counterfeit Parts – The seller shall not deliver Counterfeit Parts or Work. An Aerospace Industries Association report; *Counterfeit parts: Increasing Awareness and Developing Countermeasures*, defines counterfeit parts as; “... a product altered to resemble a product without authority or right to do so, with the intent to mislead or defraud by presenting the imitation as original or genuine.”

3.6.3 Aerospace suppliers shall mutilate non-conforming material to ensure that nonconforming material do not get onto aircraft.

#### **4. Packaging and Labeling:**

4.1. The Supplier shall adhere to all packaging and labeling requirements as per contract agreement / purchase order from PTI. In the event of non-specific packaging and labeling instructions, each Supplier shall adhere to the Packaging and Labeling Instructions which include: PTI Part Number, Quantity, Lot # and Purchase Order Number marked on every container. Skids must be banded or shrink-wrapped to secure containers and eliminate shifting during transit.

### **D. Quality Systems and Quality Systems Audits**

**1. Purpose:** To define a standard criteria for all production material Suppliers of Polymer Technologies Inc in achieving quality system acceptance.

**2. Scope:** These guidelines apply to all Suppliers of production material provided to Polymer Technologies Inc.

#### **3. Information:**

3.1. Registration to ISO 9001 Quality Standard is requested of all PTI’s suppliers. A copy of the supplier’s registration is requested for PTI’s Supplier file.

3.2. If the Supplier is not registered, an on-site evaluation of the Supplier’s quality system may be performed to assess the Supplier’s quality system and capabilities. If an on-site evaluation is required, it will be scheduled to minimize any interruptions in the Supplier’s production and will be conducted by a PTI Management Representative. If the Supplier does not meet this minimum requirement, the Supplier can be added or retained as an approved Supplier with management approval.



## **E. First Article Approval Process**

AS9102 applies unless otherwise specified on the Contract Agreement or Purchase Order.

## **F. Receiving Inspection and Nonconforming Product**

**1. Purpose:** To define the system for receiving inspection activities and disposition of nonconforming product.

**2. Scope:** These guidelines apply to all Suppliers of production material provided to Polymer Technologies Inc

### **3. Information:**

3.1. The Supplier shall establish a system for identification, segregation and documentation of any nonconforming product(s) found during the Supplier's manufacturing or inspection operations.

**3.2 Submittal of Nonconforming Product:** The Supplier shall not ship any nonconforming material to PTI without first receiving authorization.

**3.3 Notification of Delivered Nonconforming Product:** The Supplier shall notify the applicable PTI representative by phone or email of any suspected nonconforming material discovered to have shipped to PTI. Notification must be accomplished and acknowledged by PTI within 24 hours of the discovery and be followed by email notification to the same. Formal written communication shall be submitted containing applicable information concerning the defect; this shall include part numbers, lot numbers, quantities, ship dates, detailed description of the nonconformance.

**3.4 Nonconforming Product Discovered at PTI:** Any product found nonconforming at PTI may be returned to the Supplier or scrapped at PTI's facility according to the direction given by the supplier.

## **G. Supplier Corrective Action**

**1. Purpose:** To define the requirements for Suppliers to respond to PTI with corrective and preventive action when non-conformances are identified.

**2. Scope:** The guidelines apply to Suppliers of production material provided to PTI.

### **3. Information:**

3.1. Concerns from PTI may be expressed verbally or in writing. Upon notification, the Supplier is to conduct containment and corrective action activities. The corrective and preventive action is to be submitted to PTI in writing within ten working days.



3.2. Failure to respond as requested may result in the return of suspect material by PTI.

## **H. Supplier Temporary Deviation Agreement (STDA)**

**1. Purpose:** To define the method for documenting and authorizing the use of purchased production material, which deviates from defined specifications or processes by utilizing a Product and Process Change Authorization (contact PTI for a form)

**2. Scope:** These guidelines apply to all Suppliers of purchased (or consigned) production materials to PTI.

### **3. Information:**

3.1. Required signatures for STDAs relative to engineering specifications are the Quality Manager / designee.

3.2. An STDA may be proposed to allow the use of product which does not conform to specifications or enhance / improve product form, fit and function

3.3. An STDA can be denied if the end product's form, fit and function are adversely affected or serviceability is adversely affected

3.4. STDAs may be generated for a specific known quantity of parts or for a specific time period.

3.5. All materials that have been authorized for use under the deviation system must be identified for each shipment.

## **I. Engineering Change Notices to Suppliers**

**1. Purpose:** To define a standard method for notifying the Supplier of changes to engineering drawings related to purchased production parts.

**2. Scope:** 1. These guidelines apply to Suppliers of purchased production parts submitted to PTI.

### **3. Information:**

3.1. The Supplier is responsible for verifying the engineering change level during both programs launch and on-going production requirements.

3.2. The Supplier is responsible to acknowledge receipt of all drawing changes.

3.3. All ECNs which impact the Supplier's tooling must be formally submitted as a First Article Submission (See Paragraph E for First Article Information).

## **J. Supplier Performance Rating**





- 1. Purpose:** To define the method of reporting and communicating Supplier performance rating information.
- 2. Scope:** These guidelines apply to all Suppliers of production material shipped to PTI.
- 3. Information:** The Purchasing Agent or Supply Chain Manager is responsible for assuring that the performance information is communicated periodically to the Suppliers.
4. Supplier Rating Criteria:

Supplier Rating System is designed to measure performance in four categories as the following 100-point rating system describes:

Quality - 25 Possible Points

= 1500 PPM - Minimum Target Value (23.75)  
(>6000 PPM results in an index value of 0)

Delivery – 25 Possible Points

= 98% - Minimum Target Value (25)  
(<90% results in an index value of 0, shipments under-shipped by 10% will be marked as late)

Price – 25 Possible Points

= Acceptable – Minimum Target Value (18)

Customer Service – 25 Possible Points

= Acceptable – Minimum Target Value (18)

Please note that if the same category falls below the acceptable level for consecutive quarters a corrective action may be warranted.

## **K. Records and Retention**

1. Purpose: To communicated records and retention requirements to suppliers.
2. Scope: These guidelines apply to all Aerospace related suppliers of production material shipped to PTI (**note: these part numbers will begin with an RAS9- prefix**)



3. Information: All records related to the production of the supplier's product shall be maintained for a minimum period of 10 years unless otherwise contractually stated. The records will provide evidence of conformity to requirements and of the effective operation of the quality management system. Records shall remain legible, readily identifiable and retrievable. A documented procedure shall be established to define the controls needed for the identification, storage, protection, retrieval, retention time and disposition of records. The records shall be available for review by Polymer Technologies; their customers and regulatory authorities in accordance with contract or regulatory requirements. Examples of records are as follows: material specifications, certificate of conformity, test reports, statistical records, process control, drawings, parts lists, process flow charts, inspection documents, production work orders, etc.