



Polymer Technologies Inc.
Engineering Sound Solutions™

POLYMER TECHNOLOGIES, INC.

SUPPLIER QUALITY SYSTEM

REQUIREMENTS



Acknowledgement of Supplier Quality System Requirements Manual

Supplier:

RE: Supplier Quality System Requirement Manual

Polymer Technologies Inc recognizes the importance of maintaining the highest level of quality standards. This is evidenced by our achievement of certification **ISO / AS Quality Management System**. We are completely dedicated to the continual compliance with this standard and would require the same dedication to this pursuit from our Suppliers.

Enclosed is a copy of our Supplier Quality System Requirements Manual. This manual outlines the activities required from product design, manufacturing, and quality. This manual may be referenced on contractual agreements and Purchase Orders as required by Polymer Technologies Inc.

In addition, Polymer Technologies Inc will be using the guidelines defined in this manual to generate Supplier Performance Report, which will track and report product quality, on-time delivery and customer service. Report to Suppliers will be periodic.

This information will be used as a tool by PTI Purchasing and Quality Assurance personnel to monitor our suppliers and develop a superior supplier base.

Please have key member of your staff review the manual completely and sign the acknowledgement block located at the bottom of the letter and return it to PTI **Quality** Department. If you have any questions or concerns, please contact the Quality Manager at PTI.

Sincerely,

Michael Haupt
Supply Chain /Quality Manager

Acknowledgement of **Receipt** of Supplier System Requirements Manual

Supplier Representative Signature:	
Date:	

Return Receipt to PTI Quality by fax: 302 738 9085 or email: mikeh@polytechinc.com



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A. General

1. Purpose:

1.1. Polymer Technologies Inc is dedicated to becoming a preferred supplier to Aerospace customers 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 Requirement 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: The guidelines and requirements defined in this manual apply to all production components.

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. PTI, PTI's customer and Regulatory Authorities shall have right of access to all facilities involved in the order and to all applicable records.

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

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

3.6. 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.

3.7. 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.

3.8. 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.

3.9. As required, the supplier shall use customer-approved special process sources.



- 3.10. As required, the supplier shall use specially qualified personnel in the process for this purchase order.
- 3.11. The supplier shall maintain a satisfactory quality management system.
- 3.12. 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.

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 Aerospace related 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. . If a Supplier does not meet the minimum requirements, an on site quality survey may be conducted. When the Supplier is on the Approved Supplier List, the Purchasing Agent may proceed with normal purchasing activities with the Supplier.

3.2. When a potential supplier is identified, the Purchasing Agent will forward a Supplier Questionnaire and Supplier's Quality Systems Requirements Handbook to the Supplier. The evaluation includes general information regarding the Supplier's personnel, facilities and manufacturing capabilities. The Supplier **is requested to** complete the questionnaire and return it to PTI's Purchasing Agent for review along with a copy of the current ISO registration certificate from an accredited third party registrar. A signed acknowledgement of receipt **should be** returned to **PTI's Quality Manager**. In the event that a customer requires the use of a specific Supplier which does not meet the minimum PTI requirements, the Purchasing Agent may add the Supplier to the Approved Supplier List (identified as Customer designated) in accordance with the following criteria:

3.4. 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.

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

3.5. All Suppliers must meet the minimum performance standards. A Supplier Performance Report is issued periodically to the Supplier.

3.6. 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. Delivery – A timely written corrective action response may be requested for unacceptable delivery performance.

3.2. The Supplier may be held liable for all excess freight costs incurred due to a lack of Supplier performance. Included are excessive costs incurred between the Supplier and PTI along with charges passed on by PTI's customer.

3.3. Logistics and Shipping – The Supplier must adhere to the logistics and shipping instructions as outlined on the Purchase Order. Failure to follow the instruction may result in premium charges which shall be the Supplier's responsibility.

3.4. The Supplier must follow the instructions on the purchase order unless other arrangements have been made. The Supplier must provide the inspection data per each shipment.

3.5. Flow Down Requirements – The supplier shall flow down to its suppliers and subtier suppliers the applicable requirements in the Polymer Technologies Purchase Order and/or drawings, including key characteristics where required.

3.6. 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.

3.7. 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.

3.7.1 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.

3.7.2 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."

3.7.3 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. A Supplier Quality Survey / Questionnaire **should** be completed by the Supplier and **should** be returned to PTI for our Supplier files.

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. In the event that any nonconforming product is identified at PTI, every effort will be made immediately to contain it from accidental use. A Supplier Corrective Action Report may be initiated. The nonconforming product will be identified as such and segregated from other conforming product.

3.2. Product identified, as nonconforming Supplier material will drive one or more of the following activities:

3.2.1 material is returned to the Supplier for credit plus appropriate freight and handling charges

3.2.2 material is sorted / reworked at Supplier's expense,

3.2.3 material is scrapped at Supplier's expense.

3.3 Questionable material will receive a final disposition as quickly as possible to minimize any production downtime.

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. If appropriate corrective action is not taken within the defined period of time, the Purchasing Agent may elect to withhold payment and/or initiate re-sourcing as required.

3.2. Failure to respond as requested may result in the return of suspect material by PTI and a debit memo being issued against the Supplier.

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.

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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 program 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 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 a certain category falls below the acceptable level for consecutive quarters a corrective action may be warranted.

K. Records and Retention

1. Purpose: To communicate records and retention requirements to suppliers.
2. Scope: These guidelines apply to all Aerospace related suppliers of production material shipped to PTI.
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

Supplier Quality Survey / Questionnaire



COMPANY NAME:			
ADDRESS:			
CITY:	STATE:	ZIP:	COUNTRY:
PHONE #	FAX #:		
<u>KEY PERSONNEL</u>			
President:		Phone #	
Quality Manager:		Phone #	
Operations Manager:		Phone #	
Sales Manager:		Phone #	
Primary Type of Business:	Manufacturing ____	Distributor _____	Fabricator _____
List Products / Services / Processes:			
FACILITY			
SIZE (S/F):	<u>NO OF EMPLOYEES:</u>		
	Production: ____	Quality: _____	
	Purchasing: _____	Administration: _____	
Quality System: (ie: ISO, MIL STD, AS)			
Is your Quality System registered:		If yes, by whom?	
When does your registration expire?			
If registered – return this page with a copy of your certificate.			



Supplier Quality Survey / Questionnaire continued

1. Is there a documented quality system?	YES	NO	NA
2. Has management defined its quality policy and objective?	YES	NO	NA
3. Is there an organizational chart depicting the responsibility and authority of quality personnel?	YES	NO	NA
4. Is the quality system reviewed periodically by management?			
5. Are records of previous QC reviews maintained?	YES	NO	NA
6. Are internal audits performed to assure that documented procedures are being followed?	YES	NO	NA
7. Are records of these audits maintained?	YES	NO	NA
8. Are documented procedures in place for testing, final inspection and workmanship standards and quality records?	YES	NO	NA
9. Is traceability to products / batches maintained?	YES	NO	NA
10. Are final inspections carried out in accordance with documented procedures?	YES	NO	NA
11. Are calibration records maintained for measuring and test equipment?	YES	NO	NA
12. Are calibration records traceable to nationally recognized standards?	YES	NO	NA
13. Is there a method of identifying the inspection and test status of a product?	YES	NO	NA
14. Are documented procedures followed for maintaining control of non-conforming products?	YES	NO	NA
15. Are documented procedures followed for handling, storage, packaging and delivery of product?	YES	NO	NA
16. Are inspection and test records maintained to substantiate conformance with specified requirements?	YES	NO	NA
17. Is quality data made available to customers?			



	YES	NO	NA
18. Are statistical techniques used for verifying the acceptability of product characteristics?	YES	NO	NA
19. Are results of tests and inspections maintained?	YES	NO	NA
20. Has operational risk management been implemented and maintained?	YES	NO	NA
22. Are procedures in place for preventative and corrective action?	YES	NO	NA
23. Is there a documented quality improvement plan?	YES	NO	NA
24. Counterfeit Parts (for Aerospace suppliers only – if you supply parts with a prefix of RAS9)			
a. Does your company maintain an approved supplier list?	YES	NO	NA
c. Are your purchasing personnel trained to avoid purchasing from high-risk suppliers?	YES	NO	NA
d. Do you require full CofC traceability to an authorized source?	YES	NO	NA
e. Do you have a process for disposition of “suspect” counterfeit product?	YES	NO	NA
f. Do you have a documented inspection and test process?	YES	NO	NA

Please list companies who have evaluated and approved your quality system within the last year?

SUPPLIER QUESTIONNAIRE REVIEWED AND APPROVED BY:

NAME TITLE DATE: _____

SIGNATURE