

DRAWING NUMBER 43-2248	REVISION 2	TITLE Supplier Guidelines Manual	PAGE 1 of 9
WRITTEN BY: J. Caruso	DATE:	APPROVED BY: J. Porter	DATE:
PRODUCT RESOURCES NEWBURYPORT, MA USA	NOTICE: THIS DOCUMENT IS PROPRIETARY AND ITS CONTENTS ARE THE EXCLUSIVE PROPERTY OF PRODUCT RESOURCES. THIS DOCUMENT MAY NOT BE REPRODUCED IN ANY FORM WHATSOEVER, WITHOUT PRIOR WRITTEN PERMISSION FROM PRODUCT RESOURCES.		



1. Introduction

In order for Product Resources to best serve its customers, Product Resources must rely on its suppliers to supply products which are delivered when promised, reliably perform their intended function, and are a good value for money. Product Resources will give preference to suppliers that perform in this manner. This Supplier Guidelines Manual outlines the key requirements for suppliers that will lead to satisfying Product Resources' needs and developing a long term and mutually beneficial relationship.

A copy of this document can also be found on our www.prodres.com web site by following the Supplier Area link from the main menu page.

2. Quotation Expectations

Product Resources requires a maximum turnaround time of two weeks for quotations. In order to ensure the best possible service for our customers, we rely on timely quotations. Product Resources will show preference to suppliers that meet these quotation guidelines. If these guidelines cannot be met for a given quotation due to high complexity, etc., it is important that the supplier communicate this to Purchasing along with an estimate of time required.

3. Purchase Order Confirmation

A written confirmation is required for all purchase orders issued by Product Resources. E-mail, fax, and postal mail are all acceptable examples of written confirmation. E-mail is preferred for its speed and reliability. The confirmation should state all discrepancies with the PO, if applicable. See also the Contract Review section of this document.

Purchasing Fax: (978) 462-1860

4. Delivery Expectations

The delivery expectation for Product Resources is arrival at our facility in the window of 14 days early and no days late. Failure to deliver in this window may affect your supplier status. A preferred supplier will have a 95% or better success rate in hitting this target. Note that the given date on the purchase order

DRAWING NUMBER	REVISION	TITLE	PAGE
43-2248	2	Supplier Guidelines Manual	2 of 9

is for arrival at Product Resources' facility. All deliveries should be made to the following address:

Product Resources
4 Mulliken Way
Newburyport, MA 01950
(978) 524-8500

The normal operating hours of the receiving area are 7:30 a.m. through noon and 12:30 p.m. through 4:00 p.m., Monday through Friday. Make every attempt to make deliveries during these normal hours. If you must schedule a delivery outside of these hours, please contact Receiving at (978) 524-8500 x343.

5. Invoicing

Invoices should be electronic and should be sent to the following Accounts Payable (AP) mailbox:

ap@prodres.com

Accounts Payable may be contacted by phone at 978-524-8500 x396.

6. Quality Expectations

The product quality expectation for Product Resources is a 98% or better acceptable product rate to be a preferred supplier.

7. Supplier Corrective Action Requests (SCARs)

The Supplier Corrective Action Request or SCAR is the vehicle of Product Resources' Quality Assurance Department for requesting feedback/failure analysis and corrective action from our suppliers. The SCAR will normally accompany the returned product. If there is no returned product, the SCAR will be delivered on its own. A due date of three weeks after the creation date will be established and stated on the SCAR. Timely feedback is extremely important to us. Failure to return a SCAR in the prescribed timeframe will affect your Quality rating (*). If more time is needed, please contact Quality Assurance or Purchasing to explain such.

Completed SCARs may be returned by e-mail, fax, or postal mail; see the contact information below for each. E-mail is preferred for its speed and reliability. Be sure to reference the SCAR number.

Product Resources
Attn. Quality Assurance
4 Mulliken Way
Newburyport, MA 01950
(978) 462-1860 fax

DRAWING NUMBER	REVISION	TITLE	PAGE
43-2248	2	Supplier Guidelines Manual	3 of 9

quality@prodres.com

It is expected that the SCAR response addresses the root cause of the failure condition as well as what corrective actions are being taken to prevent the recurrence of the failure condition.

(* Five percent per SCAR that is due in a given quarter and not responded to by the due date will be deducted from the product acceptance percentage in forming the supplier's Quality rating for that quarter.)

8. Supplier Rating

Supplier ratings are computed and reviewed by Purchasing and Quality Assurance on a quarterly basis. Suppliers consistently meeting the above delivery and Quality expectations (that is, a 14 day delivery window ending in the due date accomplished 95% or more of the time and a 98% or better Quality rating) will be given preferred status. The supplier rating is a composite of the delivery and Quality performance ratings.

All suppliers will receive a report card detailing delivery performance. Suppliers not meeting the preferred Quality rating will receive a report card detailing product non-acceptance and SCAR responses expected and received.

The supplier is expected to use these report cards as improvement tools.

Suppliers meeting Product Resources' delivery and Quality standards (and who have shipped at least 10 line items in the given quarter) will be recognized with supplier award certificates.

9. Contract Review

The supplier shall review contracts (purchase orders) to ensure that requirements are defined and the company is capable of meeting all requirements including delivery dates. For custom items, this review shall also include the Product Resources part number / document number and revision stated on the PO as well as any other requirements stated on the PO; these Supplier Guidelines are referenced on the PO, and its contents are requirements.

The supplier shall contact Purchasing with problems and discrepancies related to the stated requirements and shall resolve the problems/discrepancies with Purchasing prior to the shipment of product. The supplier shall also contact Purchasing if the supplier does not have a copy of any referenced document.

10. Certificates of Compliance

Products built to Product Resources' specifications (identified by a part number with a letter or "-" revision and not preceded by an asterisk) shall be delivered with a certificate of compliance certifying that product was built per Product

DRAWING NUMBER	REVISION	TITLE	PAGE
43-2248	2	Supplier Guidelines Manual	4 of 9

Resources' specifications. The certificate of compliance shall be dated and signed. It shall specify, at a minimum, the following information:

- Quantity
- Product Resources' part number
- Product Resources' revision
- Date
- Purchase order number
- Serial numbers included in the shipment, if applicable
- Lot numbers and/or date codes included in the shipment, if applicable
- Any exceptions to compliance to the documented specifications, if applicable

Product requiring a certificate of compliance will not be received by Product Resources if no certificate of compliance is included or if the included certificate of compliance does not include all applicable information from the above list.

11. Product Substitutions and Specification Changes

Unless the documentation specifically gives permission for the use of alternative components, substitutions and specification changes may not be made without obtaining permission in advance from Purchasing or Quality Assurance.

12. Circuit Boards and Circuit Board Assemblies

All fabricated circuit boards produced for Product Resources, unless otherwise specified, shall be produced in accordance with IPC-A-600 Class 1 or better. Product Resources can provide the supplier with a copy of this document if needed.

All circuit board assemblies produced for Product Resources, unless otherwise specified, shall be assembled in accordance with IPC-A-610 Class 1 or better. Product Resources can provide the supplier with a copy of this document if needed.

A lead-free soldering process shall always be used.

Delivered circuits boards shall be clean and free of flux residues.

13. Wire and Wire (Cable) Assemblies

All wire and wire (cable) assemblies produced for Product Resources, unless otherwise specified, shall be produced in accordance with IPC/WHMA-A-620 Class 1 or better. Product Resources can provide the supplier with a copy of this document if needed.

DRAWING NUMBER 43-2248	REVISION 2	TITLE Supplier Guidelines Manual	PAGE 5 of 9
----------------------------------	----------------------	-------------------------------------	----------------

14. Supplying “ATEX_CRITICAL” Items

The ATEX Directive applies to devices that are used in potentially explosive environments. Because of the safety implications, enhanced control of such products and parts is needed.

There are certain safety-critical items purchased by Product Resources that are used in ATEX-regulated products. In the case that these items cannot / will not be 100% verified by Product Resources upon receipt, Product Resources will append “ATEX_CRITICAL” to the part number. Here is an example of how such a part number will appear:

12-3456-ATEX_CRITICAL

There are certain requirements of this Supplier Guidelines Manual that are augmented for suppliers of ATEX_CRITICAL items. They are:

- Each unit must be marked with a unique serial number. It is desirable, though not required, for the serial number to contain a date component.
- For circuit boards, circuit board assemblies, and wire and cable assemblies, the same IPC standards as given in Sections 11 and 12 above apply, with the exception that compliance is to Class 2.
- When a shipment is made, the Certificate of Compliance must state the serial number units included in the shipment. This is a repeat of the requirement stated above for all supplies because it is doubly important.
- The purchase specification for the item will typically ask for additional information on the C of C and for additional items to be forwarded. The additional information requested is typically the manufacturer and part number identity of components/materials used or component/material values or ratings used. Additional items requested are typically raw materials or components used in production of a given manufacturing lot included alongside the shipment so that they can be verified by Product Resources when verification in the completed state is not possible or not effective.
- The supplier must be certified to ISO 9001 by a recognized registrar. Compliance with ISO 80079-34 (formerly EN 13980) is preferred but not required. The supplier shall provide Product Resources with a copy of its ISO 9001 certificate and shall update Product Resources with new certificates following expiration of existing ones.
- In the event that the supplier subcontracts the manufacture of the item, the party subcontracted to must (1) be the party that issues the C of C (or include both companies'), and (2) fulfill the same Quality system

DRAWING NUMBER	REVISION	TITLE	PAGE
43-2248	2	Supplier Guidelines Manual	6 of 9

certification requirement as stated above. Product Resources will need a copy of the subcontractor's Quality system certificate.

- Change control is doubly critical: Whereas this Supplier Guidelines Manual requires notification and approval of change before shipping product to Product Resources for all suppliers, the criticality of this process is much greater for this class of products because of safety implications.
- Suppliers of ATEX_CRITICAL items must permit Product Resources, a contractor hired by Product Resources, or the associated regulatory body to visit for the purposes of auditing product and/or process.

15. Supplying "MD_CRITICAL" Items

The Medical Device Directive (MDD) applies to medical devices. Because of the safety implications, enhanced control of such products and parts is needed.

There are certain safety-critical items purchased by Product Resources that are used in MDD-regulated products. In the case that these items cannot / will not be 100% verified by Product Resources upon receipt, Product Resources will append "MD_CRITICAL" to the part number. Here is an example of how such a part number will appear:

12-3456-MD_CRITICAL

There are certain requirements of this Supplier Guidelines Manual that are augmented for suppliers of MD_CRITICAL items. They are:

- Each unit must be marked with a unique serial number. It is desirable, though not required, for the serial number to contain a date component.
- For circuit boards, circuit board assemblies, and wire and cable assemblies, the same IPC standards as given in Sections 11 and 12 above apply, with the exception that compliance is to Class 2.
- When a shipment is made, the Certificate of Compliance must state the serial number units included in the shipment. This is a repeat of the requirement stated above for all supplies because it is doubly important.
- The purchase specification for the item will typically ask for additional information on the C of C and for additional items to be forwarded. The additional information requested is typically the manufacturer and part number identity of components/materials used or component/material values or ratings used. Additional items requested are typically raw materials or components used in production of a given manufacturing lot included alongside the shipment so that they can be verified by Product

DRAWING NUMBER 43-2248	REVISION 2	TITLE Supplier Guidelines Manual	PAGE 7 of 9
----------------------------------	----------------------	-------------------------------------	----------------

Resources when verification in the completed state is not possible or not effective.

- The supplier must be certified to ISO 9001 by a recognized registrar. Compliance with ISO 13485 is preferred but not required. The supplier shall provide Product Resources with a copy of its ISO 9001 certificate and shall update Product Resources with new certificates following expiration of existing ones.
- In the event that the supplier subcontracts the manufacture of the item, the party subcontracted to must (1) be the party that issues the C of C (or include both companies'), and (2) fulfill the same Quality system certification requirement as stated above. Product Resources will need a copy of the subcontractor's Quality system certificate.
- Change control is doubly critical: Whereas this Supplier Guidelines Manual requires notification and approval of change before shipping product to Product Resources for all suppliers, the criticality of this process is much greater for this class of products because of safety implications.
- Suppliers of MD_CRITICAL items must permit Product Resources, a contractor hired by Product Resources, or the associated regulatory body to visit for the purposes of auditing product and/or process.

16. Suppliers of Calibration Services

Product Resources requires that its suppliers of measuring equipment calibration services be certified to nationally and internationally recognized standards for calibration providers. Product Resources recognizes ANSI Z540-1 as the U.S. national standard and ISO 17025 as the international standard; calibration providers to Product Resources must be certified to both of these standards.

In addition to these certifications, the following requirements and information apply to calibration providers to Product Resources:

- The supplier shall notify and obtain approval from Product Resources for any calibration performed at a less than 3:1 test uncertainty ratio (TUR). It is preferable that the supplier note the TUR on calibration certificates when less than 3:1.
- The supplier shall provide a calibration certificate for each item calibrated. The certificate shall include the following: Product Resources' control number for the device, date of calibration, as-found condition, as-returned condition, and calibration standards used and their expiration dates.

DRAWING NUMBER	REVISION	TITLE	PAGE
43-2248	2	Supplier Guidelines Manual	8 of 9

- The supplier shall include actual measurement data on or attached to the calibration certificate.
- The supplier shall mark the device following calibration with the device's control number, the date calibrated, and the date the calibration expires. Out-of-tolerance devices shall be marked as such.
- If the item cannot be calibrated over its full range, the supplier may contact Quality at Product Resources regarding the possibility of a limited-range calibration. If the decision is made to proceed, the item shall be marked in a visible position for the user that the calibration is limited and what the limitation is.
- Product Resources' normal calibration intervals are either one year to the month for normal equipment or six months to the day for critical equipment.
- It is Product Resources' responsibility to provide the calibration provider with the following information for each device to be calibrated: control number, manufacturer and model number, and calibration interval.

17. Quality Systems

Product Resources has a registered Quality system that conforms to the requirements of ISO 9001, ISO 13485, and ISO 80079-34. Suppliers that have registered Quality systems that conform to the requirements of one of these international standards are preferred. Other registered Quality systems that conform to known standards are preferred to Quality systems that are not registered, i.e., self-certification.

There are special Quality system requirements for producers of ATEX_CRITICAL and MD_CRITICAL items. If this applies to your item, see the ATEX_CRITICAL and MD_CRITICAL sections above.

18. Supplier Surveys and Quality System Audits

All suppliers that provide Product Resources with custom products (defined by a Product Resources specification document) shall complete a Supplier Assessment Questionnaire form to put critical information about the suppliers' organizations and Quality systems on file. Product Resources may ask that this Supplier Assessment Questionnaire be updated periodically. Product Resources may also supplement this activity with a visit of the suppliers' facilities and/or a Quality system audit.

17. End of Life Material

Product Resources requires that all suppliers inform us immediately when product that is / has been ordered from the supplier has been obsoleted or when

DRAWING NUMBER	REVISION	TITLE	PAGE
43-2248	2	Supplier Guidelines Manual	9 of 9

a component of it has been obsoleted making it no longer possible to produce the item. Product Resources should be given a “last buy” opportunity for the current, unchanged product or component.

18. Source Inspections

The supplier shall permit Product Resources to conduct a source inspection of product before shipping if such is requested. It is Product Resources’ responsibility to inform the supplier that a source inspection is desired upon placing the PO.

19. Packaging, Shipping, and Identification

The supplier shall be responsible for packaging product in a manner suitable for the chosen mode of transportation. The identity of all product shall be clearly marked. All packages, where applicable, should be shipped via UPS Ground Service* unless otherwise specified using Product Resources’ UPS account number 010-650.

(*Do not include UPS’s insurance. Product Resources carries its own insurance.)

20. ESD Protection

Sensitive electronics shall be handled at the supplier’s facility and arrive packaged at Product Resources in a manner that will protect from ESD damage.

21. Document Confidentiality

Documentation (purchase specifications, drawings, computer files, etc.) must be forwarded to suppliers so that suppliers may produce certain items. This documentation contains information that is proprietary and the exclusive property of Product Resources or its customers and must be kept confidential. Issue of these documents must be limited to those with a demonstrated need. Further distribution of these documents must be approved by Product Resources.

22. Contacts

Product Resources’ Purchasing Department is to be contacted regarding all order questions, order changes, etc. Product Resources’ Quality Assurance Department may also be contacted regarding specification questions and requests for product change. All departments can be reached at (978) 524-8500.