



an affiliate of **SAE**  
161 Thornhill Road,  
Warrendale, PA 15086-7527

# PROGRAM DOCUMENT

PD2001

REV A

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## MANUFACTURER REQUEST FOR PRODUCT APPROVAL AND QUALIFICATION PROCESS

### INTRODUCTION

It is essential that products defined by Industry Standards conform to the requirements of these Standards, and that the quality of the products be consistently maintained. To this effect an Industry consensus-based Performance Review Institute (PRI) qualification system has been established. The qualification system is based on:

- The qualification of the product according to the procedure defined in this document.
- The approval of the manufacturer's quality system, as defined in AS9100 when applicable, and the fabrication system as defined in applicable product document (i.e., AS7112, AS7115, etc.)

### 1. SCOPE

This document guides manufacturers to submit application for product approval, submission of data and steps for listing on the PRI-QPL.

PRI operating procedures provide that "This report is published by PRI to advance the state of technical, engineering, and quality sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

PRI invites your written comments and suggestions.

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## PRI PD2001 – Rev A

### 2. REFERENCES

AS7003	National Aerospace and Defense Contractors Accreditation Program (Nadcap) Requirements
AS7103	National Aerospace and Defense Contractors Accreditation Program (Nadcap) Requirements for Accreditation of PassThrough Distributors
AS7104	Nadcap Requirements for Accreditation of Full Distributors
AS7112	National Aerospace and Defense Contractors Accreditation Program (Nadcap) Requirements for Fluid System Components
AS7115	National Aerospace and Defense Contractors Accreditation Program Requirements for Elastomer Seals
AS7200/1	National Aerospace and Defense Contractors Accreditation Program (Nadcap) Audit and Inspection Procedures and Checklists for the Sealant Manufacturers Accreditation Program
AS7202	National Aerospace and Defense Contractors Accreditation Program (Nadcap) Requirements for Accreditation of Value Added Distributors
AS9000	Aerospace - Quality Assurance - AS Aerospace Products - Approval of the Quality System of Manufacturers
AS9100	Quality Systems – Aerospace – Model for Quality Assurance in Design, Development, Production, Installation, and Servicing
EN 3042	Aerospace Series, Quality Assurance, EN Aerospace Products, Qualification Procedure
ISO 17025	General Requirements for the Competence of Calibration and Testing Laboratories
PRI PD2000	Governance and Administration of an Industry Managed Product Qualification Program

### **3. DEFINITIONS**

#### **3.1 Third Party Verification Testing**

Third Party Verification Testing is the partial or complete qualification testing and inspections by independent ISO 17025 certified laboratories to verify or conduct a manufacturer's qualification tests.

#### **3.2 Pass-Through Distributor**

Designated and monitored by an Original Component Manufacturer (OCM) and accredited to AS7103. The pass-through distributor may neither make changes to the product; nor manufacture, assemble or alter its components. The pass-through distributor may not alter the documentation provided by the original component manufacturer.

#### **3.3 Value Added Distributors**

Designated and monitored by formal Original Component Manufacturer (OCM) and accredited to AS7104 and AS7202. Authorized by the OCM to place the OCM name and part number on the assembly, with a marking for the distributor. The value added distributor shall have a verified quality system. The fabrication system shall be identical to that of the OCM or shall be approved by the OCM in case of a variation. The fabrication system tooling, tool maintenance/control requirements, calibration requirements, and training requirements must all be described in controlled, written documents.

## PRI PD2001 – Rev A

### 3.4 Acronyms:

GIDEP	Government and Industry Data Exchange Program
OCM	Original Component Manufacturer
OEM	Original Equipment Manufacturer
PD	Program Document
QML	Qualified Manufacturers List
QPG	Qualified Products Group
QPL	Qualified Products List
QPMC	Qualified Product Management Council
SDO	Standard Developing Organization
SPC	Statistic Process Control

## 4. QUALIFICATION PROCESS

### 4.1 General

4.1.1 The qualification process is shown in Figure 1.

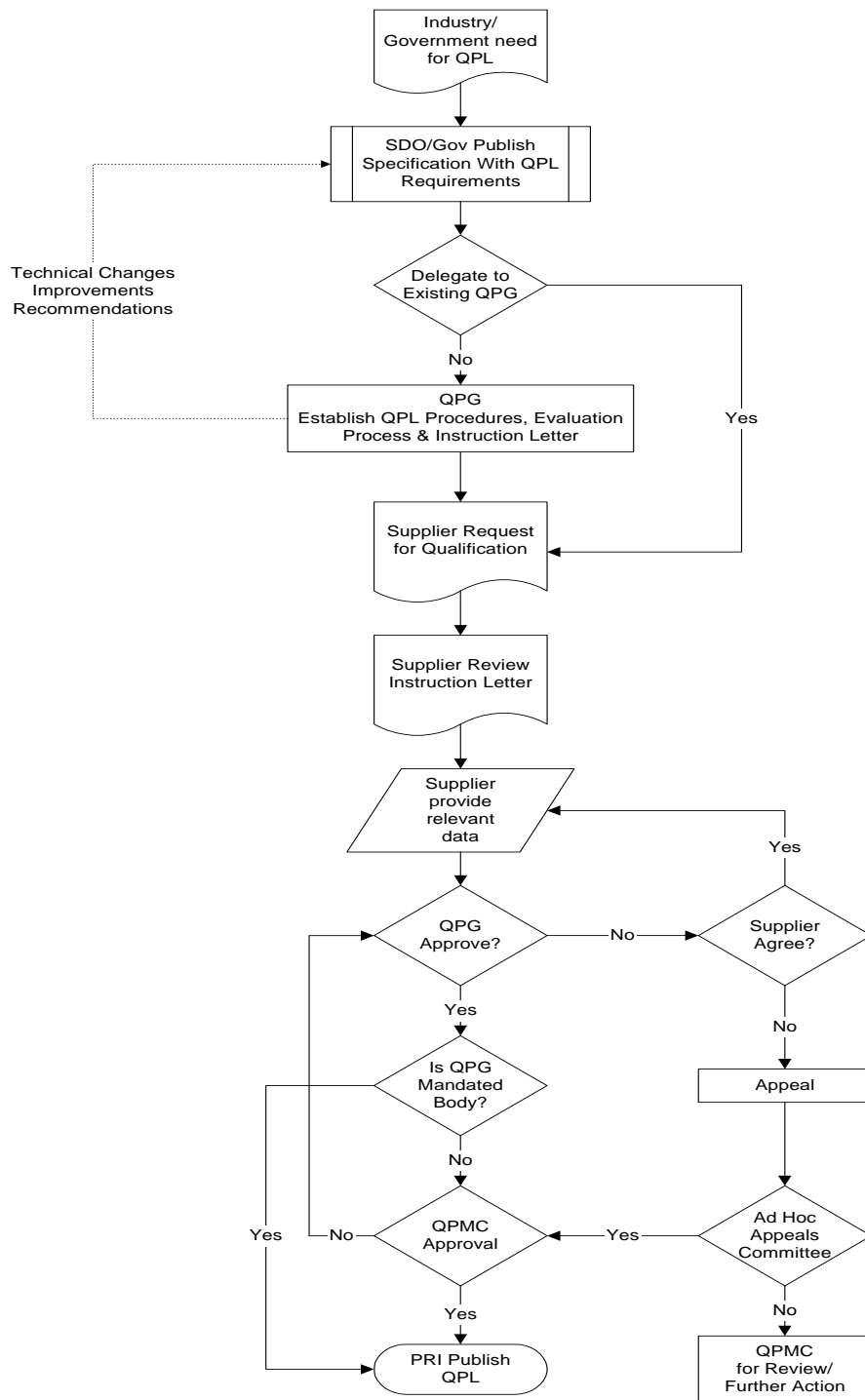
4.1.2 PRI shall administer the QPL Program. Key activities will include, but not be limited to:

- Management of the Supplier Application process as required to place product on the QPL
- Publication and distribution of electronic and hard-copy QPLs similar to the format in Appendix A
- Provide notification to the QPG and OCM's of revisions to the QPL.
- Development and maintenance of all necessary procedures, forms, records, etc. for operation of program

4.1.3 PRI shall also be responsible for managing a QPMC approved Supplier Advisory/Alert system.

# PRI PD2001 – Rev A

FIGURE 1 -- Flow Chart for the Qualification Process



## PRI PD2001 – Rev A

### 4.2 Request for Qualification

#### 4.2.1 Request for Product Approval

The manufacturer seeking product qualification shall send a request for approval to PRI and shall provide the data required by 4.2.2. The Manufacturer shall describe the products to be qualified and identify the type of qualification, *New or Grandfathered*.

For a *Grandfathered* qualification in which the product is adopted from an existing OEM, government or military QPL, the manufacturer must submit official correspondence or approval letters relating to the qualification, a copy of the existing QPL and the associated qualification test reports and product drawings, if available. The QPG may obtain the OEM verification of qualification if the QPL document is OEM proprietary.

For a *New* qualification, the manufacturer must submit a qualification test plan stating when and where the qualification testing is to be performed including third party testing, if applicable. When test plans are submitted, the manufacturer shall specifically request approval of the qualification test program, and of the place and facilities proposed to achieve this program. The products tested shall be manufactured by the applicant manufacturer according to the manufacturing and inspection requirements applicable for production.

Notes:

- (1) Qualification tests shall be conducted at test laboratories applicable to each individual QPG (refer to applicable QPG Slash Sheet or individual specification);
- (2) If qualification tests are performed at manufacturer's facility, it is required to be ISO 17025 approved, and if not, tests shall be witnessed by a QPG member, designated QPG representative, PRI Auditor or verified by OEM qualification tests.

Applicant shall submit a coherent and appropriate test plan based on associated specifications. The request for product approval shall be directed to:

Performance Review Institute (PRI)  
161 Thornhill Road  
Warrendale, PA 15086

Attention: PRI-QPL Program

4.2.2 When required by the governing specification, the request for product approval shall be accompanied by (when they are not already held by PRI):

- a. Evidence of compliance with AS9100 (or industry sector equivalent): ISO Registration Certificate with Certificate of Compliance with AS9100 and any other certifications/accreditation required by the QPG;

## PRI PD2001 – Rev A

### 4.2.2 Continued

- b. A general description of the company (organization, products manufactured, number of employees, facilities), the complete street address of the plant at which the product is being manufactured and CAGE code, if available;
- c. The list of approvals or qualifications that have been granted by OEMs or Government Agencies for the product or similar products; or status of evaluation for such approvals if under way, and time to completion;
- d. Evidence of flowdown of quality requirements when machining, manufacturing, or process operations are subcontracted by the manufacturer;
- e. Evidence of flowdown of manufacturer's quality requirements to subtiers. The quality system shall include, as a minimum, material traceability and work instructions. If performed at the subtier contractor, the manufacturer shall flow-down requirements for tool certification and calibration if applicable.;
- f. Qualification data from the manufacturer's laboratory or specified laboratory (as applicable to QPG);
- g. When specified by the governing specification, the list of manufacturer's approved distributors with any quality accreditation held by the distributor.

**5. PRI AND MANDATED QPG REVIEW PROCESS AND SCOPE PRIOR TO QUALIFICATION TESTS**

**5.1 PRI Review**

Provided the manufacturer's quality system evaluation under 4.2.2 has been successful (if applicable), and after examination of the information specified under 4.2.1, PRI shall forward the request to the Mandated Body, the QPG.

**5.2 QPG Review and Response**

**5.2.1 Review of Request for Product Approval and Test Plan**

The manufacturer's request for product approval shall be evaluated and replied to by the QPG within forty-five working days from receipt at PRI. The reply shall include a statement in the event that manufacturing and process controls are found not to be adequate.

**5.2.2 Review of Requests with Test Reports and Previous Military or OEM Approvals**

For grandfathering of military QPLs or OEM-user QPLs the QPG shall determine adequacy of second or third party accreditation and request additional testing, if required. Grandfathering shall be limited to a specific period of time, for example three years, as defined by the QPG. After this initial specified time, the QPG shall decide if the data is sufficient to continue with grandfathering approval. In all cases, any periodic testing necessitated by the procurement standard as part of the re-certification shall be completed prior to grandfathering approval.

**6. MANUFACTURER SUPPORT OF QPG EVALUATION**

**6.1 Access to Background Material**

The QPG shall have access to the manufacturing and inspection requirements of the concerned products to evaluate them. It shall also have access to the record of the inspections carried out at the appropriate stage of manufacture.

**6.2 Test Verification**

The QPG reserves the right to request specimens and to perform verification tests or partial qualification tests.

**6.3 Qualification Test Report**

At the end of the qualification test program, the manufacturer shall prepare a detailed report. The report shall include the obtained results and verification data such as inspection records and the manufacturer's drawing package defining the configuration of the qualified product. This report shall be submitted to the PRI office for review and approval by the QPG.

NOTE: The manufacturer shall identify drawings, bill of materials, operations, and process controls in the fabrication of specimens that were qualification tested. These controls shall not be modified in later production without prior QPG approval.

**7. QPG AND QPMC APPROVAL AFTER QUALIFICATION TESTS**

**7.1 QPG Response**

After submission of the test report the QPG shall write a disposition within 45 working days from date of receipt at PRI, and forward it to PRI. This disposition shall include a statement as to whether the results are acceptable. Corrective actions may be requested where necessary. This disposition shall be forwarded to the PRI Office for review by QPMC, when requested.

**7.2 Notification of PRI-QPG Approval**

The PRI office shall advise the manufacturer of successful completion of the approval process and of the pending Qualified Product Listing.

### 7.3 QPMC Approval

When necessary, the PRI QPMC shall review the QPG report and recommendation. In the absence of a request by the Council for review of the QPG report, the QPG report shall be final, and PRI shall grant the approval for the products concerned on behalf of the Council, unless basic PRI PD2000 criteria have not been complied with. When granted, approval shall be forwarded to the manufacturer by PRI. It shall contain the following information:

- a. reference to the SDO standards defining the products;
- b. reference of the part standards, if applicable;
- c. name of manufacturer and place of manufacture;
- d. product designation;
- e. date of the approval;
- f. type and/or class.

#### NOTES:

a. OEM Authority

The OEM-user shall acknowledge whether the organization which granted qualification and the rules with which they conformed are satisfactory, taking into account its contractual commitments and/or legal obligations.

b. Supplier Responsibility

Inclusion of a product on the QPL does not relieve the manufacturer of its contractual obligations to deliver products that comply with all specification requirements.

c. Responsibility for Quality Assurance

Inclusion of a product on the QPL does not constitute a waiver of any requirement for inspection, for process control, or for maintenance of quality control procedures during production. It also does not in any way relieve the OEM-user of its regulatory obligation to ensure that the delivered products comply with the specification requirements.

**7.4 In-Service and Fabrication Problem Reporting**

Manufacturers and distributors of products shall report all sampling and periodic test failures and escapement of non-conforming products in writing to PRI within 24 hours. It is noted that a report due on a Saturday or Sunday may be delivered on the following Monday and one that is due on a holiday may be delivered on the next workday. PRI shall notify the QPG within the initial twenty-four (24) hour period of receiving notice of such failures or problems. The QPG shall decide within twenty-four (24) hour period of notification by PRI on the next course of action associated with the failure. In case the failure or problem report originated at a user, PRI shall also notify the manufacturer of the problem. The manufacturer shall be required to respond to the notification in writing within five (5) working days of receipt of PRI Supplier Advisory Notification, describing the source of the problem. While the manufacturer is evaluating a failure analysis and corrective action, the manufacturer must submit a written update at least once every two weeks informing PRI of the status of the investigation. In case of repetitive complaints from users to PRI on the performance of a qualified product, the QPG shall request an audit at the place of manufacture. After consideration of the corrective actions and audit report, PRI shall notify the manufacturer of the decision taken. PRI reserves the right to issue Supplier Advisory Notifications and/or immediately remove the manufacturer or value added distributors from the applicable QPL when a product failure is reported. PRI also reserves the same rights and actions if it is discovered that a manufacturer or value-added distributor has not reported failures to PRI within the twenty-four (24) hour requirement. PRI shall notify manufacturers within five (5) working days of direction by the QPG if manufacturer will be removed from the QPL and the QPL will be updated in the same time frame. The notice will be mailed to the manufacturer with a delivery receipt.

**7.5 Manufacturer Process Changes to be Reported to PRI**

The manufacturer shall:

- a. Inform PRI in writing of any proposed change in its quality system which might affect the granted approval;
- b. Inform PRI in writing of any evolution in the company situation (change of address, merger, take-over, change in operations, place change, strike, plant closure, natural disaster, etc.) which might affect the product. In such an event, the manufacturer must submit status reports at least every two weeks until all open actions associated with the event have been resolved;

## PRI PD2001 – Rev A

### 7.5 Continued

- c. Request approval from PRI in writing for any proposed modification in product design, equipment, tooling, materials, processing, and manufacturing with a notation whether the change is minor or major. All changes require a substantiation of the effects of the change on form, fit, function, reliability, weight, structural strength, or the ability of the part to meet any requirements of the standard. Details, including pre- and post-change engineering and manufacturing documents shall be provided to PRI with the change proposal. Major changes require QPG approval prior to implementation. PRI will respond to a request for a change within thirty (30) calendar days.
- d. PRI must be advised in writing of the intended date of the change and the manufacturer must submit written updates of the status of the change until the change is fully implemented. PRI approval of proposed changes after qualification does not relieve the manufacturer of responsibility associated with the product(s). Proposed changes shall be brought to the attention of PRI at least thirty (30) working days prior to the proposed change implementation date.
- e. PRI reserves the right to require Supplier Advisory Notifications and/or immediately remove the manufacturer from the applicable QPL if it is discovered that a manufacturer has not reported changes and has not had the changes approved per 7.5.c above. PRI will notify the manufacturer within five (5) working days of direction by the QPG if the manufacturer will be removed from the QPL and the QPL will be updated in the same time frame. The notice shall be mailed to the manufacturer with a delivery receipt.

### 7.6 PRI Confidentiality Requirement

- 7.6.1 All information provided to PRI shall be treated in accordance with the confidentiality requirements of PRI. Operating procedures are in place within PRI to handle and protect all proprietary and company confidential information that is furnished by all manufacturing sources, or potential sources, for a QPL. This includes all second party or other persons acting for PRI.
- 7.6.2 Examples of proprietary data include raw qualification data, travelers, cost and yield information, procedures, PRI audit results, design techniques and guidelines, etc. Examples of non-proprietary information include QMLs and QPLs.
- 7.6.3 All QPL test data released outside PRI shall be stamped "Proprietary" before being released to QPG members. A record shall be kept indicating the material sent, date sent, why it was sent, and to whom it was sent.

## **PRI PD2001 – Rev A**

7.6.4 QPG members receiving such proprietary information agree that they shall not use such proprietary information, except in connection with PRI or QPG related transactions with the party disclosing such proprietary information. QPG members shall handle this proprietary information in accordance with PRI operating procedures. They shall not disclose such proprietary information to anyone else, either within or external to their company, without written authorization, and documentation, of the release by PRI.

### **8.0 REQUALIFICATION**

The qualification can be renewed for an additional period. The product qualification period shall be automatically extended until the review is complete. The review period should not exceed ninety days. Disagreements and appeals shall be conducted in accordance with PRI PD2000.

### **9.0 APPENDICES**

#### **9.1 Appendix A – Qualified Products List**

# PRI PD2001 – Rev A

## APPENDIX A

PRI-QPL-AMS3281

01 April 1997

Supersedes All Previous Revisions

### QUALIFIED PRODUCTS LIST (QPL) OF PRODUCTS QUALIFIED UNDER SAE AEROSPACE STANDARD

#### AMS3281

#### SEALING COMPOUND, POLYSULFIDE (T) SYNTHETIC RUBBER FOR INTEGRAL FUEL TANK AND FUEL CELL CAVITIES LOW DENSITY (1.35 SP GR MAX), FOR INTERMITTENT USE TO 360°F (182°C)

This list has been prepared for use in the procurement of products covered by the subject standard. All products listed herein have been qualified under the requirements for qualification listed in the latest issue of the applicable standard. Qualification is specific for each product, manufacturer and plant location. Only products manufactured by the given manufacturer at the given plant location are deemed to have met the requirements of the standard. Listing of products is not intended to and does not connote endorsement of the product by PRI or any particular user.

This QPL has been prepared by PRI in accordance with the procedures established in PD 2000. For information concerning this QPL contact:

Performance Review Institute  
Attention: QPLs  
161 Thornhill Road  
Warrendale, PA 15086-7527  
Phone: 724/772-1616 Fax: 724/772-1699

<u>SDO PART NUMBER</u> <u>(if applicable)</u>	<u>TYPE DESIGNATION</u> <u>(if applicable)</u>	<u>CLASS DESIGNATION</u> <u>(if applicable)</u>	<u>MANUFACTURER'S DESIGNATION</u>	<u>TEST OR QUALIFICATION REFERENCE</u>	<u>MANUFACTURER'S NAME &amp; ADDRESS</u>	<u>DATE LAST QUALIFIED</u>
AMS3281		B-1/2	PR-xxxx	MLS-00-00	ABC Manufacturing 12345 Fernando Road	5/12/98
AMS3281		B-2	PR-xxxx	MLS-00-000	Smithton, PA 12345-678 Phone: (444) 123-4567	5/12/98
AMS3281		C-2	PR-xxxx	MLS-00-000	Plant: Same Address	5/12/98
AMS3281		C-8	PR-xxxx	DAF Memo Dated 00-SEP-97	CAGE: 12345	5/12/98
AMS3281		C-12	PR-xxxx	DAF Memo Dated 00-SEP-96	DUNS: 123456789 Plant:: Same Address  CAGE: 12345 DUNS: 123456789	5/12/98

There is only one listing to AMS3281 to date. Others are encouraged to apply.