



**ENTRUST**

SECURING A WORLD IN MOTION

**SUPPLIER QUALITY STATEMENT OF WORK**

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Entrust

Supplier Quality Statement of Work

Revision P



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## SUPPLIER QUALITY STATEMENT OF WORK

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### 1.0 Purpose:

This document communicates Entrust's guidelines as they pertain to Material Quality Management. Entrust expects Suppliers to provide materials, parts, assemblies and services that meet our engineering and quality requirements.

### 2.0 Scope:

This document applies to all Suppliers selected by Entrust to provide parts, assemblies, supplies, purchased part documents (PPDs) and services. Supplier Quality is the owner of the SQSOW.

### 3.0 Supplier; Quality System Requirements

Suppliers are responsible for maintaining a quality management system. When requested, or in the event that a supplier's processes are consistently out of control, Entrust's Supplier Quality may assist the supplier with their quality management system. Entrust expects the supplier's quality system to include provisions for:

#### 3.1 Documentation

**Entrust Purchasing** is responsible for ensuring suppliers receive current revisions of applicable documentation, specifications, standards and electronic files referenced within the documentation package. Suppliers must not proceed without proper documentation.

The documentation package may include:

- Assembly drawings
- Schematics,
- Bills of material (BOM),
- Computer aided design (CAD) files,
- Other documentation, such as the documentation identified in Appendix A

**Suppliers** are responsible for managing the documentation provided by Entrust and for supplying product per the part number and revision referenced on the Purchase Order (PO).



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### 3.2 Competence Awareness and Training

Suppliers are responsible for determining the level of competence required for personnel performing work affecting product quality and ensuring they have the proper education, training, skills and experience to perform the work.

### 3.3 Process Control

Suppliers are to establish, maintain and follow controlled processes necessary to ensure product conformance. Where Statistical Process Control (SPC) requirements are identified on the print or Supplier Quality Requirements document (SQR), the supplier is required to collect and analyze data on the features specified.

### 3.4 Handling of Nonconforming Material

All nonconforming material must be identified and isolated, by the supplier, to prevent unintended use. Nonconforming material must not be shipped to Entrust unless the supplier has received approval per the deviation process described in section 3.5

### 3.5 Deviations

Entrust may accept nonconforming material from a supplier at the discretion of the SQE. The supplier must request and receive an approved deviation prior to shipping the product. In their initial communication, the supplier must indicate,

- Exact nature of the proposed deviation
- Quantity of units involved or the time period involved
- Purchase order
- Short and long term corrective action

Entrust reserves the right to reject an approved deviation if the deviated item is found to jeopardize the performance of the final assembly.

### 3.6 Corrective Action

Suppliers must have a documented corrective action process. At a minimum the process must provide for containment, root cause analysis and short and long term corrective action plans.

### 3.7 Repair/Rework

All repair / rework must be performed in accordance with documented instructions. Reworked product must pass all tests/inspections stated in the manufacturing process before it is returned to normal material flow.



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### **3.8 Machine Calibration and Maintenance**

Suppliers must maintain calibration and maintenance records for equipment used to manufacture, measure and monitor product and processes.

### **3.9 Electrostatic Discharge (ESD) Program**

Suppliers of products that are static sensitive and suppliers adding value to static sensitive products must maintain an ESD program covering all applicable areas of manufacturing. This includes training and records of training for all personal that handle static sensitive devices.

### **3.10 Lot Traceability**

When required by Entrust and/or government agency, suppliers must maintain lot traceability records.

### **3.11 Packaging**

The supplier is responsible for design and test of packaging to provide adequate protection during shipping. Ease of unpacking and minimization of waste material must be taken into consideration.

### **3.12 Record Retention**

The supplier must retain data, agency and material certification records required by Entrust. The supplier is required to maintain the records for the period defined by Entrust and must make them available upon request.

### **3.13 Environmental/Agency Requirements**

#### **Request for Compliant parts:**

Entrust will communicate requirements for compliant parts by adding drawing notes and identifying the specification in the Bill of Materials and/or P.O..

#### **Certificate of Conformity (CoC):**

Suppliers must manage CoC's in the manner described in the specification and/or Purchase Order.

Where Entrust has formally requested certification, CoC's must be kept by the supplier and made available to DCG upon request.



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### **3.14 Sub-tier suppliers and purchased services support**

Suppliers are responsible for ensuring Entrust requirements flow down to sub-tier suppliers. Entrust suppliers are responsible for the quality of products and services received from their suppliers.

In instances where the sub-tier supplier is providing Entrust designed product, Entrust may assist with quality requirements.



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### 3.15 Audits

Entrust reserves the right to perform Quality Management System audits with advanced notification.

## 4.0 First Article Evaluation

First Article (FA) evaluation is used to ensure equipment, materials, processes, and procedures are capable of producing a part/assembly.

### 4.1 Situations that May Require a First Article

- New Part / Assembly
- New Supplier for a Part / Assembly
- New Tooling
- Form fit or function change to an existing part that requires release of a new part number.
- Supplier is using a new or reworked mold.

### 4.2 Situations requiring consultation with Entrust Supplier Quality

- The manufacturer is using a new facility, site or location where the material has not been manufactured.
- A new process or new equipment is implemented which invalidates prior process capability assessments.
- A change to Form, Fit, or Function of the material, including non-electrical, electrical, software, or firmware changes.

**Note:** Changes to the process that are considered routine maintenance, or process Adjustment, do not require FA data.

### 4.3 First Article Activities

First article activities may be required based on commodity type. A first article requirement may be waived at the SQE's discretion.

#### 4.3.1 Mechanical Parts/Assemblies

All of the dimensions and notes identified on the drawing must be verified on a quantity of parts determined by the SQE of that particular commodity. A minimum of 1 part per cavity must be verified on multiple cavity tools. First Article data compiled by the supplier is to be kept on file for a minimum of 6 years and



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provided to Entrust on request (within 24 hours of said request). Entrust prefers an electronic format for the first article data.

### **4.3.2 Printed Wiring Assemblies (PWAs - Computers - Electrical Components**

The supplier is required to inspect 3 assemblies and verify they meet the requirements of the assembly drawing, bill of material (BOM) and the approved manufactures list (AML). The supplier must also perform electrical testing if it has been identified in a Supplier Quality Requirements document (SQR) or Printed Wiring Assembly (PWA) Test Plan included in the documentation package.

### **4.3.3 Supplies: Ribbons, Topcoats, Card stock etc.**

All First Article activities required of the supplier are documented in the Supplies Qualification and Acceptance Specification.





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### Appendix A Definitions

**Entrust mechanical drawings** show basic information and should be interpreted per ASME Y14.5M-1994 (Dimensioning and Tolerancing). Any other applicable standards will be noted on the drawing.

**PWA Test Plans** may be developed for **PC boards, electrical assemblies and OEM computer components** if the supporting SQE finds it necessary. Test plans define the test methods to be followed during manufacturing of circuit boards and electrical assemblies.

**Qualification and Acceptance Specifications** are developed for supplies. Processes taken to qualify supplies (**Ribbons, topcoats, card stock etc.**) are outlined in these documents. They identify the acceptance processes performed by the supplier, outside parties, and Entrust Supplier Quality to evaluate supplies.

**Supplier Quality Requirements (Supplier Quality Assessment F-840-002)** may be developed by the SQE for:

**Hardware items:** Fasteners, Bearings, Belts, Pulleys, Gaskets, Springs, etc.

**Plastic/Rubber materials:** Formed, Injection Molded, Machined, Rollers

**Electrical items:** Cable Assemblies, Wires, Cords, Motors, Clutches, and other custom electrical parts

**Metal items:** Formed, Machined, Castings, Stampings, Punch/Die parts

**OEM items:** Misc. Equipment and Spares, Cameras and camera related items.

**Custom Packaging, and Miscellaneous Printed Materials.**

The SQR may contain methods and or processes the supplier is to follow in manufacturing the product. The SQR may also contain key product characteristic (KPC) coding and special instructions on how and what dimensions/parameters the supplier is to control and provide qualification data on. Following is a key to KPC coding:

**Key Product Characteristics (KPC):**

**“Critical” <C>** - a product characteristic for which reasonably anticipated variation could significantly affect the product’s critical performance function, safety, or government agency regulations. An initial Cpk  $\geq 1.33$  is required.



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**“Major” <M>** - a product characteristic for which reasonably anticipated variation is likely to significantly affect customer satisfaction with a product, such as fit, function, performance, durability, mounting, appearance, or the ability to process or build the product. An initial Cpk  $\geq$  1.00 is required.

**“Minor” <m>** - a product characteristic determined by Entrust and/or the supplier that requires additional attention if “Critical” or “Major” has not been designated for this characteristic. Unless otherwise specified, the supplier’s quality system is used to assure product conformance to specifications.



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### Appendix A (Continued)

#### Supplemental Verification and Validation Documentation

**Supplier Quality Assessment Forms (Supplier Quality Assessment F-840-002)** are used to communicate the approval status of new parts, or parts produced by a significantly modified process, to the supplier.

**Nonconforming Material Report** documents details associated with nonconforming materials. Summaries of nonconformance are sent to suppliers by email or fax. The summary may be accompanied by a request for an RMA.

**Part Deviations** are created by the Supplier Quality organization if Entrust Supplier Management and Quality agree to accept nonconforming material generated by the supplier. The supplier must receive an approved deviation from Entrust Supplier Management prior to shipping the product.

**Supplier Corrective Action Requests (SCAR)** Entrust maintains a formal SCAR process. SCARs will result from repeated nonconformance for quality and/or delivery issues. An SCAR may be generated for the first occurrence if the SQE determines the nonconformance to be critical.