

Title: <i>Supplier Quality Requirements</i>	Number: SQA-0200-001
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1. Scope and Index

1.1 Scope:

These requirements apply to suppliers of materials, products or services to Brass Craft. Suppliers must ensure that their suppliers also support compliance throughout the supply chain.

1.2 Definitions:

None.

1.3 Responsibility:

The Purchasing and Quality departments are responsible for Supplier Quality Assurance implementation, and have authority to ensure all suppliers meet and fulfill requirements.

Suppliers are responsible for ensuring that products and/or services provided meet established requirements and assume full responsibility for the quality thereof. Approval and verification by Brass Craft of supplier's facilities, systems, records and product does not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by the customer.

1.4 Requirements:

This Supplier Quality Manual establishes minimum quality requirements for all suppliers of production materials, products and services to Brass Craft. The requirements within this handbook are provided as a supplement to, and do not replace or alter the terms or conditions within purchasing documentation, engineering drawings and/or specifications. This manual establishes general policy; however, when needed, suppliers may obtain additional information from the Purchasing, Engineering or Quality contact(s). If conflicting interpretations arise, this order of precedence applies:

- Supply and Purchase Agreement and/or Purchase Order
- Specification or Drawing
- Supplier Quality Assurance Handbook

1.5 Reference Documents:

None

1.6 Index:

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3. Supplier Quality System, General Requirements

3.1 Scope:

This Supplier Quality Manual establishes minimum quality requirements for all suppliers of production materials, products and services to Brass Craft.

3.2 Definitions:

KPC – Key Product/Process Characteristic

3.3 Responsibility:

The Purchasing Buyer of each commodity shares this responsibility with the Quality Manager of each facility.

3.4 Requirements:

- 1) General Requirements
 - a) A quality manual which includes the scope of the quality management system, documented procedures and a description of the sequence and interaction of the processes within the quality system will be in place and maintained. This manual will be available for audit during the initial qualification process and for routine assessments.
 - b) Personnel performing work affecting conformity to product requirements will be deemed competent based upon education, training, special skills and experience. Records are available to demonstrate compliance to this requirement.
 - c) The work environment and infrastructure will be maintained to that extent necessary to achieve conformity to product requirements. Safety, statutory and regulatory requirements will be complied with.
- 2) Product Specific Requirements
 - a) Control Plans will be developed and maintained that identifies the KPC's, resources, documents and activities to be applied to a specific process. This document will include actions to be taken when the output of the process fails to achieve the intended results (control of nonconforming product).
 - b) KPC data will be used to drive Continual Improvement activities. Progress to goal will be documented on the Supplier Scorecard.
 - c) Corrective action will utilize a disciplined approach to identify the root cause(s) of nonconformities in order to prevent recurrence. The cause of nonconformities, including customer complaints, will be identified to determine and implement the appropriate actions. These actions will be reviewed to verify their effectiveness.
 - d) Product will be identified by a suitable means throughout the production process, including status with respect to monitoring and measurement requirements. Unique product identification is recorded as appropriate to control traceability.
 - e) Measuring equipment must be calibrated or verified at specified intervals against measurement standards traceable to international or national measurement standards and will be adjusted or re-adjusted as necessary. Equipment will be identified to provide calibration status and protected from damage, deterioration or unauthorized adjustments. Previous measurement results must be reassessed and appropriate action taken (re-test, notify customer, etc.) should measurement equipment fail the verification process.
 - f) Product will be preserved during internal processing and delivery to the intended destination in order to maintain conformity to requirements. Preservation includes the identification, handling, packaging, storage and protection of product.
 - g) Product shipment guidelines are provided on the Brass Craft website.
 - h) Records of Quality Testing must be retained for four (4) years. Records are to be reviewed annually per this requirement and purged as appropriate.

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Supplier Quality System, General Requirements, continued

- 3) Certification/Registration
 - a) The supplier shall demonstrate capability to attain appropriate internationally recognized standards certifications as required for the product/process involved. Examples include UL, UL GS, NSF, CSA, CE, CCC, SAI.
 - b) Registration to ISO 9001 is not a current requirement of Brass Craft.

3.5 Reference Documents:

None.

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4. Supplier Selection and Approval Process

4.1 Scope:

To identify the activities required to identify, select and approve suppliers to Brass Craft.

4.2 Definitions:

KPC – Key Product/Process Characteristic

4.3 Responsibility:

The Purchasing Buyer for each commodity shares this responsibility with the Quality Manager of each facility.

4.4 Requirements:

1) Selection

Supplier selection will be completed through use of a sourcing checklist which includes at a minimum:

- a) Quality – Supplier Site Assessment, Product Specific Control Plans, PPM or Process Capability requirements and Supplier identified KPC's..
- b) Costs (Commercial) – Quote/RFQ, Annual Volume quoted, Material cost baseline, tooling costs as appropriate and risk assessment.
- c) Delivery – Order Lead Time, Minimum Order Quantity, Packaging Requirements and Safety Stock Level.
- d) Technology – Engineering Drawings, Manufacturing Capability, Corrective Action and Continual Improvement with the goal of defect prevention and Industry Certifications

2) Qualification

Qualification activities encompass the due diligence performed in support of supplier selection and is typically performed before any work or contracts have been awarded. This activity can be accomplished in the following steps:

- a) Initial Evaluation – All suppliers must complete and submit a supplier profile and provide their quality manual for review.
- b) On Site Assessment – This is typically conducted by a Brass Craft representative during a visit to the supplier. The intention is to verify the Quality, Costs, Delivery and Technology information previously submitted.
- c) Deficiencies identified during either assessment must be corrected prior to supplier approval. An action plan will be submitted to Brass Craft purchasing that describes what action(s) will be taken and when they will be implemented. Upon completion and submission of corrective actions, Brass Craft will verify that the actions taken are effective.

3) Approval and Monitoring

- a) After successfully completing the qualification process, suppliers to Brass Craft will be added to the approved supplier list as product specific ISIR approvals are completed. Suppliers will be monitored for compliance to requirements including scorecards and routine audits.

4.5 Reference Documents:

None.

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5. New Product Introduction

5.1 Scope:

A cross functional team of Brass Craft and Supplier specialist will review customer requirements, product and process constraints

5.2 Definitions:

None.

5.3 Responsibility:

The Purchasing Buyer for each commodity shares this responsibility with the Quality Manager of each facility.

5.4 Requirements:

1) Initial Sample Inspection Report (ISIR)

Parts or components being sourced must be approved for production by Brass Craft. It is the supplier's responsibility to meet all applicable specifications. Suppliers are **not** authorized to begin shipment of production quantity material prior to part/process approval. Small quantities of parts for reliability/engineering testing, and sample needs are the only exception. A drawing/specification review will be conducted prior to the production part approval process. ISIR's include any or all of the following as appropriate:

- a) Dimensional Layout/Inspection
- b) Material Verification
- c) Performance Testing
- d) Appearance Approval Report

2) Outcome of an ISIR

- a) Pass – Full Approval
- b) Reject – Must resubmit after implementing corrective action
- c) AFOPO – Provisional approval for one shipment only, must resubmit after implementing corrective action

5.5 Reference Documents:

AIAG (Automotive Industry Action Group) Advance Product Quality Planning (APQP)
AIAG Production Part Approval Process (PPAP)

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6. Product Verification and Acceptance

6.1 Scope:

To define the activities required to identify, document, verify and accept purchase product.

6.2 Definitions:

KPC – Key Product/Process Characteristic

6.3 Responsibility:

The Purchasing Buyer for each commodity shares this responsibility with the Quality Manager of each facility.

6.4 Requirements:

- 1) Materials and Components
 - a) A unique control number traceable to one lot/heat of product will be assigned for traceability and placed on rod tags or carton labels.
 - b) Shipments of multiple control numbers are permissible.
 - c) Material certification and/or certificate of compliance is required for each control number.
 - 1.1 Brass
 - a) In addition to control numbers and material certification, brass product must be color coded
 - b) Rod is to be painted the appropriate color on each end on each bar
 - c) Components are to use the appropriate color labels or tags
 - 1.2 Rubber
 - a) Rubber seals, o-rings and washers must have the appropriate NSF/CSA certification number listing referenced.
- 2) Assemblies
 - a) A unique control number traceable to one lot of assemblies will be assigned that will provide for traceability to the various components and placed on carton labels.
 - b) Shipments of multiple control numbers are permissible.
 - c) Certificates of Compliance are required for each control number.
- 3) Control of Documents
 - a) All documents must be in English.
 - b) Material Certification and/or Certificates of Compliance must be sent for each unique control number in a shipment.
 - c) Electronic copies should be sent to the receiving location prior to shipment if available.
- 4) Verification of Purchased Product KPC's
 - a) The Brass Craft receiving location will inspect purchased product to verify that product meets specified requirements.
 - b) Product will be accepted for use based upon verification results.
 - c) Material chemistry, when identified as a KPC, will be verified annually by Brass Craft for each affected supplier. A minimum of 3 pieces will be randomly selected with the goal being to take samples from a range of products supplied.
- 5) Nonconforming Product
 - a) Should product fail the verification process, product is placed on hold and a Nonconforming Material Report (NCFMR) created.
 - b) A Corrective Action Request (CAR) may also be issued based upon the nature of the nonconformance.

6.5 Reference Documents:

None

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7. Control of Nonconforming Product

7.1 Scope:

To define the actions to be taken in the event that nonconforming product is received or otherwise identified during use.

7.2 Definitions:

None.

7.3 Responsibility:

The Purchasing Buyer for each commodity shares this responsibility with the Quality Manager of each facility.

7.4 Requirement:

- 1) Nonconforming Product identified at the Using Facility
 - a) Should nonconforming product be identified at time of receipt, product will be placed on hold and quarantined in a method appropriate to prevent its unintended use. A representative sample and/or pictures of the nonconformance will be obtained for the supplier to analyze.
 - b) Should nonconforming product be identified at time of use, product from the suspect lot will be placed on hold and quarantined in a method appropriate to prevent its unintended use. This may include completed assemblies that contain suspect nonconforming product. A representative sample and/or pictures of the nonconformance will be obtained for the supplier to analyze.
 - c) An NCMR will be created and sent to the supplier along with samples and/or pictures for analysis. A corrective action request (CAR) may also be issued to document corrective and preventive action activities.
 - d) The number of NCMR's, timely response and effective corrective action will be included in Supplier Scorecard metrics.
- 2) Nonconforming Product identified at the Supplier
 - a) Should nonconforming product be identified during first piece, in process, final inspection or audit, all suspect product will be quarantined in a method appropriate to prevent its unintended use or release.
 - b) The supplier will assess finished product and work in process to effectively "book end" the beginning and end of nonconformance.
 - c) Appropriate corrective action will be implemented with the goal of defect prevention.
- 3) Resolution of Nonconforming Product
 - a) Nonconforming product at the facility will remain on hold until disposition is agreed upon by the using facility, Novi purchasing and the supplier.
 - b) The supplier is responsible for the control of nonconforming product at the various stages of manufacture, handling, packaging, preservation, storage and shipment. This includes the requirement to notify the affected Brass Craft facility in the event that nonconforming or suspect product has been released for delivery.
 - c) Associated costs incurred by Brass Craft with the control of nonconforming product will be identified, documented and submitted to the supplier.
 - d) CAR's, when issued, require initial response and containment within 24 hours, Analysis within 10 days and Resolution within 30 days.
 - e) CAR's will be assessed for effective corrective action which may require on site verification by a Brass Craft representative.

7.5 Reference Documents:

Nonconforming Material Report (NCMR)
Corrective Action Request (CAR)

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8. Performance Metrics

8.1 Scope:

To identify the metrics used in Supplier Scorecards to monitor and rate performance.

8.2 Definitions:

Key Product Characteristic: The features of a material, process, or part whose variation has a significant influence on product fit, performance, service life, or manufacturability.

8.3 Responsibility:

The Purchasing Buyer for each commodity shares this responsibility with the Quality Manager of each facility.

8.4 Requirements:

- 1) Supplier Scorecard, Supplier responsibility
 - a) Suppliers are responsible to monitor the variable data for each KPC on the process control plan for product supplied to Brass Craft.
 - b) Results will be expressed as process capability (C_p and/or C_{pk}) or PPM as appropriate.
 - c) Data will be entered on the Supplier Scorecard to chart YTD and monthly performance.
- 2) Supplier Scorecard, Brass Craft responsibility
 - a) Brass Craft will monitor and report on the number of NCMR's issued during the affected scorecard time period and the timeliness of response.
 - b) CAR's for the affected scorecard time period, if issued, will be monitored for effectiveness. Additional CAR's and/or on site assessments may be required based upon results.
- 3) Scorecard Reporting
 - a) Suppliers are to send process capability data to Brass Craft on a quarterly basis.
 - b) An overall performance score will be calculated based upon process performance (improvement trends), number of NCMR's, timely response and effective corrective action. Results will be documented on the Supplier Scorecard, form SQA-0200-001-01.

8.5 Reference Documents:

SQA-0200-001-01 Supplier Scorecard