GLOBAL ENTERPRISES
SUPPLIER QUALITY MANUAL

Table of Contents

REVISION HISTORY

Rev.	Section	Modification	Date	Approval (initials)
0	New	New Manual	10-6-10	NA
1	Various	Added Revision History, revised wording	4-24-14	JM
2	Various	Revised ISO/TS16949 to ISO/TS16949:2009(E)	1-14-15	JM

This is a controlled document. All printed or saved versions of this document are to be considered uncontrolled. Suppliers are to be compliant with the latest version of this document. It is the supplier's responsibility to refer back to Global Enterprises website to obtain the most recent version Global Enterprises Inc. Supplier Quality Manual.

INTRODUCTION

Global Enterprises Expectations:

To exceed in meeting our customer expectations, it is imperative to have a solid relationship with our suppliers. The intent of the supplier manual is to eliminate any miscommunication between Global Enterprises and our suppliers.

Global Enterprises Has the following expectations for their suppliers:

1. 100% on time delivery
2. Zero Defects
3. Continual Improvement
4. Safety / Government / Regulatory Requirements are achieved

We also expect that your suppliers meet these minimum requirements. It is your responsibility to manage your supply base, in the same manner.

PURPOSE

This business operating manual for our supply base explains the minimum quality requirements. This manual does not replace individual agreements or specifications, but are the minimum requirements upon which other requirements and expectations are built.

SCOPE

This document applies to all suppliers of Global Enterprises that supply product for production purposes.. It is expected that the supplier understands and utilizes this manual. It is the responsibility of the supplier to check periodically for any changes that may have occurred. Any questions can be directed to the quality department at Global Enterprises. More information can be found on our website at www.globalent.org in the vendor terms section.

Global Enterprises, utilizes the Automotive Industry Action Group (AIAG) format for quality systems, quality planning and statistical methodologies. Suppliers are expected to establish goals aimed at becoming fully compliant to ISO/TS16949:2009(E), and or ISO 9001:2008 at a minimum. This manual has been written to be in alignment with the AIAG reference manuals.

DEFINITION

Publications from the Automotive Industry Action Group, (AIAG), referenced in this manual and used as a guide to establish the requirements for Suppliers.

1. Advanced Product Quality Planning and Control Plan (APQP)
2. Potential Failure Mode and Effects Analysis (FMEA)
3. Measurement Systems Analysis (MSA)
4. Production Part Approval Process (PPAP)
5. Quality System Requirements: ISO/TS 16949:2009(E)/ISO9001:2008
6. Statistical Process Control (SPC)

PROCEDURE

Management Responsibility

Suppliers will have methods in place to measure customer satisfaction. These measurements should be used in identifying the need for corrective and preventive actions, as well as continual improvement.

Suppliers will at a minimum, use the Supplier Performance Ratings as a method of measuring satisfaction. Global Enterprises will track the Supplier Performance Ratings on an on-going basis. If the Performance Rating goes below the specified minimum of 80%, the supplier is required to submit a formal corrective action and an on-site supplier evaluation is conducted as deemed feasible.

The Supplier's rating is comprised of the following areas:

1. Quality 45%
2. Delivery 45%
3. Responsiveness 10%

The minimum score to achieve is 80%, maximum is 100%. Suppliers that achieve the 100% rating will be considered first for new business.

Suppliers are to identify a primary and an alternate contact for both normal and emergency communications with Global, for all shifts.

The following information is to be sent to Global Enterprises.

1. Business Phone and Fax
2. Cell / Mobile Phone
3. E-mail Address
4. EDI capability
5. Department Matrix / Organizational Chart

Global Enterprises will then send the same information to the supplier.

All suppliers must be at a minimum ISO9001:2008, preferably ISO/TS16949:2009(E) compliant. In the event a supplier does not have a 3rd party registered system, they cannot be selected. Only in special circumstances will a supplier be utilized without certification. Written acceptance by Global Enterprises is required. A Quality Audit or supplier evaluation will be conducted by the Global Quality and Purchasing departments to assure compliance.

It is the Supplier's responsibility to ensure that all regulatory documentation such as MSDS, IMDS etc. is provided to Global Enterprises as required.

It is the Supplier's responsibility to ensure that all "due dates", requests for quote, PPAP submissions, corrective actions, preventative actions etc. are met.

QUALITY SYSTEM

Suppliers shall develop and implement a documented system to control processes and insure quality per the industry standard. Suppliers must allow for system audits by Global Enterprises representatives for any of the following reasons.

1. The Supplier is being considered for new or additional business.
2. The Supplier scored low on the quarterly supplier performance data.
3. The Supplier failed to submit acceptable PPAP or corrective action reports.
4. When the quality of supplied product does not meet the PPAP, Drawing, Math Data requirements and / or shows evidence of deterioration.
5. To assist the Suppliers in improving performance as needed or requested.

PPAP REQUIREMENTS (Production Part Approval Process)

Suppliers are to submit a PPAP package in accordance with the AIAG Production Part Approval Process Manual, 4th edition. Level three is the default submission for PPAP. Any other Level submission PPAP's such as Level 1, 2, 4 or 5, must be approved by Global Enterprises prior to the supplier submitting. All approvals must be in writing to be valid, and be from the Quality Manger at Global.

The total PPAP package including sample parts and related documents, for example; IMDS, Material Certifications, Test Reports etc, are to be submitted in English or be accompanied by complete translations.

The PPAP package is to be labeled with **"PPAP Enclosed – Please forward to the Quality Department".**

The label must include the following:

- Part Number
- Part Name or Program Name
- Purchase Order Number
- Date of Submission
- PPAP Parts Included – Yes or No

In preparation for the PPAP submission, the Supplier must develop the following process control tools in accordance with the AIAG manuals and are to be used as a guideline to improve the process.

- A Process Flow Chart of the process used to produce product.
- A PFMEA – Process Failure Mode and Effects Analysis
- A Control Plan

The PPAP must include (six) sample parts per cavity, each tool, with full dimensional layout. Any change on quantity must be approved by the Quality Manager or Quality Engineer at Global, and be in writing to be valid.

Dimensional reports need to be correlated with a "Ballooned Drawing" as appropriate and all the dimensions on the drawing, including title block and notes. Data should be in summary form showing out of tolerance readings.

Process Capability studies and analysis of data is to be performed on key or critical characteristics, as determined by Global. If no key or critical characteristics are determined, then it is the responsibility of the supplier to pick or designate them, based on previous history, and submit those to Global Enterprises for approval. CP, CPK and PpK values are to be calculated and submitted with the PPAP.
A minimum of thirty piece studies are to be submitted, from a 300 piece production intent run.

No PPAP that deviates from the established requirements can be submitted without prior written approval for deviation from Global, with the necessary associated documentation. Once the approval is obtained for deviation, the supplier will include the written approval from the Global Quality Manager, in their submission package.

The PPAP may be rejected, approved or given an interim approval by the Global Quality Manager or Quality Engineer.

Suppliers must also clearly identify each box, each shipment for product that is not yet fully PPAP approved. Suppliers must first obtain an interim approval or deviation to do so, and can only ship per these documents, until expiration of the deviation or interim or full PPAP approval is achieved.
A new submission of the total or partial PPAP package will be required if the original submission is rejected. Global Enterprises must submit a full explanation with the reason for the rejection and include the new requirements.

A PPAP warrant that is marked "Interim Approval" is sent to the supplier along with an explanation of what is required to gain "Full Approval" and the date that the "Interim Approval" expires.

On the date that the "Interim Approval" expires, the status of the PPAP reverts to "Rejected", unless an extension has been granted or the warrant has been signed granting full approval. At the time of expiration, the supplier can no longer ship product and must obtain an extension from Global Enterprises to ship.

Labs used for testing for PPAP submission must be certified as follows:

- If the supplier utilizes its own internal lab for testing the supplier must be ISO/TS16949:2009(E) registered. The testing performed must be covered under the lab scope.
- If the supplier utilizes a third party lab, the lab must be ISO/IEC 17025:2005 certified. The testing performed by the lab must be covered under the lab's scope of accreditation.
- If there are other specific requirements for the testing facility, the supplier will be informed.
- All certification testing must have been completed within one calendar year of the PPAP submission.
- All certifications must include a copy of the required results, detailed test data and a statement of compliance.
- The person who performed the test or inspection must sign and date all reports.
- All deviations, exceptions, extensions, etc. must be approved in writing, by the QE assigned to the affected project.

INTERNATIONAL MATERIAL DATA SYSTEM - IMDS

It is a requirement of each supplier to submit to Global Enterprises their IMDS information for each component.

This is to be completed prior to submission of the level three PPAP to Global. The IMDS number that is used must be included on the PSW from the supplier. The Global IMDS number is 36287. It is the Suppliers responsibility to keep current their IMDS for system upgrades and for component changes.

If a supplier fails to complete their IMDS, the submission package will be rejected.

Should a supplier require assistance with IMDS they should inquire with the Quality Department and ask for the Quality Engineer.

CONTRACT REVIEW

Suppliers must maintain records of contracts in accordance with the requirements of the business operating system requirements manual or written agreements with Global Enterprises

DESIGN CONTROL

All designs for tooling used to produce product for Global, must be shared with Global, if requested by Global.

DOCUMENT AND DATA CONTROL

All documents including prints, drawings, manuals, specifications, functional parts received from Global Enterprises etc, are the property of Global Enterprises and must be returned to Global Enterprises upon request or at the end of the contract to do business.

When Global Enterprises issues revised prints, specifications or manuals, the obsolete copies must be marked obsolete, destroyed, or returned to the proper Global Enterprises contact.

PURCHASING

Suppliers to Global Enterprises are fully responsible for all aspects of controlling the quality and delivery of product and/or services from sub-suppliers/subcontractors.

Suppliers are also responsible for ensuring that sub-suppliers/subcontractors understand and meet Globals' requirements and expectations.

Suppliers must upon request, from Global, provide PPAP submissions for material, certificates of compliances or services from sub-suppliers/subcontractors.

Suppliers will ensure that all certificates and other required documentation is available for product and or services from sub-suppliers/subcontractors.

Suppliers upon request will arrange for a Global representative to visit sub-suppliers/subcontractors.

Global's suppliers will maintain their supply-base in the same manner as they are requested to from their customers, and per the requirements set-forth in ISO9001:2008 and ISO/TS16949:2009(E).

When a sub-supplier/subcontractor is used without certification, it is the **Supplier's** responsibility to manage that sub-supplier/subcontractor accordingly, and if necessary, to start the de-sourcing process to find a supplier that does comply. This should start six months from the time of award of business.

CONTROL OF SUPPLIED PRODUCT

Suppliers will store and maintain all products supplied from Global, in a manner that will prevent damage or loss.

Any supplied product that is damaged, lost or otherwise unusable must be documented and reported to Global Enterprises in a timely manner.

Tools, equipment and returnable packaging owned by Global Enterprises must be permanently marked so that the ownership of each item is visually apparent.

Tools and equipment as provided and owned by Global Enterprises cannot be used for any other customer, without prior written approval from Global.

Reusable packaging owned by Global Enterprises must be handled and stored in a manner that will prevent damage or loss. It is the responsibility of the supplier to maintain records of inventory of the reusable packaging.

Prior to use, it is the suppliers responsibility to inspect, clean and repair or replace all reusable/returnable packaging to ensure that the packaging will protect product during storage and during transit.

PRODUCT IDENTIFICATION AND TRACEABILITY

Suppliers will ensure that all products are identified according to print and / or purchase order requirements and specifications.

Unless otherwise specified by Global, Suppliers will utilize an effective system, such as unique lot numbers and date stamps, to maintain lot traceability of raw and/or finished material.
Whenever possible, material received by Global Enterprises must have the outside of each carton marked with the following and have two (4" x 6 ") Barcode label with the following information:

- Part Number
- Part Name
- Quantity
- Purchase Order Number
- Date of Manufacture
- Lot Number
- Supplier Name
- Supplier's Number

Any failure to properly label product, will result in a rejection of the material. A charge back will be issued to re-label the material or a disposition of it.

Global Enterprises may request material prior to formal approval for evaluation purposes. Material shipped prior to PPAP approval must have the outside of each carton marked as follows "Sample Parts" and have the appropriate documentation with the sample parts.

- This does not apply to items which have interim approval.
- Matching barcode labels and "Sample Parts" labels shall be on adjoining sides of each carton. "Sample Parts" are to be on Orange Barcode stock, unless otherwise noted.

PROCESS CONTROL

Suppliers must identify and plan production, installation and servicing processes that directly affect the quality of product supplied to Global. Suppliers must ensure that these processes are carried out under controlled conditions.

Suppliers will have documented procedures for process monitoring, as well as detailed operator instructions for all employees having responsibilities for operation of processes.

All instructions should be accessible at the workstation, including receiving and shipping.

The instructions should be derived from the PFMEA (Process Failure Mode Effects Analysis) and Control Plan.

Where key characteristics (control dimensions) are identified on the print, Global Enterprises requires that the Supplier monitor the process capability on an on-going basis.

Each of these items must be identified on the Control Plan.

For all control dimensions, SPC data showing capability must be submitted with the PPAP package.

Capability studies require a check of 100 pieces taken from 300 piece run.

The process must achieve a CpK of 1.67 or higher.

Gage R&R studies must be submitted with the PPAP package for all gages.

Global Enterprises, may require submission of SPC data on a regularly scheduled basis.

Suppliers must maintain records of all process changes and the effective dates.

A new PPAP must be submitted and approved by Global Enterprises, prior to implementing any process or material changes. Suppliers must notify Global Enterprises of a process or material change and submit a new PPAP.

For Suppliers manufacturing parts designated by the customer as "Appearance Items", the following requirements must be met:

- Appropriate lighting for evaluation. Global Enterprises may specify the lighting requirements for the inspection of product.

- Masters for color, grain, gloss, metallic, brilliance, texture, distinctness of image (DOI) as appropriate. All masters must be signed and dated by a Global Enterprises representative or customer.

- Color checks or match must be conducted in an approved lighting source such as a Macbeth booth, X-Rite or Spectrophotometer, must be calibrated and those making decisions affecting appearance must be trained, as documentation may be requested.

- The Munsell Farnsworth 100 hue color test must be conducted annually at a minimum for each person checking product with a requirement for appearance.

- Boundary samples exhibiting the maximum allowable defect, (max limit samples) may be provided by Global. All boundary samples must be approved and dated by Global. In addition to, the supplier may initiate boundary samples and may use those samples with Global's approval.

- Maintenance and control of appearance masters and evaluation equipment must be maintained.

INSPECTION AND TESTING

Suppliers are to establish and maintain documented procedures for inspection and testing activities to insure that the specified requirements for the product are met. The control plan may satisfy this requirement.

Product should not be moved to subsequent processes or shipped until all inspections and tests have been successfully completed and the results documented, unless positive recall procedures are utilized.

The quality plan (control plan) should include inspection of incoming product at all stages. This includes sub-supplier/subcontractor processes for example: sending product out for paint and then re-inspecting product upon re-entry into the plant.

All inspection and test records will be maintained and available for review by Global Enterprises

The Supplier's test and inspection laboratory should be operated and maintained in accordance with ISO17025:2005 and have the laboratories scope available for review.

CONTROL OF INSPECTION, MEASURING AND TEST EQUIPMENT

Suppliers of Global, must maintain calibration records for all inspection and test equipment used to make pass/fail decisions on products manufactured for Global Enterprises.

All calibrations must be current and all test or inspection equipment tagged or labeled showing current calibration status.

All masters and boundary samples must be controlled and included in the document and data control system.

INSPECTION AND TEST STATUS

All Products of Global Enterprises, must be tagged or labeled showing inspection and or test status throughout the process.
When required by Global Enterprises, additional verification/identification and or certification requirements are met for product.

CONTROL OF NON-CONFORMING MATERIAL

Suppliers must request a deviation prior to shipping any product that does not meet all specified requirements, or that was produced outside the process approved by the PPAP. This should only be used in the rare instance where there is data to show that the product is usable by Global. Shipment is authorized after Global Enterprises does an evaluation and has notified and received approval from customers to Global. An approval signature from the Quality Manager or Quality Engineer on the requested deviation authorizes shipment.

All rework and/or repair which is not part of the normal process (process approved as part of PPAP) must be authorized, in writing by Global Enterprises Quality Manager or Quality Engineer prior to shipment of product.

Suppliers must contact Global Enterprises immediately if it is discovered that suspect product may have been shipped to Global.

When defective material is detected at Global, a DMR (Defective Material Report) is completed and sent to, via fax or email to the Supplier detailing the nature of the problem, the part number and quantity of parts involved.

The supplier is to document the reason for the nonconformance and the corrective action on Global Enterprises 8D Corrective Action form which can be found at www.globalent.org

The Supplier is required to respond within 24 hours of the DMR (Defective Material Report) date, the initial response to the problem, concern or issue. Root cause analysis must be completed within two weeks and include permanent corrective actions. An associated "5 Why" or "Fishbone Diagram" should be included to show how the root cause was identified.

The Supplier's performance rating for the current period will be negatively impacted by each DMR issued.

Upon notification that nonconforming product has been detected at Global, the Supplier must contact Global Enterprises immediately, to discuss options and disposition of the nonconforming product.

The Supplier may choose to have nonconforming material returned to their facility, scrapped at Global Enterprises or if approved by Global Enterprises (in writing), arrange for the material to be sorted and or reworked.

The supplier is responsible for all transportation charges associated with returning nonconforming material.

A charge for rework, sort and other fees apply as appropriate to the nature of the issue and/or if Global Enterprises has to implement containment action to protect Global Enterprises and their customers from suspect/defective product. (A list of rates per every item are referenced in the Appendix A)

Global Enterprises may refuse to allow sorting and or rework on nonconforming material.

All rework must be approved by Global Enterprises on an individual basis.

All reworked material must be identified in a method approved by Global, and re-inspected.

The Supplier is responsible for all costs associated with sorting and or reworking nonconforming material.

Global Enterprises is responsible for the supervision of personnel performing sort and or rework of nonconforming material at Global, including 3rd party containment companies.

If Global Enterprises has not received a response from the supplier within five (1) days of issuing a defective material notice, a debit memo is issued.

If a response is not received within ten (2) days of issuing a defective material notice, the defective material may be returned to the supplier without authorization.

When defective product is detected at Global, the Supplier will provide for sorting, rework, or replacement of parts to ensure that production needs are met.

When necessary to support production requirements, Global Enterprises may sort and or rework rejected material and charges back the cost without approval from the responsible Supplier.

CORRECTIVE AND PREVENTIVE ACTION

When a request for a corrective action report is received from Global, the response must be documented on an 8D form; preferably Global Enterprise's 8D Corrective Action form which can be found at www.globalent.org.

Special attention must be given to identification of the root cause and action to prevent recurrence. The root cause must show systemic corrective actions.

When a request for a corrective action report is received from Global, a response detailing the short term containment action(s), must be received by Global Enterprises within twenty-four (24) hours after being issued.

All responses must be reviewed and approved by the Global Enterprises Quality Manager or designate.

If the quality manager or designate rejects a corrective action response, the Supplier is required to respond with a revised corrective action plan within ten (5) days from the rejection date and show permanent corrective actions are in place.

HANDLING, STORAGE, PACKAGING, PRESERVATION AND DELIVERY

The supplier is required to develop procedures to handle, store, package, and ship materials in a manner to ensure that it meets all functional and appearance specifications upon arrival at Global.

Material may be rejected at Global's incoming/receiving inspection due to damaged or incorrect packaging. If the packaging is not adequate to protect the material during handling and storage at Global, then it must be addressed immediately.

Whenever it is possible, the material supplied to Global Enterprises must be on pallets that can be moved with standard warehouse equipment.

All packaging labels must be positioned in a manner that allows the package labels to be read without rearranging the material on the skid.

When a shipment contains several cartons of the same product/part, cartons may be placed in the center of the skid, thus hiding the labels.

All material supplied to Global Enterprises must be packaged, labeled, and shipped in accordance with the guidelines set forth in This Manual and/or the Purchase Order.

Suppliers must have on file documentation which certifies that the raw materials used in the production of Global Enterprises meets the print specifications.

Suppliers are required to provide material certifications, certificate of analysis, certificate of compliance or test/data reports with each shipment.

When the total quantity of material specified on the release is not received at Global Enterprises within the time as stated on the release or a quantity less than the amount specified is received, the Supplier will receive a notification and be expected to complete a corrective action (8D)/(5 Why).
The Suppliers performance rating is also negatively impacted by failure to respond on or before the response due date, if it was submitted by Global.

All restricted, toxic and hazardous materials shipments must include a blanket warrant or certificate that shows products comply with governmental and safety regulations with regard to packaging, labeling, storage, handling and first aid instructions.

CONTROL OF QUALITY RECORDS

Suppliers should adhere to the minimum record retention times specified by the ISO/TS 16949:2009(E) requirements and the Global Enterprises Supplier Manual for all product.

Global Enterprises may require extended retention times.

INTERNAL QUALITY AUDITS

Suppliers are required to develop an internal audit program with qualified auditors to insure all established policies and procedures are being followed.

TRAINING

Suppliers are also required to maintain training records for all employees who are required to make pass/fail decisions on parts supplied to Global Enterprises

STATISTICAL TECHNIQUES

Suppliers should investigate opportunities to utilize statistical techniques as defined in the AIAG SPC (Statistical Product Control) Reference Manual.

Supplier Charge Back Schedule

ITEM	COST (US Dollars)
Administration Fee NCR (Separate issue)	$250.00 per issue
Administration Fee NCR (Repetitive issue)	$500.00 per issue
Sort / Rework / Material Handling	$35.00 per hour
Rework / Sorting performed in house at Global Enterprises facilities (Third Party Containment Administrative Fees)	$100.00 per day
Third Party Containment at Global Enterprises	$30.00 per person / per hour
Overtime charges due to hours worked as a result of Non-conforming material required to meet Customer Releases	$25 per hour in addition to basic Rate of $30 per hour. (Double on Weekends/Holidays)
Late PPAP	$150.00 each occurrence
Rejected PPAP	$150.00 each occurrence
Review and Disposition of Accumulative Non-conforming material	$150.00 per month- additional to the cost of the material.
Late submission of Corrective Actions without Notification	$50.00 per day
Downtime due to material shortage	$Actual Cost
Premium Freight	$Actual Cost
Costs incurred at Global's customer due to a supplier issue.	$Actual Cost
Additional costs; travel, supplies, mileage, hotels etc.	$Actual Cost
3rd Party Sort at supplier's expense	$Actual Cost of sort, associated expenses, travel