

2.1 General Expectations

Shape/NetShape expect that all supplied products and services meet or exceed our quality expectations 100% of the time with no exceptions. One of our core values is to delight the customer and we realize that our suppliers play a vital role in helping us in this effort. We do business with domestic and international automotive companies as well as many non-automotive customers. Customer specific requirements will supersede our requirements and will be communicated through the affected business unit Quality Engineer. Suppliers must be compliant to Shape/NetShape and/or customer specific engineering and quality standards at all times. We expect regular communication from our suppliers to ensure that we are aware of problems and can work towards quick resolution with zero impact on our customers.

- **Quality standards and certifications:**

We are committed to be certified to the highest required standards as specified by our customers. The requirement, for the automotive industry, is the ISO/TS-16949 Quality Management System. We expect suppliers, involved in the production of automotive components, to be certified to the ISO 9001 standard and conforming to the current revision of TS16949 requirements. Conformance to the TS-16949 standard is defined by the current IAOB published requirements. Our non-automotive suppliers are highly suggested to obtain third-party quality systems certification by an RAB certified registrar.

NOTE: A written deviation, approval letter or equivalent from our customer may be used if you are not certified to a quality system.

2.2 Product Launch Requirements

- We realize that quality begins in the product launch process. Our business units and support staff utilizes a launch structure to ensure all activities are completed to meet customer timelines. Ultimately, the Program Manager is accountable for the completion of the launch process. Contact the appropriate Program Manager or Buyer for details on this process.
- **Advance Product Quality Planning (APQP)**
 - Requirements for APQP are based on the current revision **AIAG Advanced Product Quality Planning and Control Plan (APQP)** manual. However, the requirements are customized to the program, depending upon who the end customer is. In other words, customer specific requirements are incorporated. To communicate these requirements to the supplier, a kick-off planning meeting should be coordinated between us and Supplier teams. The meeting is to include a review of the launch system and any specific customer requirements. It is the supplier's responsibility to ensure that they have a full understanding of all requirements and have signed documentation listing all requirements and agreements on unclear information and limitations that may exist.
- **Production Part Approval Process (PPAP)**
 - Generally we utilize the current revision **AIAG Production Part Approval Process (PPAP)** manual format for part submission packages. Customer specific requirements will ultimately dictate the content and format of part submissions. We are responsible for documenting the submission requirements, setting a timeline with due dates, and communicating them to the supplier. All questions and open items must be resolved prior to the submission due date with documented results included in the submission package as necessary.

- Engineering changes
 - Suppliers are required to comply with (and maintain on file) the current issued Shape/ NetShape controlled copy blueprint or specification. When engineering changes occur, a print/specification will be sent to the supplier.
- Early Production Product Containment
 - This requires that supplied product, during early production, will be 100% sorted and contained, per requirements set forth by our Quality Engineer. Our customer requirements (i.e. GM GP-12) supersede any of our internal requirements.
- Suppliers/subcontractors are required to track product by our lot number system (or develop and record a correlation to Shape/NetShape lot control system) for the ability to segregate nonconforming material and minimize any impact that may incur. Lot traceability is the ability to separate material/product by batch, lot or run.
- Pass through characteristics and annual product validation may be required to be included on quality documentation (control plan). They are communicated and defined by the appropriate business unit Quality Engineer.

2.3 Nonconformance and Corrective Action

- Supplier Nonconformance Process:

Nonconformance to our requirements (tooling, product quality, documentation, quality and delivery) can impact our ability to meet customer expectations. The nonconformance, as well as the action taken by the supplier, is reflected on the Supply Base Rating Report

A problem is issued when supplied product does not conform to the specifications. When a problem is issued, the supplier will be notified.

The following are some examples of why a problem may be issued:

- Nonconforming product found at our customer as a result of a Supplier's product
 - Nonconforming product found anywhere in our process - do not conform to agreed upon specifications or standards (acceptance criteria is based on zero defects)
 - The stated product quantity is not in the shipping container
- Containment of nonconforming material
 - There are increasing levels of containment activity based on the severity of the issue, reoccurrence, and confidence in the corrective action presented. We expect that all suspect material is contained, and an interim corrective action is submitted to the business unit QE within 24 hours. We will evaluate the non-conformance and determine the appropriate level of containment required. The two levels of containment activity and related guidelines are listed as follows:

LEVEL I CONTAINMENT is defined as the implementation of additional controls by the supplier to ensure all suspect products and/or documentation is verified to meet Shape/NetShape requirements. This action must include all product and/or documentation that may be in our facilities, in transit, in process, in a supplier storage location, or in any hold area. The goal of this containment is to purge the entire system of all non-conforming material.

Supplier Level I Containment guidelines include the following:

- Containment area must have a well defined material flow for incoming and out going product
- No rework must be done in the containment area
- Product acceptance, standards, measurements, and testing process to be agreed upon by Shape/ NetShape QE or designate
- Results of containment activities must be documented in a report and submitted to the Shape/ NetShape QE or designate who initiated the sort
- Containment personnel must be properly trained and have work instructions, quality standards, boundary samples, etc

LEVEL II CONTAINMENT is defined as the implementation of additional controls by an impartial third party approved by Shape/NetShape, at the expense of the supplier; to ensure all suspect inventories are purged and/or verified. Level II containment is enacted when level I containment fails to protect us from receiving non-conforming material. Level II containment will result from any non-conforming product found at Shape NetShape during the specified containment period at early product launch (i.e. GM GP-12 or equivalent). All Level I requirements apply to Level II with the additional requirements as listed below.

Supplier Level II Containment guidelines include the following:

- We will initiate Level II activities by sending a formal request to the supplier's Plant and Quality Managers
- All documents pertaining to the containment action must be certified by the third party involved (example: container labels, packing lists, sort reports)
- We may require that the supplier involve third party engineering services, at the suppliers cost, if adequate progress is not being made on containing and correcting the incident.
- The supplier is required to submit all sort records and/or engineering findings to us to verify that appropriate containment and corrective action activity is taking place.

In the event we experiences down time, scrap, or labor expenses to sort due to supplied non-conforming material, we will calculate all additional costs incurred, due to the issue, and debit the supplier responsible.

Potential sources of additional costs may include:

- Line shut down will be calculated based on the specific cost for respective line
 - Hourly charges for sorting or rework both at our plants and our customer
 - The total cost of a non-conforming assembly resulting from a supplier issue
 - We may charge \$150 charge per QI or reject memo
 - Travel costs incurred by Shape/NetShape to contain the issue at our customer
- Problem Solving
The preferred corrective action form is the Basic Problem Report (3D) and the Corrective Action (8-D) that we supply; however, program teams may request a specific corrective action format (i.e 5-P, Global 8-D, Drill Deep, 7 Step, etc) to meet customer requirements.

The supplier is responsible to:

- Respond to us with a documented interim corrective action (containment plan) within 24 working hours of the notification.
- Contact Shape/NetShape to verify the effectiveness of the interim corrective action and determine appropriate course of action.
- Return the completed corrective action within 30 days of the notification, or communicate timeline expected to the appropriate personnel.
- The Supplier Rating will be negatively affected if the corrective action response is untimely or unsatisfactory. Untimely and unsatisfactory responses can ultimately have a negative impact on potential future business with Shape/NetShape.

2.4 *Documentation*

Subcontract / Component Suppliers

Subcontract and component label

The bar code must contain the following information:

- Customer Part Number-Data identifier 'P'
- Quantity-Data identifier 'Q', (shipping utilizing the standard shipping quantity on the packaging specification)
- Lot/Serial Number-Data identifier 'S'. An alphanumeric designator unique to each container. The lot/serial number must begin with your three-letter prefix followed by a unique alphanumeric lot/serial number. The maximum character length of the entire lot number is 13 plus start/stop characters and data identifiers. **NOT ONLY SHOULD ONE PARTICULAR PART NEVER USE THE SAME LOT NUMBER, NO PART SHIPPED TO SHAPE/NETSHAPE FROM ANY ONE SUPPLIER CAN EVER USE THE SAME LOT NUMBER**

NOTE: Bar code standard is 3 of 9

The label must contain the following information in text:

- Customer Item number
- Quantity (usually # of pieces)
- Manufacturing/Shipping Date
- Lot/Serial Number
- Item Description from your PO
- Shape/NetShape Engineering Change Level (as listed on Shape/NetShape drawing revision block)

If a subcontract supplier ships product directly to our end customer, the end customer's labeling requirements apply.

It is required that the bar code label to be **removable** from the container (ex. clear plastic pouch attached to the container, affixing the label to a removable card stock tag with wire ties). The format for the bar code can be a variety of formats, but should meet the standard as provided in AIAG B-10 Trading Partner Label definition dated 5/95. All packaging specifications must be adhered to unless otherwise directed by Shape/NetShape (please contact your Shape/NetShape buyer).

SAMPLE COMPONENT / SUBCONTRACT LABEL

| | | | |
|---|---|-------------------------|--------------------------------|
| PART NO. (P) 123456789  | | | |
| QUANTITY (Q) 100  | DESCRIPTION CUSTOMER PART DESCRIPTION | | |
| | MFG DATE 9/28/09 | ENG CHANGE 02 | SUPPLIER PART 158102 |
| SUPPLIER (V) SUPPCODE  | | | |
| SERIAL (S) ABC2813653  | | | |

Raw Steel Material Suppliers

The bar code must contain the following information in text

- Shape Part Number-Data identifier 'P' (**WITHOUT EC LEVEL "-01"**)
- Quantity-Data identifier 'Q', (shipping utilizing the standard shipping quantity on the packaging specification)
- Purchase Order – Data Identifier 'K'
- Heat/Process Number – Data Identifier '1T'
- Actual weight – Data Identifier '2Q'
- Lot/Serial Number-Data identifier 'S'. An alphanumeric designator unique to each container. The lot/serial number must begin with your three-letter prefix followed by a unique alphanumeric lot/serial number. The maximum character length of the entire lot number is 13 plus start/stop characters and data identifiers. **NOT ONLY SHOULD ONE PARTICULAR PART NEVER USE THE SAME LOT NUMBER, NO PART SHIPPED TO SHAPE/ NETSHAPE FROM ANY ONE SUPPLIER CAN EVER USE THE SAME LOT NUMBER**

The label must contain the following information in text:

- Item number (WITHOUT EC LEVEL “-01”)
- Quantity (usually # of lbs.)
- Lot/Serial Number
- Heat/Process Number
- Coil Size
- Item Description from your P.O. (including material type, minimum gage, width)
- Purchase Order – Data identifier ‘K’
- Heat/Process No. – Data Identifier ‘1T’
- Actual weight – Data identifier ‘2Q’

SAMPLE SHAPE RAW STEEL MATERIAL LABEL

| | | | |
|---|------------------|----------------------------|---------------------------|
| JOE'S STEEL WAREHOUSE INY | | 8Aug03 | mkt |
| 1-PRODUCT IDENT. 126332 | | | |
| | | | |
| 2-SUPPLIER N° JOE1234 ID | | | |
| | | | |
| 3-SERIAL NO. I591517C | | | |
| | | | |
| 4-CSTMR ORD. NO. 116380 | | | |
| | | | |
| 5-HEAT/PROCESS NO. 329831 | | | |
| | | | |
| 6-ACTUAL WT. 8320 | | 9-SIZE .0630 | |
| | | 18.1200 | |
| 7-LGTH./THEO. WT. 2005 | | 10-SPECIAL DATA | |
| | | CUT=103 | |
| | | LF=2005 | |
| 8-PIECES 1 | | | |
| | | | |
| INLAND STEEL COMPANY | | 857-21846 | |
| JOE'S STEEL WAREHOUSE | | | |
| | | PN: 521892-002-0 8Aug03 | |
| | | No/Loc: 63 / 1-5790 | |
| | | | |
| Description: COLD ROLLED COILS: DI-FORM 140T | | | |
| .0630 Min X 18.1200" | | | |
| Cust. Tag No: | 857-21846 | Customer Ord No: | 1830779 |
| Order No.: | 521892-01 | Weight: | 8320 Pcs: 1 |

Supplier Manual - Section II Quality Expectations

Steel Material Certifications

- Material certifications are required on steel raw material shipped to our facilities. The Purchase Order (P.O.) may list some of the appropriate specifications and requirements for the material certifications.
- HSLA (High Strength Low Alloy) grade of steel or higher must accompany mechanical test results as well as chemical test results on the certification.
- Material that is below the HSLA grade will only require chemical data unless otherwise specified on the P.O.
- IMPORTANT NOTE:
 - The material certifications must accompany or be received in advance of the raw steel
 - Raw material received without certification will not be placed into inventory until certification is received. The supplier is at risk of being charged a late delivery and liable for a line shut down until certifications are received and material placed into inventory

Steel Coil Packaging/Transportation:

- Steel banding must be used on all coil ID's and belly bands for all standup and lay down coils that come into our plant.
- Lay down coils must be protected from skid rust and adjustment during shipment that may tear VCI paper, plastic, coated skids, etc.
- No low boy trailers at our plants
- Stand up coil eyes must face the rear of the truck.
- All coils must be in a covered truck or properly covered.

NOTE: Failure to follow the above could result in a rejection of shipment.

Plastic Resin (Base or Colorant) Suppliers

The label must contain the following information in text:

- Item number (**WITHOUT EC LEVEL "-01"**)
- Quantity (# of lbs.)
- Lot/Serial Number
- Description of material
- Manufacturing Date

SAMPLE PLASTIC RESIN RAW MATERIAL LABEL

| | | | |
|-------------------------------|--|-------------|-----------------------------|
| ITEM NO (P) 200569 | DESCRIPTION REGIS 6500 NetFlex EA1000 | | |
| QUANTITY (Q) 1300 | MFG DATE 10/24/2009 <small>REV 02</small> | ENGR CHANGE | SUPPLIER NO NOBLE |
| LOT NO 291024-B2 | BOX NO 1 | | |
| SERIAL (S) 00036457 | <small>NOBLE POLYMERS LLC GRAND RAPIDS, MI 49512 United States</small> | | |

All Suppliers

Labeling

An integral part of our Material Control System is the ability to receive material and control inventory through the use of bar coding technology. A **unique lot number on each container** of product received into Shape/NetShape will be used for lot traceability and inventory tracking.

Packing Slips for all suppliers

- *Incoming packing slips must contain the following:*
 1. Ship date
 2. Packing slips must be legible (critical)
 3. Purchase order number – one purchase order per invoice
 4. Remit to Address, including telephone and fax number
 5. Shape/NetShape item number (where applicable)
 6. Description of product
 7. Quantity, unit of measure and number of containers
 8. Supplier packing slip number, which must also be referenced on the invoice
 9. Ship via and FOB

Any packing slip, which does not comply with the above requirements, will affect the Service section of the suppliers/subcontractors quarterly report, delay payment due to incorrect or incomplete information in our system.

NOTE: Any sample material that is delivered to Shape/NetShape must be clearly identified as such.

Material Certifications

- Material certifications may be required on components and raw material shipped to our facilities. The Purchase Order (P.O.) will list the appropriate specifications and any requirements for material certifications.
- If material certifications are required for each shipment as listed on the P.O.:
 - The material certifications must accompany or be received in advance of the raw material
 - Raw material received without certification will not be placed into inventory until certification is received. The supplier is at risk of being charged a late delivery and liable for a line shut down until certifications are received and material placed into inventory

International Materials Database System (IMDS)

- The purpose of this directive is to identify all hazardous materials and to determine recyclability of the vehicle at the end of its useful life. The IMDS is a database system where the material composition of parts, and how much of the part can be recycled, are entered and tracked. AIAG has developed an industry standard method of collecting this data. It can be accessed, free of charge, at www.mdsystem.com Suppliers are expected to submit this data to the Business Unit QE. We can answer questions on this requirement.

2.5 Gage Design/Build Standards and Calibration

The supplier is responsible to:

- Notify Shape/NetShape prior to any repair, replacement of parts, or modification of any kind to gages
- Shape/NetShape owned fixture/gages must be identified w/ asset tag, to be coordinated with our Business Unit Quality Engineer
- Calibration to be completed as stated on the gages.