



Quality Procedure QP320 Supplier Management

Procedure Owner: Quality Manager

Change History: See DCN for Details

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▶ Current Revision

P

2021-0715

DCN20257

1. PURPOSE

- 1.1. This procedure outlines the process for management of suppliers including assessment, classification, risk mitigation, and maintenance of their approval status.

2. SCOPE

- 2.1. This procedure applies to all suppliers providing processes, products and services intended for incorporation into Flexial's own products and services or directly to Flexial's customers on Flexial's behalf.

3. DEFINITIONS

- 3.1. OASIS - An online database controlled by the International Aerospace Quality Group (IAQG) that contains information regarding the certification status of all AS registered companies. (www.iaqg.org/oasis/)

4. RESPONSIBILITY

4.1. Quality Engineering

- 4.1.1. Sets up new suppliers in FlexNet when requested.
- 4.1.2. Updates Organization Watch List in OASIS for AS9100/9110/9120 certified companies that are set up as new suppliers.
- 4.1.3. Updates approval status of suppliers based on supplier evaluation, performance, and capabilities.
- 4.1.4. Coordinates request for supplier assessment through purchasing or directly with the supplier.
- 4.1.5. Saves survey assessments as a record in FlexNet and attaches to the supplier page.
- 4.1.6. Transfers the supplier assessment results into the supplier page.
- 4.1.7. Updates supplier capabilities and restrictions in FlexNet as needed.
- 4.1.8. Amends supplier details as necessary.
- 4.1.9. Initiates supplier corrective action requests as needed and coordinates with purchasing to alert the supplier per **QP190**.
- 4.1.10. Performs onsite assessment audits as needed.

4.2. Quality Analyst

- 4.2.1. Monitors and maintains supplier certifications in FlexNet.
- 4.2.2. Requests copies of new certifications upon expiration of current certifications.
- 4.2.3. Performs verification of the certification and existence of any exclusions with the registrar or applicable website.
- 4.2.4. Amends supplier details as necessary.

4.3. Purchasing

- 4.3.1. Determines the product and/or service required to be ordered, the quantity needed, and the program for which it will be used.
- 4.3.2. Identifies potential suppliers of the product and/or service needed.



Quality Procedure QP320 Supplier Management

Procedure Owner: Quality Manager

Change History: See DCN for Details

Rev

Date

DCN Number

▶ Current Revision

P

2021-0715

DCN20257

- 4.3.3. Reviews the potential suppliers' qualifications against the requested supplier capabilities and customer flow down requirements on the program review for a given product or service need. Reference the 'Approved Programs' matrix on the individual supplier details page in FlexNet.
- 4.3.4. Determines the following during pre selection activities:
 - Whether or not a signed NDA is in place with the potential supplier when applicable.
 - Whether or not the potential supplier is ITAR registered or has signed an ITAR compliance agreement when applicable.
 - Whether or not the product and/or service will use or impact customer furnished material.
 - Cost of the finished shipment to Flexial's customer.
- 4.3.5. Assesses risk during pre and post supplier selection activities per [QP600](#).
- 4.3.6. Determines the quality clauses and FAR clauses that are required to flow down to the suppliers.
- 4.3.7. Obtains quotes from potential suppliers and identifies any exceptions to the quality clause and FAR clause flow down requirements taken by the potential suppliers.
- 4.3.8. Reviews the cost and lead time of the product and/or service as well as required exceptions from the potential suppliers.
- 4.3.9. Obtains approvals for any exceptions taken by the preferred supplier via a temporary deviation notice (TDN) per [QP122](#) prior to issuing the purchase order.
- 4.3.10. Verifies that the preferred supplier is on the approved supplier list and reviews their standing.
 - 4.3.10.1. Reviews risk of using any suppliers with a poor rating.
- 4.3.11. Creates purchase orders in Epicor and list the applicable quality clauses and FAR clauses within the purchase order.
 - 4.3.11.1. Adds an addendum to the purchase order containing all the applicable quality clauses and FAR clauses if character limit is reached and saves a record of the addendum within FlexNet.
- 4.3.12. Issues purchase order including any applicable quality clauses and FAR clauses and any relevant technical data to the supplier.
- 4.3.13. Based on the risk assessment, sets up meetings (via phone, web conferencing, etc.) between the supplier and Flexial to review drawings, specifications, documentation requirements, lessons learned, and customer feedback as well as any other critical information that could impact quality or delivery of the order to ensure Flexial's expectations are clearly understood.
- 4.3.14. Monitors supplier performance on a monthly basis.
- 4.3.15. Communicates performance expectations to suppliers.
- 4.3.16. Coordinates with quality and communicates requests for corrective action to suppliers per [QP190](#).
- 4.3.17. Assists with onsite assessment audits and supplier surveys as needed.

4.4. Finance / Accounting

- 4.4.1. Activates or deactivates suppliers in Epicor when notification of approval status changes in FlexNet.



Quality Procedure QP320 Supplier Management

Procedure Owner: Quality Manager

Change History: See DCN for Details

Rev

Date

DCN Number

► Current Revision

P

2021-0715

DCN20257

5. PROCEDURE

5.1. Flexial shall maintain a register of its suppliers in FlexNet with the following information:

- 5.1.1. Name
- 5.1.2. Website, if applicable
- 5.1.3. Quality Contact's Name, Email, and Phone Number, if known
- 5.1.4. Alternate Contact's Name, Email, and Phone Number, if known
- 5.1.5. Capabilities
- 5.1.6. Restrictions, if applicable
- 5.1.7. Certifications and Verification of Certifications
- 5.1.8. Survey or Audit Results
- 5.1.9. Program Imposed Selection Limitations
- 5.1.10. Approval Status

5.2. Supplier Capabilities

5.2.1. Capabilities shall be assigned to suppliers based on the product or process they provide.

5.2.2. Suppliers can have multiple capabilities.

5.2.3. The following capabilities apply to production products and services:

5.2.3.1. Raw Material

5.2.3.1.1. Applies to any supplier that provides metallic bar stock, strip, plate, and billets as well as any non-metallic materials that are further processed such as plastic or rubber.

5.2.3.2. Special Process (Non-NDT)

5.2.3.2.1. Applies to any supplier that performs chemical processing, heat treating, materials testing, nonconventional machining, welding, elastomeric seal manufacturing, or non-metallic materials manufacturing such as carbon fiber.

5.2.3.3. Special Process (NDT)

5.2.3.3.1. Applies to any supplier that performs non-destructive testing including liquid penetrant testing, magnetic particle testing, ultrasonic testing, radiographic testing, and eddy current testing.

5.2.3.4. Build to Print

5.2.3.4.1. Applies to any supplier that manufactures components or assemblies to a drawing provided by Flexial but not necessarily designed by Flexial.

5.2.3.5. Build to Spec

5.2.3.5.1. Applies to any supplier that manufactures components or assemblies to requirements given by Flexial but designed by the supplier.

5.2.3.6. Commercial Off The Shelf (COTS)

5.2.3.6.1. Applies to any supplier that manufactures or distributes components or assemblies that are standard hardware or catalog items that are built to a standard specification.



Quality Procedure QP320 Supplier Management

Procedure Owner: Quality Manager

Change History: See DCN for Details

Rev

Date

DCN Number

► Current Revision

P

2021-0715

DCN20257

5.2.3.7. Chemicals (Non-MRO)

5.2.3.7.1. Applies to any supplier that manufactures or distributes chemicals listed in the bill of materials of a part.

5.2.4. The follow capabilities apply to non-production content:

5.2.4.1. Calibration

5.2.4.1.1. Applies to any supplier that performs calibration services.

5.2.4.2. MRO & Packaging

5.2.4.2.1. Applies to any supplier that provides materials or services for maintenance, repair, and operations or packaging.

5.2.5. The following capabilities apply to research and development content:

5.2.5.1. Functional Test Lab

5.2.5.1.1. Applies to any supplier that provides functional testing services for design validation.

5.2.5.2. Prototypes

5.2.5.2.1. Applies to any supplier that provides prototyping.

5.3. Supplier Restrictions

5.3.1. Restrictions may be applied to a supplier for risk mitigation purposes based on either risks identified during supplier evaluation or based on the supplier's performance.

5.3.2. The list of restrictions includes, but is not limited to, requiring 100% inspection at receiving, requiring 100% inspection at supplier, imposing source inspection on all products the supplier provides, and allowing machining of non-deliverable parts only such as tooling.

5.4. Supplier Selection

5.4.1. Suppliers shall be selected to provide a quote based on their known or advertised ability to manufacture the part or perform the process that Flexial requires and whether the customer has mandated use of certain sub-tier suppliers.

5.4.1.1. Suppliers do not need to be on the approved supplier list in order to provide a quote.

5.4.2. Suppliers shall be awarded purchase orders based on their ability to meet requirements, their previous performance regarding on time delivery and quality, the level of risk associated with using that supplier, cost, lead time for the current order, and restrictions on work transfers.

5.4.2.1. Suppliers must be on the approved supplier list to be issued a purchase order.

5.4.3. Supplier selection on subsequent orders shall be determined based on the supplier's performance regarding on time delivery and quality, cost, and if work transfers are allowed. See [QP334](#).

5.5. Supplier Evaluation

5.5.1. Suppliers shall be evaluated for their ability to meet requirements through self assessment using [F1215](#) or through onsite or offsite audits prior to issuing them a purchase order.



Quality Procedure QP320 Supplier Management

Procedure Owner: Quality Manager

Change History: See DCN for Details

Rev

Date

DCN Number

► Current Revision

P

2021-0715

DCN20257

- 5.5.1.1. Assessing new suppliers for use on critical programs that will be providing products or processes under the following classifications should have an onsite assessment of the supplier. See **QP111** for details regarding critical programs.
 - 5.5.1.1.1. Special Process Non-NDT
 - 5.5.1.1.2. Build to Print
 - 5.5.1.1.3. Build to Spec
- 5.5.1.2. MRO & Packaging suppliers are exempt from assessment requirements but must be on the approved supplier list.
- 5.5.1.3. Distributors (ex: McMaster-Carr, Grainger, MSC Direct) may be given exemption from assessment requirements by the Quality Manager. However, exemption does not allow distributor to supply material or components to programs where customers have flowed down minimum quality management system requirements without completing an assessment.

5.5.2. Reassessment shall be performed upon a change in an approved supplier's certification status, 2 years after the previous assessment was given, or when a supplier has gained new capabilities which were not considered in the responses of the previous assessment.

5.5.3. Suppliers failing to respond to the survey or audit requests as well as requests for corrective action shall be unapproved.

5.6. Certifications

5.6.1. The validity of the following certifications shall be verified :

5.6.1.1. AS9100 / AS9110 / AS9120

5.6.1.1.1. Verified through OASIS (<https://www.iaag.org/oasis/login>)

5.6.1.2. AS9003

5.6.1.2.1. Verified through registrar via phone, email, or website

5.6.1.3. ISO9001

5.6.1.3.1. Verified through registrar via phone, email, or website (non AS supplement)

5.6.1.4. ISO17025

5.6.1.4.1. Verified through registrar via phone, email, or website

- A2LA (<https://www.a2la.org>)
- NVLAP (<https://www.nist.gov/nvlap>)
- ANAB (<https://anab.ansi.org/>)

5.6.1.5. Nadcap AC7004

5.6.1.5.1. Verified through eAuditNet (<https://www.eAuditNet.com>)

5.6.1.6. Nadcap Special Processes

5.6.1.6.1. Verified through eAuditNet (<https://www.eAuditNet.com>)

5.6.2. Certifications must be reviewed to ensure the scope of certification is in line with the work being outsourced and to ensure exclusions do not conflict with the work being outsourced or customer requirements.



Quality Procedure QP320 Supplier Management

Procedure Owner: Quality Manager

Change History: See DCN for Details

Rev

Date

DCN Number

► Current Revision

P

2021-0715

DCN20257

5.6.3. Evidence of certification verification shall be recorded on the supplier page in FlexNet.

5.7. Customer Approved Sources

5.7.1. Flexial shall only use customer approved sources when required by the customer.

5.7.1.1. This requirement will be recorded on the program review when applicable.

5.8. Information for External Providers

5.8.1. Applicable quality and FAR clauses shall be added to the purchase order comments. These requirements are generated using the PO Clause tool in FlexNet. See diagram 6.2 for the list of quality clauses and how they apply. Also reference [Flexial PO Quality Clauses](#).

5.8.2. The supplier must be provided with the drawing and any technical specifications when required.

5.8.3. The supplier must be provided with any customer designated or approved supplier requirements when required.

5.9. Monitoring of Performance

5.9.1. Flexial shall measure the performance of individual suppliers with capabilities listed under production products and services on the following items:

5.9.1.1. On Time Delivery

5.9.1.1.1. Shall be calculated by the equation below.

$$OTD = \frac{(Total\ Number\ of\ Parts\ Delivered - Number\ of\ Parts\ Delivered\ Late)}{Total\ Number\ of\ Parts\ Delivered}$$

5.9.1.1.2. Receipts that are more than 3 days past the due date shall be considered late.

5.9.1.1.3. There shall be no penalty for early receipts.

5.9.1.2. Quality

5.9.1.2.1. Shall be calculated by the equation below.

$$QA = \left(\frac{(Total\ Number\ of\ Parts\ Delivered - Number\ of\ Nonconforming\ Parts\ Delivered)}{Total\ Number\ of\ Parts\ Delivered} \right) - (10 * Number\ of\ SCAR\ Nonresponses)$$

5.9.2. Monitoring should be performed on the basis of a rolling 365 days.

5.9.3. Performance is rated on the following criteria:

5.9.3.1. Good Standing

5.9.3.1.1. Requires an OTD and QA rating greater than or equal to 90%.

5.9.3.2. Okay Standing

5.9.3.2.1. Does not meet the good standing thresholds but has an OTD greater than or equal to 70% and QA rating greater than or equal to 80%.

5.9.3.3. Poor Standing

5.9.3.3.1. Does not meet the good standing or okay standing thresholds. OTD is less than 70% or QA rating less than 80%.



Quality Procedure QP320 Supplier Management

Procedure Owner: Quality Manager

Change History: See DCN for Details	Rev	Date	DCN Number
▶ Current Revision	P	2021-0715	DCN20257

- 5.9.4. Suppliers with capabilities listed in the Production Products and Services group shall be notified of their performance through an automated email on a monthly basis when a contact email address exists for the supplier.
- 5.9.5. Purchasing will be notified when attempting to purchase from a supplier in poor standing at which point a decision must be made to determine whether to continue using the supplier based on program restrictions, availability of alternatives, cost, and other risks.
- 5.9.6. Overall supplier performance for on time delivery and quality are measured and monitored per [QP900](#).

- 5.10. Verification Activities
 - 5.10.1. Receiving inspection of externally provided processes, products, and services shall be performed per [QP280](#).
 - 5.10.2. Periodic testing of raw material shall be performed per [QP324](#).
 - 5.10.3. Source inspection shall be applied when required by the customer or government and may be applied by Flexial as a risk mitigation activity based on the supplier's performance.
 - 5.10.4. Flexial shall not delegate source inspection authority for product verification to the supplier.
 - 5.10.5. Flexial shall not use externally provided product until it has been released for production use and all verification activities have been completed.

- 5.11. OASIS
 - 5.11.1. Suppliers that are registered to AS9100/9110/9120 standards should be added to the Organization Watch List in the OASIS database.
 - 5.11.2. Notifications are sent weekly to active Organization Users when there have been changes to a supplier's certification if the supplier is on the Organization Watch List. These notifications should be monitored and appropriate action taken if a change in a supplier's certification impacts Flexial.



Quality Procedure QP320 Supplier Management

Procedure Owner: Quality Manager

Change History: See DCN for Details

Rev

Date

DCN Number

► Current Revision

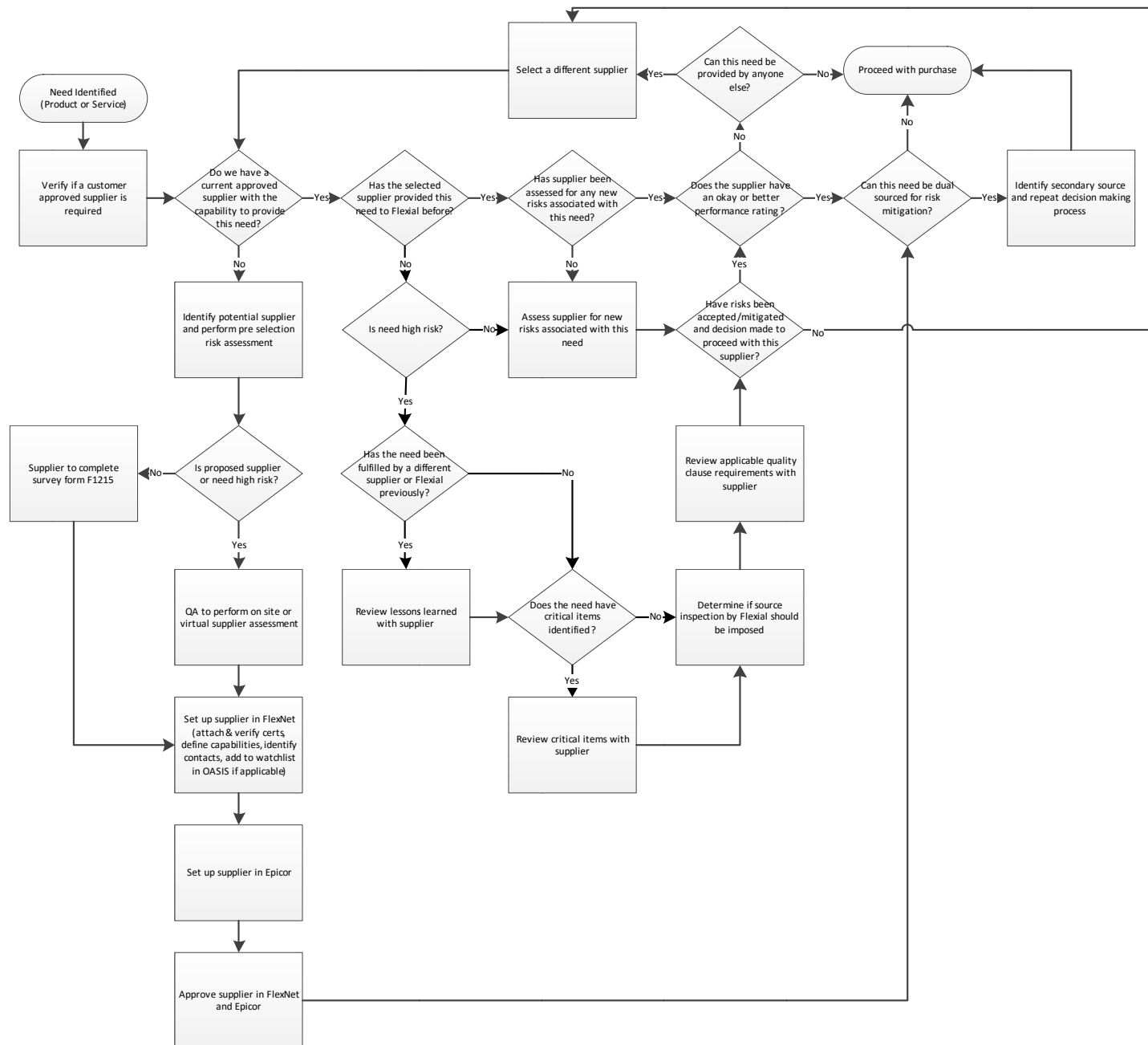
P

2021-0715

DCN20257

6. DIAGRAMS

6.1. Process Flow Diagram





Quality Procedure QP320 Supplier Management

Procedure Owner: Quality Manager

Change History: See DCN for Details

Rev

Date

DCN Number

▶ **Current Revision**

P

2021-0715

DCN20257

6.2. Supplier Requirements Matrix

Quality Clause	Production Products & Services								Non Production Products and Services				Research & Development	
	Raw Material	Special Process (Non NDT)	Special Process (NDT)	Build to Print	Build to Spec	COTS	Chemicals (Non MRO)	Calibration	MRO & Packaging	Functional Test Labs	Prototypes			
Q01 AS9100 Certified	A/R	A/R	A/R	A/R	A/R	A/R	A/R					A/R		
AS9100 Compliant	A/R	A/R	A/R	A/R	A/R	A/R	A/R					A/R		
AS9120 Certified	A/R	A/R	A/R	A/R	A/R	A/R	A/R					A/R		
AS9120 Compliant	A/R	A/R	A/R	A/R	A/R	A/R	A/R					A/R		
ISO9001 Certified	A/R	A/R	A/R	A/R	A/R	A/R	A/R					A/R		
ISO9001 Compliant	A/R	A/R	A/R	A/R	A/R	A/R	A/R					A/R		
AC7004 Certified	A/R	A/R	A/R	A/R	A/R	A/R	A/R					A/R		
AC7004 Compliant	A/R	A/R	A/R	A/R	A/R	A/R	A/R					A/R		
AS9003 Compliant	A/R	A/R	A/R	A/R	A/R	A/R	A/R					A/R		
No QMS Requirement	A/R	A/R	A/R	A/R	A/R	A/R	A/R					A/R		
Q02 Gage Calibration System	A/R	X	X	X	X	A/R	A/R	X				X		
Q03 Right of Access	X	X	X	X	X							X	X	
Q04 Certificate of Conformance	X	X	X	X	X	X	X					X	X	
Q05 NADCAP Special Process		A/R	A/R	A/R	A/R									
Q06 Material Certifications	X			X	X									
Q07 Test Reports			X		X							X		
Q08 Inspection Required (Sampling Prohibited)				A/R	A/R									
Q09 Inspection Required (Sampling Allowed)				X^	X^									
Q10 First Article Inspection Reports				A/R	A/R									
Q11 Nonconforming Product / Material Review Authority		X		X	X									
Q12 Eyesight Requirements		A/R	A/R	A/R	A/R							A/R		
Q13 Non-Destructive Testing Qualification			A/R											
Q14 Material Traceability	X	X	X	X	X	A/R	A/R							
Q15 Limited Shelf Life Material				X!	X!	X!	X!							
Q16 Counterfeit Materials	A/R			A/R	A/R	A/R	A/R							
Q17 Mixed Lots Prohibited	A/R	A/R	A/R	A/R	A/R									
Q18 Foreign Object Damage (FOD) Prevention		A/R	A/R	A/R	A/R	A/R	A/R					A/R		
Q19 Control of Sub-tier Sources	X	X	X	X	X							X		
Q20 Supply Chain Risk Management Process	A/R	A/R	A/R	A/R	A/R									
Q21 Control of Work Transfers		X	X	X	X							X		
Q22 Configuration Management Process		A/R	A/R	A/R	A/R							A/R		
Q23 Record Retention	X*	X*	X*	X*	X*	X*	X*	X*	X*			X*	X*	
Q24 Export Control Compliance		A/R	A/R	A/R	A/R							A/R	A/R	
Q25 DFARS Specialty Metals Required	A/R			A/R	A/R									
Q26 Nonconventional Machining Prohibited		A/R		A/R	A/R									
Q27 Source Inspection Required	A/N	A/N	A/N	A/N	A/N	A/N	A/N	A/N	A/N			A/N	A/N	
Q28 Government Source Inspection Required	A/N	A/N	A/N	A/N	A/N	A/N	A/N	A/N	A/N			A/N	A/N	
Q29 Conflict Minerals	A/R			A/R	A/R	A/R								
Q30 Mercury Prohibited	A/R	A/R	A/R	A/R	A/R	A/R	A/R					A/R		
Q31 Cadmium Plating Prohibited	A/R	A/R		A/R	A/R	A/R								
Q32 Asbestos	A/R	A/R	A/R	A/R	A/R	A/R	A/R		A/R			A/R		
Q33 Anti-Drug and Alcohol Testing Plan	A/R	A/R	A/R	A/R	A/R							A/R		
Q34 Corrective Action	X	X	X	X	X	X	X	X	X			X	X	
Q35 REACH	A/R			A/R	A/R	A/R	A/R							
Q36 RoHS	A/R			A/R	A/R	A/R	A/R							

Legend

- X = required
- X^ = dependent on clause Q08
- X* = retention years determined by program review
- X! = dependent on limited life checkbox02 in Epicor part setup
- A/R = as required by program review
- A/N = as needed (determined by buyer during query)



Quality Procedure QP320 Supplier Management

Procedure Owner: Quality Manager

Change History: See DCN for Details

Rev

Date

DCN Number

▶ **Current Revision**

P

2021-0715

DCN20257

7. RECORDS

- 7.1. Supplier certifications, assessments, audits, and evaluation actions are retained per [QP130](#).

8. REFERENCE DOCUMENTS

- 8.1. QP111 Program Management
- 8.2. QP122 Planning and Control of Changes
- 8.3. QP130 Control of Records
- 8.4. QP190 Corrective Actions
- 8.5. QP280 Receiving Inspection
- 8.6. QP324 Third Party Raw Material Verification
- 8.7. QP334 Control of Work Transfers
- 8.8. QP600 Risk Identification and Mitigation
- 8.9. QP900 Performance Evaluation and Improvement
- 8.10. F1215 Supplier Quality System Survey
- 8.11. Flexial PO Quality Clauses