

DEXTER MAGNETIC TECHNOLOGIES

SUPPLIER QUALITY ASSURANCE REQUIREMENTS MANUAL

Rev H (04/07/2017)

PREVENTION IS THE SOLUTION



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PURPOSE

This document establishes general, mandatory and special quality assurance requirements for use on Purchase Orders from Dexter Magnetic Technologies (hereinafter “Dexter”). It is intended to clearly define all requirements for the Supplier, to assure that all products delivered by the Supplier, on the Purchase Order (hereinafter “PO”), conform to Dexter’s specified requirements (or those of Dexter’s Customer(s)) for quality, reliability, and integrity. The Supplier shall flow down the requirements to its own sources and require the work be performed by qualified personnel.

If the Supplier has questions or concerns about the requirements, they are to contact Dexter’s Purchasing Department, prior to performing any work. All correspondence, including Dexter responses, shall be in written format.

The Supplier is required to maintain this document on file for reference as necessary.

SCOPE

All documents, including drawings and specifications (regardless of origin, including Dexter, the Government, or Dexter’s customers) are considered part of the PO requirements, when specified or referenced. Document revisions are effective as of the PO issue date, unless otherwise stated.

This document establishes the minimum quality requirements for Suppliers and sub-tier sources. Use of Dexter (or Dexter’s customer) specified sub-tier sources do not relieve the Supplier of compliance to all applicable product technical and quality requirements.

Providing exceptional value to the Supplier / Customer relationship must be the ultimate goal of both Dexter and the Supplier. We as a team must work together to eliminate waste wherever it exists. Suppliers that proactively engage in these processes will have the opportunity to receive ongoing business from Dexter.

Communication is the key to collective cooperation and must start in the advanced planning stages of product development.

QUALITY ASSURANCE REQUIREMENTS

General Quality Assurance Requirements (Applies to all PO’s)

Record Retention: All records including test reports and certifications as required under the terms of the purchase order and which document the quality of items provided shall be retained for a minimum of 10 years after the final shipment unless otherwise specified in the PO.

Quality Management System Requirements: Dexter requires all material and components delivered to be defect free. Product is required to meet all purchase order, contract requirements, referenced specifications and standards unless a “Supplier Deviation Request” has been submitted by the Supplier prior to shipment, and approved by Dexter in writing. Supplier is responsible to maintain an inspection system which will assure product delivery of zero defect(s).

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Notification of change The Supplier shall notify Dexter in writing of all process, design, fabrication, testing, facilities and material changes affecting the form, fit, function, reliability or interchangeability of end item requirements during the performance of this contract or previous contracts. Also shall notify Dexter about change of suppliers.

Access to the Supplier's Facility Dexter, customer representatives and regulatory authorities reserve the right to access the supplier's facilities and their lower-tier Suppliers, to assure that Supplier's product(s) complies with the requirements of this PO.

Requirement Flow Down The Supplier is required to flow down all applicable requirements in the PO to sub-tier suppliers.

Applicable issues of requirements Unless otherwise specified all specified Drawings, Specifications, Standards, Statutory and Regulatory Requirements shall be adhered to and be of the latest revision at the time of placement of PO.

Notification of defective Product In the event a Supplier determines that material previously delivered to Dexter was defective, written notification to Dexter's Purchasing Department is required.

Conformance Responsibility Surveillance, Inspection, and or Test conducted by Buyer or representatives of any Customer or Government agency at the Supplier's or Buyer's facility shall not relieve Suppliers of their responsibility in meeting the specified requirements of the PO.

Corrective Action The Supplier is responsible for initiation of prompt replies to Buyer nonconforming material reports and when required, shall provide effective corrective action responses.

Measuring and Test Equipment The Supplier shall establish and maintain documented procedures to control, calibrate, and maintain, inspection measuring and test equipment used to demonstrate the conformance with the requirements of ISO 10012-1 and ANSI/NCSL Z540-1.

Conflicting Requirements In the event of conflicting technical requirements, the order of priority to be followed is the PO, the drawing and then the specification. Conflicting requirements must be brought to the attention of Dexter's Purchasing Department as soon as possible.

Counterfeit Parts Suppliers are responsible for, as appropriate, planning, implementing and controlling processes to prevent the delivery of counterfeit parts to customers.

Awareness Suppliers are to ensure their employees are aware of their contribution to product or service conformity, product safety and the importance of ethical behavior.

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Mandatory Quality Assurance Requirements/Codes (Apply to all POs, as appropriate)

Mandatory quality assurance requirements for each specific category of material apply as listed below:

Permanent Magnet Materials - Raw Material Example: blocks, rods, bars, disks	QA04
Permanent Magnet Materials – Finished Parts Example: finished parts per a particular drawing	QA01, QA03(as applicable), QA04, & QA14
Catalog and SEP-Specialized Electronic Products Example: toroids, beads, ferrite U, E & I cores	QA01
Hardware Components Example: steel, aluminum parts	QA01, QA03 (as applicable),QA05, QA06 & QA14
Subcontracted Operations Example: plating, coating, NDT	QA03
Age sensitive materials Examples: adhesives, epoxies	QA02

QA01 Certification of Conformance

The Supplier shall furnish, with each shipment, a Certificate of Conformance that shall be signed by the responsible representative and must show the part number, revision level (if applicable), PO number, quantity shipped, and date of shipment. Serialization must be listed on C of C (if applicable). Suppliers of magnetic materials must list material description and/or grade, as appropriate.

QA02 Shelf Life Certification/ Certification of Conformance

The Supplier shall furnish, with each shipment of age / environmentally sensitive materials, a Certification that shall be signed by a responsible representative and must show part or specification number, PO number, lot or batch number of the material, quantity shipped, the date of manufacture, the shelf life, the date of expiration and special handling procedures that need to be followed (if applicable). The Supplier shall not deliver materials with less than 85% of shelf life remaining at the time of delivery.

QA03 Special Process Certification

The Supplier shall furnish, with each shipment, a Certification that includes a statement certifying conformance to any special process (e.g. plating, NDT, welding) performed on the material to the specification(s) listed on the PO and / or engineering drawing. It must also include the PO number, part number, revision level (if applicable), serial number (if applicable), Lot Code & Date Code showing on the Dexter PO (if applicable), and quantity shipped.

Coating & Plating: The Supplier shall include valid information about thickness (“coupon attached” should be preferred method).

Radiographic Inspection: The Supplier shall attach X-Ray film(s) and report(s).

Ultrasonic Inspection: The Supplier shall attach test examination report(s).

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QA04 Material Certification – Magnetic Properties

The Supplier shall furnish, with each shipment, a material certification showing the actual magnetic properties of material that the Supplier is sending to Dexter. Certification shall also list part number and PO number. This Certification must be signed by an authorized representative.

QA05 Material Certification – Chemical Composition

The Supplier shall furnish, with each shipment, a material certification showing the actual chemical composition of material that the Supplier is sending to Dexter. Certification shall also list part number and PO number. This Certification must be signed by an authorized representative.

QA06 Material Certification – Physical Properties

The Supplier shall furnish, with each shipment, a material certification showing the actual physical properties of material that the Supplier is sending to Dexter. Certification shall also list part number and PO number. This Certification must be signed by an authorized representative.

QA14 Final Inspection Reports and Records

With each delivery of product(s), the Supplier shall furnish a copy of the Supplier’s final inspection report(s) and/or record(s), showing the actual results obtained by the Supplier during final sampling inspection of delivered product(s). Each sampling plan shall be based on C = 0 [accept lot on 0 (zero) defects and reject lot on 1 (one) or more defects].

Specific Quality Assurance Requirements/Codes

QA05 Material Certification – Chemical Composition (for magnetic material as required)

The Supplier shall furnish, with each shipment, a material certification showing the actual chemical composition of material that the Supplier is sending to Dexter. Certification shall also list part number and PO number. This Certification must be signed by an authorized representative.

QA07 First Article Inspection Report (FAIR)

The Supplier is required to perform a First Article Inspection on a minimum of 2 units prior to running the production. The FAIR must be sent to Dexter for approval prior to running the production run.

QA08 First Article Inspection (FAIR) Submission

The Supplier shall perform a complete First Article Inspection to the requirements of SAE AS9102, latest revision. The first article part shall be clearly identified by a suitable method such as tagging and submitted with the FAIR.

QA09 100% Inspection Required

The Supplier shall perform 100% inspection of all characteristics on all products covered by the PO. Records of Supplier 100% inspection results showing actual values shall accompany each delivery of product(s) to Dexter.

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QA10 Government Inspection

Government source inspection is required prior to shipment from the Supplier's facility. Upon receipt of the PO, the Supplier is required to immediately notify and provide a copy of the PO to the Government representative who normally services the Supplier's facility. If a Government representative does not normally service the Supplier facility, the nearest Government Defense Agency office shall be contacted. In the event that a Government representative cannot be contacted, the Supplier shall notify Dexter's Purchasing Department, in writing, immediately.

QA11 Source Inspection

Dexter inspection is required prior to the shipment. Notify Dexter five days in advance of final inspection so that arrangements for source inspection can be coordinated. Dexter source inspection shall not constitute product acceptance, nor shall it relieve the Supplier of any liability for full compliance with the requirements of the PO.

QA12 Customer Approved Special Process Sources

The Supplier must use special process sources of Dexter's customer, for any special process (es) on this PO.

QA13 Defense Priorities and Allocations System (DPAS)

This is a rated job that may have national or defense significance. The Supplier shall follow the provisions of 15 CFR 700. The Supplier shall flow down the DPAS requirements to the Supplier's sub-tier sources.

QA15 Preference for Domestic Specialty Metals

The Supplier must be in compliance with DFARS 252.225-7008 and DFARS 252.225-7009- "Preference for Domestic Specialty Metals", during the performance of this PO or Contract. Specialty metals must be melted or produced in the United States or a qualifying country. The Supplier must flow down this requirement to sub-tier sources, as applicable. The Supplier (or the sub-tier source) of a specialty metals- containing component or assembly, who is located in a qualifying country shall provide explicit certification that the part or component was manufactured in that qualifying country (e.g.: if a Sm-Co magnet that needs DFARS compliance is produced in a UK company –the Supplier's paperwork must include the following statement "I hereby certify that these parts were manufactured in the United Kingdom". The same for any Company located in the United States). The Supplier must contact Dexter's Purchasing Department or Quality Department if additional information or clarification is required to comply with this.

QA16 EC-Directive 2002/95/EC (ROHS)

No material, surface finish, and production process, used for the PO, may contain or apply any ROHS directive restricted substances.

QA17 SPC Program

The Supplier shall utilize a SPC program to establish, control, and verify process capability, product characteristics, and process improvement. Process capability C_{pk} must be 1.33 or higher. SPC tools should be used to evaluate or improve product key characteristic(s).

QA18 Gage R & R Program

The Supplier shall utilize a Gage Repeatability and Reproducibility program in order to determine the viability of the measurement system in reference with key characteristic(s).

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QA19 Calibration Certification (Independent Lab)

A certificate is required, stating that calibration has been performed to the appropriate standards or test requirements to which the certification applies. The certificate shall specify the date of calibration, serial number of tool(s) calibrated, the NIST test number for traceability to standards used and their due date for recalibration. This certificate must contain a report number for traceability, the actual readings or results of the tests and the degree of conformance to specified requirements. All calibrations must be performed in accordance with ANSI/NCSL Z540-1. The certificate must be signed by an authorized agent including agent title.

QA20 Preproduction Samples

The Supplier shall furnish preproduction samples in the quantities and under the conditions specified in the PO. The process adopted for manufacture shall be verified by the submission of preproduction samples as stated in the PO.

QA21 Mercury Contamination

The material supplied under this PO shall contain no metallic mercury and shall be free from mercury contamination. This statement shall be an explicit element of the Supplier’s Certificate of Conformance. These requirements shall be included in any subcontract or PO hereunder and the contract shall ensure subcontractor compliance with these requirements.

QA22 Quality Management System Requirements

The Supplier shall maintain a Quality Management System that, at a minimum, shall comply with the requirements of ISO 9001:2008.

QA23 ITAR (International Traffic and Arms Regulations) 22CFR -120-130

The Supplier must be in compliance with ITAR (International Traffic and Arms Regulations). Applicable export control regulations restrict access to the technical documentation (and equipment, if applicable) originated by Dexter and / or Dexter’s Customer, to US citizens and permanent residents only. The supplier agrees that it shall be responsible for ensuring that the requirements of this notification are conveyed to any of its suppliers that will receive technical documentation (and equipment, if applicable), originated by Dexter and / or Dexter’s Customer.

QA24 NAFTA (North American Free Trade Agreement).

The Supplier must be in compliance with NAFTA (North American Free Trade Agreement). The Supplier shall attach to the job NAFTA – Certificate of Origin form.

QA25 Material Certification – Electrical Data (for Specialized Electronic Products)

The Supplier shall furnish, with each shipment, a material certification showing the actual electric data of material that the supplier is sending to Dexter. Certification shall also list part number and PO number. This Certification must be signed by an authorized representative.

QA26 Material Certification –Dimensional Data (for Specialized Electronic Products)

The Supplier shall furnish, with each shipment, a material certification showing the actual dimensional data of material that the supplier is sending to Dexter. Certification shall also list part number and PO number. This Certification must be signed by an authorized representative.

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QA27 PPAP1 (Production Part Approval Process 1)

The Supplier shall furnish with initial sample parts or before the following documents: Part Submission Warrant (PSW), Certificate of Conformance, and material certifications.

QA28 PPAP2 (Production Part Approval Process 2)

The Supplier shall furnish with initial sample parts or before the following documents: Part Submission Warrant (PSW), Certificate of Conformance, material certifications, and ISIR (Initial Sample Inspection Report)

QA29 PPAP3 (Production Part Approval Process 3)

The Supplier shall furnish with initial sample parts or before the following documents: Part Submission Warrant (PSW), Certificate of Conformance, material certifications, and ISIR (Initial Sample Inspection Report), Process Flow Diagram, Control Plan, FMEA (Failure Mode Effect Analysis), Process Capability, gage R&R study.

QA30 FMEA (Failure Mode Effect Analysis)

The Supplier shall furnish with initial sample FMEA (Failure Mode Effect Analysis) report.

QA31 FOD (Foreign Object Damage/Foreign Object Debris)

The Supplier shall have a FOD control program, as suited for its products and/or company, in accordance with specification NAS412 in lieu of MIL-STD-980. This program is for the purpose of prevention, detection, and removal of foreign objects. FOD prevention must be implemented in all areas as applicable.

QA32 (Change of Method)

The Supplier shall notify Dexter in writing of any changes of the method, even if changes will not affect form, fit or function.

QA33 (Priority job DPAS rated– for jobs executed outside the USA)

By accepting Dexter’s PO the supplier agrees to perform the job as a very high priority.

QA34 (Nadcap-The National Aerospace & Defense Contractors Accreditation Program)

Process - Supplier required to be NADCAP approved.

QA35 Material Certification - Helmholtz Test Data (for Magnetic Material)

The Supplier shall perform Helmholtz test on a Helmholtz coil and a fluxmeter, using the "flip method", on 3 samples cut from the final parts, for each part number for the first shipment. The Supplier shall furnish the Helmholtz test data signed by the responsible representative and must include flux linkage results; Helmholtz coil and fluxmeter used; part number; revision; test date.