

DEXTER MAGNETIC TECHNOLOGIES

SUPPLIER QUALITY ASSURANCE
REQUIREMENTS MANUAL
(SQAR)

Rev Q (3/27/2023)

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 ensure 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.

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QUALITY ASSURANCE REQUIREMENTS

General Quality Assurance Requirements

(Applies to all POs)

Data Transmission: Suppliers are to send electronic files and documents to QCROI@dextermag.com.

Safeguarding Covered Defense Information and Cyber Incident Reporting: Suppliers shall handle covered defense information for Dexter orders and report cyber incidents in accordance with DFARS 252.204-7012. The Supplier shall also flow down this requirement to sub-tier sources as applicable.

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. Dexter shall be contacted prior to destruction of documentation.

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).

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. The Supplier shall also notify Dexter about any change of lower-tier 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 applicable PO.

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

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

Notification of defective Product: Written notification to Dexter's Purchasing Department is required in the event a Supplier determines that material previously delivered to Dexter is defective.

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Conformance Responsibility: Surveillance, Inspections, and or Tests 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 to meet the specified requirements of the PO.

Corrective Action: The Supplier is responsible for prompt replies to 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; as well as comply with the requirements of ISO/IEC 17025 and ANSI Z540.3.

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 planning, implementing, and controlling processes to prevent the delivery of counterfeit parts to customers as appropriate.

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

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:

Category of Material	Mandatory Quality Assurance Requirements
Permanent Magnet Materials - Raw Material Example: blocks, rods, bars, disks	QA01, QA04, QA14, QA16, QA31, QA32, QA36, & QA37
Permanent Magnet Materials - Finished Parts Example: finished parts per a particular drawing	QA01, QA03(as applicable), QA04, QA05/QA06, QA14, QA16, QA31, QA32, QA36, & QA37
Catalog and SEP (Specialized Electronic Products) Example: toroids, beads, ferrite U, E, I cores	QA01, QA14, QA16, QA31, QA32, QA36, & QA37
Hardware Components Example: steel, aluminum parts	QA01, QA03 (as applicable), QA05/QA06, QA14, QA16, QA31, QA32, QA36, & QA37
Subcontracted Operations Example: plating, coating, NDT	QA03

Age sensitive materials Example: 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, date of shipment, country of origin, and statement confirming the material supplied contains no conflict minerals (3TG). 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

Each shipment of age / environmentally sensitive materials shall include a Certification signed by a responsible representative and show the 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 of 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, country of origin of material, and statement confirming the material supplied contains no conflict minerals (3TG). (“coupon attached” is the 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).

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 the part number, PO number, and be signed by an authorized representative.

QA05 Material Certification - Chemical Composition (traceability 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 the part number, PO number, and be signed by an authorized representative.

QA06 Material Certification - Chemical Composition (typical)

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

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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 starting 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.

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’s facility, the nearest Government Defense Agency office shall be contacted. In the event that a Government representative cannot be contacted, the Supplier shall immediately notify Dexter’s Purchasing Department in writing.

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.

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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), with data and summary for all dimensions and characteristics showing the actual results obtained by the Supplier during final sampling inspection of delivered product(s). Each sampling plan (unless otherwise specified) shall be based on AQL 1.0, C = 0 [accept lot on 0 (zero) defects and reject lot on 1 (one) or more defects] from the "Zero Acceptance Sampling Plans Fifth Edition". The Supplier shall also indicate the metrology used for each dimension and characteristic measured. Hardcopy with shipment is preferred unless agreed upon with Dexter Sourcing in advance.

QA15a Restriction on Acquisition of Specialty Metals

The Supplier must be in compliance with DFARS 252.225-7008 Restriction on Acquisition of Specialty Metals during the performance of this PO or Contract. The Supplier must flow down this requirement to sub-tier sources as applicable, and contact Dexter Magnetic Technology's Purchasing Department or Quality Department if additional information or clarification is required to ensure compliance. The supplier (or the sub-tier source) of a raw material containing *specialty metals* shall provide explicit certification identifying it as such, with its paperwork including the statement, "I hereby certify that these parts were manufactured in the United States or its outlying areas in accordance with DFARS 252.225-7008."

[FOR REFERENCE ONLY]

- Raw material containing *specialty metals*, including nickel, iron-nickel, cobalt, titanium, and zirconium must be melted or produced in the United States.

QA15b Restriction on Acquisition of Certain Articles Containing Specialty Metals

The Supplier must be in compliance with DFARS 252.225-7009 Restriction on Acquisition of Certain Articles Containing Specialty Metals during the performance of this PO or Contract. The Supplier must flow down this requirement to sub-tier sources as applicable, and contact Dexter Magnetic Technology's Purchasing Department or Quality Department if additional information or clarification is required to ensure compliance. The supplier of a component or assembly containing *specialty metals* located in a qualifying country (per DFARS 225.003) shall provide explicit certification identifying it as such, with its paperwork including the statement, "I hereby certify that these parts were manufactured in a qualifying country in accordance with DFARS 252.225-7009."

[FOR REFERENCE ONLY]

- *Specialty metals*, including nickel, iron-nickel, cobalt, titanium, and zirconium, must be melted or produced in the United States or a qualifying country.

QA15c Restriction on Acquisition of Certain Magnets and Tungsten

The Supplier must be in compliance with DFARS 252.225-7052 Restriction on the Acquisition of Certain Magnets and Tungsten during the performance of this PO or Contract. The Supplier must flow down this requirement to sub-tier sources as applicable, and contact Dexter Magnetic Technology's Purchasing Department or Quality Department if additional information or

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clarification is required to ensure compliance. The supplier (or the sub-tier source) of a component or assembly containing *covered material* shall provide explicit certification stating the item was not manufactured in a covered country, with its paperwork including the statement, “I hereby certify that these parts do not contain covered material melted or produced in covered countries, nor do they contain covered material and were manufactured in a covered country in accordance with DFARS 252.225-7052 and 10 USC 2533c”.

[FOR REFERENCE ONLY]

- Certain magnets of *covered material*, including neodymium-iron-boron magnets, samarium-cobalt magnets, tungsten metal powder, and tungsten heavy alloy, cannot be melted or produced in North Korea, China, Russia, or Iran (covered countries).

QA16 EU-Directive 2011/65/EU and 2015/863 (RoHS)

No material, surface finish, and production process used for the PO may contain or apply any RoHS directive restricted substances. The Supplier shall furnish, with each shipment, a certification stating the material supplied does not contain any EU-Directive 2011/65/EU RoHS 2 and 2015/863 RoHS 3 substances. Certification shall also list the part number, PO number, and be signed by an authorized representative.

QA17 SPC Program

The Supplier shall utilize an 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).

QA19 Calibration Certification (Independent Lab)

A certificate is required stating 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 ISO/IEC 17025 and ANSI/NCSL Z540.3. 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.

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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, complies with the requirements of ISO 9001:2015.

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

The Supplier must be in compliance with the 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 USMCA (United States-Mexico-Canada Agreement).

The Supplier must be in compliance with USMCA (United States-Mexico-Canada Agreement). The Supplier shall attach to the job a USMCA – 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 sent to Dexter. Certification shall also list the part number, PO number, and 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 sent to Dexter. Certification shall also list the part number, PO number, and be signed by an authorized representative.

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).

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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, ISIR (Initial Sample Inspection Report), Process Flow Diagram, Control Plan, FMEA (Failure Mode Effect Analysis), Process Capability, and gage R&R study.

QA30 FMEA (Failure Mode Effect Analysis)

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

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/AS9146 or equivalent. This program is for the purpose of prevention, detection, and removal of foreign objects. FOD prevention must be implemented in all areas as applicable. However, FOD control is less critical for raw materials that will undergo additional processing.

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. Dexter’s authorization is required prior to any changes.

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

The Processor / Supplier is 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 with flux linkage results, the Helmholtz coil and fluxmeter used, the part number, revision, and test date.

QA36 REACH Regulation (EC) No 1907/2006 / REACH Annex XVII

No material, surface finish, or production process used for the PO may contain or apply any REACH SVHC (substances of very high concern) or Restricted substances. The Supplier shall furnish, with each shipment, a certification stating the material supplied does not contain any substances in thresholds exceeding 0.1% by weight (1000ppm) found in the REACH SVHC list or any supplemental Annexes. Certification shall also list the part number, PO number, and be signed by an authorized representative.

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QA37 Minerals Reporting

The material supplied under this PO shall comply with Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Act of 2010 and contain no tantalum, tin, tungsten, or gold (3TG) sourced from the Democratic Republic of the Congo (DRC) or adjoining countries. It shall also reflect responsible sourcing practices regarding cobalt and mica supply chains. Suppliers shall submit a completed Conflict Minerals Report and Extended Minerals Report to DMT annually to confirm compliance. The Conflict Minerals Reporting Template (CMRT) can be found at <https://www.responsiblemineralsinitiative.org/reporting-templates/cmrt/>, and the Extended Minerals Reporting Template (EMRT) can be found at <https://www.responsiblemineralsinitiative.org/reporting-templates/emrt/>.

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