



Supplier Quality Manual

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1.0 Introduction

1.1 Overview

AOP Technologies is committed to exceeding customers' quality needs and expectations. Suppliers play a vital role in helping us achieve customer satisfaction.

AOP Technologies suppliers are viewed as being fully responsible for the quality of their products. Therefore, they must ensure products and services are delivered in conformance to the required standards

1.2 Scope

This standard applies to suppliers of raw material and services/parts. Acceptance of all purchase orders constitutes acceptance and commitment on behalf of the recipient to comply with this manual's content. This manual establishes minimum requirements, is supplemental to, and does not replace or alter any purchase agreement.

1.3 AOP Technologies Responsibilities

AOP Technologies works to develop a strong alliance with our supplier base. To help suppliers perform to their capability AOP Technologies is obligated to by doing the following:

- Set clear requirements
- Review requirements with the supplier to ensure a mutual understanding
- Provide timely and accurate feedback on supply base performance
- Act as a resource to improve supplier performance
- Actively seek supplier involvement with emphasis on continuous improvement
- Communicate and negotiate appropriate lead time for order placement, manufacturing and delivery
- Maintain open communication to discuss growth plans and concerns

2.0 Supplier Quality Expectations

2.1 Quality System Requirements

AOP Technologies quality management system is based on the ISO 9001 quality system requirements. Suppliers not certified to ISO 9001 may be subject to a quality system assessment by AOP Technologies.

If not, ISO certified, the minimum that should be documented and maintained is as follows:

- Methods in place to create product, service, and process consistency.
- Training documents in place to help employees be more successful.
- Methods in place to confirm equipment in use is functioning properly.
- Methods in place to respond to non-conformances and corrective actions in a timely manner.

- Methods in place to segregate the materials in question if a problem does occur.
- Regulatory and human rights responsibilities.
 - Code of conduct for labor standards such as child labor, working hours, wages & benefits, humane treatment. Environmental, Health and Safety laws and regulations.

Suppliers have the responsibility to provide products and services that meet all end customer quality specifications. For some products, AOP Technologies may require evidence that the supplier/subcontractor cascades down all applicable statutory and regulatory requirements and special product and process characteristics to point of manufacture. When in doubt, contact AOP for clarification.

2.2 Fabricated Materials Suppliers Requirements

AOP Technologies fabricated material suppliers must have workmanship wisdom, knowledge, and skill at performing task(s) that impacts quality to a product.

- Drawing interpretation of dimensions and tolerance requirements shall be in accordance with ANSI/ASME Y-14.5
- Drawings that are not fully dimensioned shall control by the 3D model. When in doubt, contact AOP for clarification.
- Machining lubricants and cutting fluids should be aqueous base and of low or no sulfur or chlorine chemistry.
- All parts shall be free of sharp projections (burrs) created by the fabrication process, applicable to all features of a part.
- All external corners and edges, unless otherwise specified by drawing and/or Purchase Order, shall have a break, defined as removal of material from the corner or edge so as to create a minimum 0.1mm to maximum 0.18 mm or 0.004" to 0.007" chamfer or radius.
- All internal corners or edges, unless otherwise specified by drawing and/or Purchase Order, shall have a maximum 0.18 mm or 0.007" radius.
- Unless noted, all metric threads shall be class 6H internal class 6g external. Unless noted, all Unified Standard threads shall be class 2B internal and 2A external.
- All machined surfaces shall be finished in such a manner as to produce a uniform appearance. Surface finish symbols, or call out, shall be interpreted in accordance with ANSI Y14.36
- Sheet metal must maintain a minimal degree of warp with a tolerance of 0.0002 per inch of length.
- All plated surfaces shall exhibit visual evidence of plating continuity.
- All painted parts shall appear smooth and continuous and shall be uniform in color.
- Anodized parts shall conform to the specification indicated in the part drawing and shall appear smooth, continuous and uniform in color.
- Silk screen and laser markings characters and line definition shall be clean, sharp, and free of voids. Artwork must be approved by AOP prior to screen preparation.
- All cosmetic defect/damages such as discoloration, scratches, cracks, fractures, etc.... shall be evaluated for rework or replacement.
- Screws, nuts and bolts should show no evidence of cross threading, mutilation, or detrimental or hazardous burrs, and should be firmly secured.

- Wires and cables shall be positioned and/or protected to avoid contact with rough or irregular surfaces and sharp edges to avoid damage to conductors and/or adjacent parts.
- Finished parts shall be inspected, records maintained, and conform to design/purchase order requirements.
- All parts shall be cleaned prior to packaging.

2.3 Product Document Requirements

AOP Technologies goal is to exceed customer expectations by delivering quality products. Therefore, it is the responsibility of the supplier to provide a certificate and/or statement(s) of compliance, **as applicable**. When in doubt, contact AOP for clarification.

The certificate and/or statement(s) of compliance shall state:

- Supplier Name
- Supplier conformance to the purchase order and/or product specifications
- Type of material/product being supplied
- Construction of material/product supplied
- Material lot/batch number
- Compliance to RoHS/REACH
- Free of conflict minerals
- Other regulatory requirements as requested
- Country of Origin
- Signature and Date from a designated representative

Packing slips should contain but not limited to:

- Purchase Order number
- AOP item number and description
- Quantity shipped
- Lot number

The supplier is responsible for retaining appropriate evidence to confirm compliance upon request.

Shipments received without a certificate and/or statement(s) of compliance or without a current blanket certificate/statement on file will not be received.

When requested PPAP/FAIR documentation will be required.

2.4 Provided Services

Supplier or subcontracted services may be subjected to audit, source, and/or incoming inspections. Audits will be based on pre-determined expectations of deliverables.

2.5 Corrective Action

AOP Technologies suppliers are responsible for providing defect-free product. If defective product is found, a Nonconforming Product Form (NPF) will be issued, the supplier will be contacted, and a Corrective Action Request (CA) may be issued.

A NPF or CA may be issued for but is not limited to the following:

- Nonconforming product
- Missing certificates of compliance
- Improper packaging or labeling
- Identified process improvement
- Other issues as deemed appropriate by Purchasing and/or Quality

Communication to the supplier will be initiated via a Nonconforming Product Form (NPF):

- This will be reflected in the supplier's quality and, possibly, delivery rating.
- If a corrective action response is deemed necessary (chronic or frequent occurrence) then a Corrective Action Request (CA) will be issued.
- The supplier is expected to respond in a timely manner to any quality or delivery issues. Response timing and content requirements are as follows:

Initial response within 24 hours of notification including:

- Containment plan to hold and inspect all product at supplier facility.
- Disposition of any product in transit, at AOP Technologies and at AOP Technologies customers, including authorization to return for credit, sort/rework at supplier expense or hold for supplier review.
- Timing to replace product with certified product (product that has been 100% inspected for defects). All certified stock must be identified as such.

Suppliers issued a corrective action may be required to pass 3 consecutive incoming product audits/inspections prior to closure.

2.6 Request for Deviation

Suppliers do not have Material Review Board authority and shall not make any changes in product construction or manufacturing processes without approval. This also includes reworked or repaired product. A product deviation is used when a specific quality of product being shipped or used is not compliant with the specified drawing, purchase order or specifications. When in doubt, contact AOP for clarification

Deviation requests shall be submitted in writing by the supplier to AOP Technologies and approved before goods and/or services are delivered.

Changes to any of the following will require deviation:

- Manufacturing processes or locations
- Supply
- Product formulations
- Product identification
- Physical/Chemical properties
- Ownership of the company

AOP Technologies requires formal documentation of deviations.

2.7 Charge-Back Policy

Costs associated with supplier product quality issues that are the supplier's responsibility may be charged back to the supplier. Quality issues because of supplier product or services will result in discussions with the supplier to determine disposition and develop plan to reduce end customer impact. Accountabilities, possible rework activities, credits/debits may be discussed and negotiated based on circumstances of issue.

These charges may include but are not limited to:

- Deviations
- Expedited freight
- Customer shutdown charges
- Inspection fees
- Charge-back costs incurred by the end customer
- Any additional costs incurred by AOP Technologies as it directly relates to, the quality of the product supplied
- Direct wastes

2.8 Regulatory Reporting

AOP Technologies requires our suppliers to comply with all current and applicable regulatory requirements. Depending on product type this may include submitting certificates/statements of compliance and/or supporting documentation. Examples of typical regulations include RoHS, REACH, Conflict Minerals, California Prop 65, TSCA PBT, and so on. AOP Technologies is committed to supporting our customers who must conform to these regulations. A supplier's ability to comply will be taken into consideration when

building or continuing business relations. When in doubt, contact AOP for clarification.

2.9 Parts Substitution

Part substitutions are not authorized unless a AOP Technologies Procurement Representative has approved them in writing. The supplier shall notify the AOP Technologies Procurement Representative of any End of Life, obsolete or Form, Fit, or Function issues.

2.10 Foreign Object Debris

The Supplier shall conduct production processes appropriate to prevent, detect, and remove all FOD from product(s) during manufacture and provide parts clean and free of all FOD prior to shipment to AOP Technologies.

2.11 Shelf-Life Sensitive Materials

The supplier must ensure sensitive materials, that are shelf life controlled and/or perishable, be deliver a minimum of 80% remaining of shelf life upon receipt.

2.12 Inspection Plan

The supplier shall maintain an inspection plan and ensure parts fully meet specification and PO requirements.

2.13 Sub-Suppliers

The supplier shall flow down to sub-tier suppliers the applicable requirements in the purchasing documents.

2.14 Calibration

The Supplier shall perform all inspections and tests using calibrated equipment. For calibration service providers or test laboratories, accreditation to ISO 17025 or traceable to NIST is preferred.

2.15 Product Identification

The Supplier shall identify all items, parts, material, components, sub-assemblies and/or assemblies as required by the drawing, as specified by the AOP Technologies Purchase Order.

2.16 Counterfeit Parts Control

The Supplier shall establish and maintain a counterfeit and suspected counterfeit part/material program to affectively eliminate the introduction of counterfeit parts into the supply chain.

2.17 Supplier Records

The Supplier shall maintain records for a period of 10 years unless specified otherwise.

2.18 Traceability

Each manufacturer's lot within each shipment must be segregated and identified to include the quantity and lot number. There must be clear links (e.g., heat #, Lot/Batch number) that tie the entire certification package of the shipment together. This includes special process certifications performed by sub-tier suppliers.

- a) Raw material and forging stock that is provided to AOP Technologies shall include lot, heat lot, batch number, etc. as applicable, and origin of manufacture.
- b) Components/Assemblies shall include the original manufacturer's part number, lot number and date code. Traceability data for electronics, electrical parts, raw material, and mechanical parts shall be readily retrievable and provided to AOP Technologies upon request.
- c) Distributors shall maintain clear traceability to the original manufacturer for each lot in a shipment and it shall be readily retrievable and provided to AOP Technologies upon request.
- d) Any additional traceability requirements will be listed in the PO Notes.

3.0 Purchasing Expectations

3.1 Supplier Assessment

The supplier assessment is required to verify potential new suppliers have the appropriate quality and business systems in place. These systems will need to meet the minimum requirements of AOP Technologies. This self-assessment is also used to verify that current suppliers have maintained their quality and business systems. The supplier assessment needs to be completed and returned to AOP Technologies prior to becoming an approved supplier.

A Supplier Quality System Audit may be performed at the supplier's manufacturing location by a AOP Technologies representative.

3.2 Supplier Status

- Pending – Still in the approval process.
- Approved – Supplier has submitted proper documentation and is in good standing.
- Dis-Approved – Supplier has been omitted due to poor supplier rating or non-usage.

3.3 Supplier Responsibility

AOP Technologies potential suppliers are requested to provide an up-to-date copy of:

- Completed Supplier Survey

- ISO certificate (If Applicable)
- W-9 Form

Disaster/Contingency Plan must be on file at suppliers.

Disaster/Contingencies are to include plans to ensure continuity of product supplied to AOP Technologies in the event of a business interruption

3.4 Terms

Supplier agrees to AOP Technologies standard payment terms.

4.0 Labeling, Packaging and Shipping

4.1 Labeling Specifications

Each package to be clearly labeled with the following when applicable:

- AOP purchase order
- Quantity shipped
- Ship date
- Part number
- Part description
- Supplier name

Special labeling requirements may be noted on the purchase order. When in doubt, contact AOP for clarification.

4.2 Packaging Specifications

Packaging of products shall be done in a manner to ensure product integrity during shipping and handling. Product shall be received clean and absent of foreign material and/or debris.

In addition, suppliers are responsible to identify and communicate any packaging changes, improvements, etc. Special packaging requirements may be noted on the purchase order.

4.3 Shipping Specifications

Shipping method and terms are designated on the purchase order unless agreement has been reached for supplier to pay shipping cost. Suppliers are responsible for adhering to shipping instructions on PO. AOP Technologies should be contacted for any deviation from instructions prior to shipping. AOP Technologies must approve collect "premium" freight methods if used to meet confirmed delivery date.

Advanced notice to be given on any shipping or delivery delays beyond the due date specified on the confirmed purchaser order.

A subcontract product or service provided directly to the customer requires a tracking number for proof of delivery.

5.0 Supplier Performance and Evaluation

5.1 Introduction

Supplier report cards are reviewed on a quarterly basis, or as needed. The purpose of this rating is two-fold – it provides objective comparison of a supplier's performance, and it is a tool to benchmark the supplier's competitiveness in the marketplace.

5.2 Supplier Score Rating Criteria

Suppliers are rated on the following criteria:

- OTD – On Time Delivery
- OTQ – On Time Quality
- Non-Conforming Product
- Corrective Actions
- Service and Responsiveness
- Response to requests
- Response to quality issues
- Notification of changes affecting delivery

These criteria will be weighted based on severity and influences on the overall supply chain as it affects the customer.

REVISION HISTORY

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A	Supplier Quality Team	Initial release. DCN 347	2/15/2022
B	Supplier Quality Team	Added sections 2.9 through 2.18. DCN 349	11/9/2022

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