

<i>Document Name:</i> SUPPLIER QUALITY MANUAL	<i>Document #:</i> PP-01	<i>Revision:</i> C	<i>Date Issued:</i> 10/10/2019	TRANSACT Technologies Incorporated
<i>Objective:</i> To inform Suppliers of the requirements to supply quality materials to TransAct.	<i>Supporting Documentation:</i> PP-02 - New Supplier or Material Qualification PP-03 - Productive Material Procurement PP-04 - Receiving Inspection			<i>Group:</i> Quality <i>Owner:</i> Vice President Global Quality



SUPPLIER QUALITY MANUAL

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TABLE OF CONTENTS

1. Purpose
2. Supplier Commitment
3. Supplier Audits
4. Quality Management Systems
5. Regulatory Compliance Requirements
6. Supplier Packaging, Labeling, and Storage Requirements
7. First Article Process
8. New Product Introduction
9. Supplier Product and Process Changes
10. Non-Conforming Material/Return Material (NCFR/RMA) Process
11. Corrective Action Request (CAR) Process
12. Supplier Performance

1. PURPOSE


The purpose of the Supplier Quality Manual (SQM) is to outline TransAct requirements for suppliers and identify expectations to support ongoing business with TransAct.

2. SUPPLIER COMMITMENT

Suppliers shall review and accept the business practices outlined in the TransAct Supplier Quality Manual. These practices are in place to ensure suppliers competently and consistently conform to TransAct's standards. This sets the foundation for commitment to Quality and On-Time Delivery while TransAct develops, grows, and extends our supplier business relationships. Periodically, TransAct will ask for commitment to TransAct Quality practices outlined in this document. Suppliers are expected to reply in a timely fashion.

3. SUPPLIER AUDITS

TransAct will conduct supplier audits on each supplier as required. The type of audit performed will vary depending on the purpose of the audit. Audits can be performed for several reasons including, but not limited to, initial assessment, launch readiness, annual evaluation, or on-going issues. With prior notice, suppliers shall allow TransAct access to their facility for the purpose of evaluating parts, processes, systems, and documents used in the manufacturing of TransAct products. TransAct may also ask for some information to be prepared prior to the audit. Suppliers are expected to be prepared as needed.

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4. QUALITY MANAGEMENT SYSTEMS

ISO 9001:2015 is the international standard that specifies requirements for providing products and services that meet customer and regulatory requirements. TransAct prefers every supplier to be ISO 9001:2015 certified. Suppliers shall provide proof of their quality and other pertinent certifications as part of the First Article process. Suppliers shall immediately communicate any change in certification or status to TransAct.

5. REGULATORY COMPLIANCE REQUIREMENTS

A. RoHS Compliance

TransAct Suppliers are required to be RoHS 3 (EU Directive 2015/863) compliant. This requirement supersedes any Transact drawing that does not specify RoHS 3. EU RoHS specifies maximum levels for the following 10 restricted substances:


- Mercury (Hg): < 1000 ppm (0.1%)
- Cadmium (Cd): < 100 ppm (0.01%)
- Lead (Pb): < 1000 ppm (0.1%)
- Hexavalent Chromium: (Cr VI) < 1000 ppm (0.1%)
- Polybrominated Biphenyls (PBB): < 1000 ppm (0.1%)
- Polybrominated Diphenyl Ethers (PBDE): < 1000 ppm (0.1%)
- Bis(2-Ethylhexyl) phthalate (DEHP): < 1000 ppm (0.1%)
- Benzyl butyl phthalate (BBP): < 1000 ppm (0.1%)
- Dibutyl phthalate (DBP): < 1000 ppm (0.1%)
- Diisobutyl phthalate (DIBP): < 1000 ppm (0.1%)

B. REACH Compliance

“Registration, Evaluation, Authorization and Restriction of Chemicals” (REACH) is a European Union regulation dating from 18 December 2006. REACH addresses the production and use of chemical substances, and their potential impacts on both human health and the environment. TransAct suppliers are required to be REACH compliant.

C. Conflict Minerals Reporting

TransAct suppliers shall comply with all SEC conflict minerals annual reporting requirements and provide it in a timely manner as it applies to products supplied to TransAct.

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6. SUPPLIER PACKAGING, LABELING, AND STORAGE REQUIREMENTS

- A. Supplier packaging is typically approved during the FAR process. Any exceptions shall be agreed upon between TransAct and the supplier. The supplier shall assure that the packaging is sufficiently robust to withstand shipment by land, air, sea, etc. and arrive on time without damage.
- B. Special labeling is sometimes required by TransAct. TransAct will outline the requirements in released documents as applicable.
- C. Storage of Finished Goods, WIP and Raw Materials shall comply to the manufacturer's standards and good manufacturing practices.
- D. When a product has a defined expiration period, it shall be labeled with the expiration date and sent to TransAct with no less than 80% of that expiration period left for use.

7. FIRST ARTICLE PROCESS


TransAct will typically issue a First Article Report (FAR) Purchase Order to the supplier when a FAR is required. FAR requirements generally apply for custom (non off-the-shelf) components and provide objective evidence that all design and specification requirements are properly understood, verified, and documented. FAR requirements are outlined in 7.1 on our website. FAR cover sheet and checklist guidelines are outlined in 7.2.

When notified by TransAct, suppliers shall submit a re-validation FAR for selected components to ensure on-going compliance. Document requirements shall be consistent with those of the initial FAR submission unless otherwise specified by TransAct.

8. NEW PRODUCT INTRODUCTION

When TransAct classifies a product as "New Product Introduction" (NPI), the NPI template found in 8.1 on our website, or an approved equivalent, shall be used to track the project. Tracking requirements include, but are not limited to, Project Timeline, Tooling Status, Tooling Status Tracker, BOM/FAR Status, FAR Tracker, RFC Tracker, Process Readiness Review Chart, and Action Item List.

Suppliers may be required to execute a Critical Characteristics Matrix (CCM) process for a pre-determined period or number of components. The CCM template found in 8.2 on our website is a guideline for communicating Safe Launch requirements for critical product and process characteristics. TransAct's approval is required before exiting the CCM process.

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9. SUPPLIER PRODUCT AND PROCESS CHANGES

Suppliers are expected to communicate any changes to TransAct. Suppliers shall submit proposed product, process and supplier changes to the appropriate Engineering, Commodity, and Quality managers. Upon authorization to proceed, suppliers shall follow the FAR process as outlined in section 7. This includes TransAct directed changes.

10. NON-CONFORMING MATERIAL/RETURN MATERIAL (NCFR/RMA) PROCESS

The Non-Conforming Material/Return Material process is used to identify, segregate, and disposition non-conforming material or products. This applies to product found during production, inspection, testing, verification, or product returned by customers. If material or product is found to be defective, a non-Conformance Report (NCFR) will be sent to the supplier along with a request to obtain a Return Material Authorization (RMA) number to return the material or product for refund, replacement, or repair.

11. CORRECTIVE ACTION REQUEST (CAR) PROCESS

Corrective Action Requests (CAR) are initiated for supplier non-conformances in product quality, safe launch, process, on-site audits, delivery, warranty, and customer concerns. Upon receiving a CAR, suppliers shall implement an immediate containment action and submit corrective action within the target date set by the initiator. Suppliers should use systematic problem-solving methods such as 8D, WHY-WHY, Fishbone diagram, etc. TransAct's CAR process is outlined in 11.1 on our website.

Costs resulting from supplier non-conformances will be recovered through the Supplier Cost Recovery process. The costs will be included with the CAR and are inclusive of all incurred expenses including, but not limited to, labor costs, scrap costs, line downtime costs, travel costs, analysis costs, and transit costs.

12. SUPPLIER PERFORMANCE

Suppliers of TransAct are expected to achieve and maintain zero defects and 100% On-Time Delivery. Specific performance expectations for TransAct's strategic suppliers will be formally communicated and monitored. TransAct will typically update the Supplier Scorecard on a monthly basis. Failure to meet performance expectations may result in the supplier going into TransAct's Quality Improvement Program (QIP). This may also impact current or future business with TransAct.




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DOCUMENT CONTROL

CHANGE HISTORY

REV	DATE	CHANGE BY	CHANGE DESCRIPTION	RFPC #
A	6/25/2012	D. Rousseau	Document Creation. Replaces 100-00897	10612
B	6/26/2019	M. Kane	Complete document revision	10760
C	10/10/2019	S. Cunningham	Update verbiage in section 2 and 4	10762

APPROVALS

TITLE	NAME	SIGNATURE	DATE
Senior Vice President, Operations	Andy Hoffman		10/10/19
Vice President, Global Quality	Mark Kane		10/10/19
Director, Global Supply Chain	Mudit Nopany		10/10/19