

Viking Products, Inc. Supplier Quality System Requirements Manual

QUALITY POLICY

Viking Products, Inc. will continuously improve its products and services to provide quality-engineered products. Our Environment of team involvement is committed to satisfying the needs and expectations of its customers and to provide timely delivery. Our goal is to maintain a good relationship with our customers, employees and community.

TABLE OF CONTENTS

1.0 INTRODUCTION.....	3
1) SCOPE	
2) PURPOSE	
3) GENERAL	
4) SUPPORTING DOCUMENTS	
2.0 SUPPLIER APPROVAL AND MANUFACTURING PLANNING.....	4
1) SUPPLIER APPROVAL	
2) PLANNING FOR PRODUCT AND SERVICE QUALITY	
3) PRE-AWARD MEETING	
4) SPECIAL CHARACTERISTICS	
5) ENGINEERING PROTOTYPE SAMPLE SUBMISSION	
6) MANUFACTURING PROCESS REVIEW	5
7) PRODUCTION PART APPROVAL PROCESS	
8) VERIFICATION REVIEWS OF PURCHASED PRODUCT	
9) WARRANTY	
10) CHANGES TO APPROVED PRODUCT AND PROCESSES	
11) ANNUAL LAYOUT AND VALIDATION	
3.0 MANUFACTURING CONTROL.....	6
1) DIES, PATTERNS, MOULDS, SPECIAL TOOLING AND RETURNABLE PACKAGING	
2) NONCONFORMANCE REPORT/NON-CONFORMING SERVICE	
3) CONTAINMENT STATUS	
4) INCOMING QUALITY AND SUPER INCOMING QUALITY MEETINGS	
5) NONCONFORMING PRODUCT DEVIATIONS FOR TIME PERIOD AND QUANTITY	7
6) CERTIFICATES OF CONFORMANCE/CAPABILITY DATA SUMMARY	
7) PRODUCT IDENTIFICATION AND PACKAGING	
8) DELIVERY PERFORMANCE EXPECTATION	
9) SUB-SUPPLIER CONTROL	8
10) APPLICABLE ADMINISTRATIVE CHARGES FOR NON-CONFORMANCES	
APPENDIX A.....	SUPPORTING DOCUMENTS

1.0 Introduction

1.1 Scope

The details stipulated within this manual are intended as the minimum mandatory requirements for “approved” production goods and service suppliers to Viking Products Inc. Inc., its subsidiaries and affiliates, irrespective of their global location.

Viking Products Inc.’s focus includes a commitment from suppliers of production parts and services, chosen to provide timely, valued goods and services. Win/win relationships strengthened by success, remain a cornerstone in meeting changing customer expectations.

1.2 Purpose

The purpose of this document is to communicate Viking Products Inc.’s requirements for the structure of fundamental quality management systems of those companies that supply goods and product/process related services to Viking Products Inc..

Viking Products Inc. requires that its suppliers:

- a) Acknowledge that achievement of ZERO DEFECTS is a fundamental objective for quality and delivery performance.
- b) Manage facilities, processes, quality systems and personnel to consistently and cost effectively produce products and furnish services that meet the needs of Viking Products Inc. and its customers.
- c) Develop and implement Advanced Product Quality Planning practices and procedures in accordance with the requirements of QS-9000, including the AIAG Advanced Product Quality Planning and Control Plan reference manuals, in order to assure that all Viking Products Inc. requirements are met.
- d) Provide objective evidence that all supplied products and services satisfy all AIAG Production Part Approval Process requirements including acceptable process capabilities for all Special/Control Characteristics that have been established.
- e) Utilize appropriate statistical techniques for on-going process control and improvement (as established in the AIAG “Fundamental Statistical Process Control” reference manual).
- f) Be committed to continuous process improvement by emphasizing reduction of part to part variation and the elimination of all waste.
- g) Conduct its operations in conformance with, or to exceed, all applicable environmental laws and regulations of the jurisdictions in which the supplier does business.
- h) Meet the requirements of the Viking Products Inc. with regard to the use, control and supply of returnable packaging.

1.3 General

The Viking Products Inc. Supplier quality system requirements are based upon the latest edition of TS16949 and ISO9001/2000 Quality System Requirements. These requirements are an integral and legally binding aspect of the Viking Products Inc. Purchase Order terms and conditions. Although this does not alter or reduce any other requirements of the contract, it is intended to provide a concise understanding of Viking Products Inc. quality expectations.

1.4 Supporting Documents

It is the responsibility of Viking Products Inc.’s suppliers, both present and potential, to obtain and maintain the current issue of all the TS 16949 related documents. If you have comments or questions regarding Viking Products Inc.’s Supplier Quality System Requirements manual, please call 616-791-2277 and ask for the Quality Manager.

2.0 Supplier Approval and Manufacturing Planning

2.1 Supplier Approval

Present and potential suppliers to Viking Products Inc., Inc. must operate within a comprehensive quality system. Suppliers shall provide written confirmation and objective evidence of third party certification, to **ISO 9001-2000**, QS-9000, TS-16949, or an equivalent nationally recognized standard.

Goal of Supplier compliance requires Suppliers to achieve compliance within a defined period of time not to exceed 18 months from the effective date of this sanctioned document. Minimum Supplier compliance shall be certification by an accredited certification body to a current version of the ISO 9000 Quality Management Series of Standards, excluding ISO 9003; plus any requirements specified by Viking Products Inc. Assessment by an OEM or an OEM approved second party will be recognized as meeting Supplier compliance requirements to 2.1. Non QS-9000 or TS-16949 compliant quality systems must conform to the requirements specified in the following AIAG Reference Manuals: Advanced Product Quality Planning (APQP), Production Part Approval Process (PPAP), Failure Mode and Effects Analysis (FMEA), Measurement Systems Analysis (MSA), and Statistical Process Control (SPC). Additional requirements are noted in this Supplier Quality System Requirements Manual, and others may be communicated by Viking Products Inc. as our needs or the needs of our customers change.

2.2 Advanced Product Quality Planning (APQP)

The Advanced Planning Quality Process (APQP) utilized is intended to identify for Viking Products Inc. the following:

- a) Plan to meet and exceed customer expectations (both internal & external).
- b) All potential and real risks that affect product integrity.
- c) All opportunities to incorporate mistake-proofing techniques (poky-yoke) in accordance with a Zero Defect objective.
- d) Early notification of changes in product or manufacturing processes.
- e) Adherence to minimum required capabilities for all product significant characteristics.
- f) Suppliers will be required to fill out Viking Products, Inc. feasibility form.

2.3 Pre-Award Meeting

A Pre-Award Meeting for present and potential suppliers offering new products or services shall be required prior to Purchase Order issuance (unless formally deviated by the Viking Products Inc. team based upon historical evidence of successful adherence to Pre-Award requirements). Technical, quality, manufacturing, engineering, purchasing, delivery, and business issues shall be reviewed during this meeting to provide the supplier with a thorough understanding of Viking Products Inc. requirements.

2.4 Special Characteristics

In accordance with the requirements of TS16949, Viking Products Inc. shall agree to identify special characteristics utilizing the customer's special characteristics symbols.

2.5 Engineering Prototype Sample Submission

Engineering prototype parts with documentation of specification conformance shall be submitted by the supplier for engineering validation testing to the stipulated Viking Products Inc. site as instructed by the Viking Products Inc.. Each sample or prototype, at a minimum, must be accompanied by a completed dimensional results report, material test results report, and performance test results report as described in the AIAG PPAP manual. Specific instructions, in addition to these stated requirements, will be agreed and documented via the Pre-Award Meeting.

2.6 Manufacturing Process Review

At the discretion of the Viking Products Inc. team (based upon risk assessment), a systematic and sequential review of a supplier's manufacturing process may be conducted at the supplier's facility prior to AIAG PPAP submission. These reviews are typically known as Process Sign-Off's, Run at Rates, etc. The process to be utilized for the review may be a customer specified process (e.g., DaimlerChrysler's "PSO") or Viking Products Inc.'s audit process, as determined by the Viking Products Inc. team. This review, if required, will be completed as part of the quality planning and manufacturing processes for new and/or significantly changed products.

2.7 Production Part Approval Process

All production part sample submissions shall be in accordance with the requirements stipulated by the Viking Products Inc. team and/or the AIAG PPAP manual. In the absence of any specific instructions, the supplier shall default to a level 3 PPAP submission.

Any shipment of production product without first obtaining either a signed, approved PPAP part submission warrant (PSW) or an approved engineering deviation, shall classify the shipment as defective product. Conditions under which the supplier may be required to resubmit a Part Submission Warrant (PSW) are clearly stated in the AIAG PPAP manual. Failure to comply with these requirements shall make the supplier fully responsible for those costs resulting in failures attributable to the change.

NOTE: In situations that involve product/components designated as safety/critical, no deviations/concessions shall be permitted on features that affect the functionality/reliability of the product without the appropriate validation and customer approvals.

2.8 Verification Reviews of Purchased Product

The supplier shall allow both Viking Products Inc. and its customers the right to verify, at the supplier's premises that the product and subcontracted product(s) conform to specified requirements. Prior to conducting such verification reviews, the responsible Viking Products Inc. contact shall specify both the arrangements and method of performing the reviews.

2.9 Warranty

Requirements for warranty are identified on Viking Products Inc.'s Purchase Orders. The Viking Products Inc. team may review/identify other specific warranty requirements at the Pre-Award Meeting.

2.10 Changes to Approved Product and Processes

Viking Products Inc. **must be notified prior to** any changes to approved products or processes. Any approved product or process changes must follow normal AIAG/PPAP 4th Edition requirements. In addition the appropriate Viking Products Inc. procurement representative shall be notified of intentions to change a product or process if the change has a cost impact.

2.11 Annual Layout and Validation

The Viking Products Inc. team shall be responsible for identifying, during the Pre-Award Meeting, the supplier's annual submission requirements. The user plant quality team will be responsible to ensure the supplier's adherence to the annual submission requirements. The stipulated annual submission requirement shall include those requirements of Viking Products Inc.'s customers and be in accordance with the customer declared requirements.

3.0 Manufacturing Control

3.1 Supplier Tooling (Dies, Patterns, Molds, Special Tooling)

The supplier shall establish preventive/predictive maintenance procedures on all tooling. Evidence of procedure execution shall be made available upon request. All Customer tooling shall be permanently marked so that the ownership of each item is visually apparent. Preventive/predictive maintenance schedules and tool history records shall be documented and available for review for both manufacturing tooling and any gauging that is used to verify product. Where applicable, the Viking Products Inc. team shall instruct the supplier as to the relevant design and build standards that have to be adhered to.

3.2 Nonconformance Report/Non-Conforming Service

A nonconformance report (8D) is issued when Viking Products Inc. plant receives material or service that fails to conform to applicable quality and delivery specifications. Within 48 hours of receipt of the nonconformance report, the supplier is required to submit a formal, interim corrective action plan to the Viking Products Inc. user plant. At a minimum, this action plan shall identify the problem, the immediate containment actions that have been instituted and the potential root cause(s) of the problem. A completed corrective action plan (e.g. 8-D), listing root cause, corrective actions, verification of corrective action, and system prevention actions must be submitted no later than thirty (14) days after receipt of nonconformance report. Costs associated with shipping, handling, processing, reworking, inspecting, and replacing defective material including the costs of value-added operations prior to its discovery shall be charged to, and paid by, the supplier.

3.3 Containment Status

Suppliers who are notified that they have been placed on "containment status", due to continued poor performance and/or failure to achieve goals and objectives, will be required:

- a) To establish and communicate to Viking Products Inc. a plan for containment.
- b) To communicate the manner in which product shall be identified as quality assured/inspected by container and individual product.
- c) To provide on-site support, in conjunction with Viking Products Inc. personnel, to Viking Products Inc.'s Customers, as required, as part of the containment action.
- d) In those circumstances that prevent the supplier from providing expedient and efficient containment actions, the supplier shall utilize the services of a third party inspection body to reinforce containment action plans.
- e) To accept all costs associated with shipping, handling, processing, reworking, inspecting, and replacing defective material including the costs of value-added operations prior to the discovery of the non-conformance.

3.4 Incoming Quality (IQ) Meetings

Suppliers who do not meet Viking Products Inc.'s performance expectations may be selected to attend an IQ Meeting. IQ Meetings are plant led meetings designed to drive suppliers to identify the systemic/management issues that need to be addressed in order to put effective closure to an issue(s). The criteria upon which a supplier may be invited to an IQ Meeting include, but are not limited to, unsatisfactory:

- a) PPM Performance
- b) Delivery Performance
- c) Number of nonconformance reports
- d) Corrective Action analysis/response
- e) Recurring Issues
- f) PPAP Performance
- g) Viking Products Inc. Customer complaint/rejection

3.5 Nonconforming Product Deviations for Specified Time Period and Quantity

It is the policy of Viking Products Inc. **not** to accept product that does not meet the requirements of the applicable drawings and specifications. Requests for deviations on non-conforming product shall be submitted to the Viking Products Inc. for review and approval and to obtain Customer approval, as required, prior to shipment. A deviation request shall be accompanied by an action plan identifying root cause and steps to implement a permanent corrective action. The date of quality assured product availability with confirmation of the product traceability, and the manner in which product is identified should be included in the action plan.

3.6 Certificates of Conformance/Capability Data Summary

A signed certificate of conformance, certificate of analysis, and/or capability data summary may be required to accompany each shipment of specified components or materials. **The certificate of analysis must contain the actual results of physical testing and/or measurements specified by the contract.** At a minimum, SPC data must be documented on special/control characteristics. Specific guidance will be given by Viking Products Inc. during Pre-Award Meeting.

3.7 Product Identification, Packaging and Pallets

All products are to be shipped into Viking Products, Inc. in a 40 lb plain (no markings) brown box with proper identification per Viking Products, Inc. labeling instructions, unless bulk packing is required due to part size or weight.

Each container, rack, box, or pallet of material shipped to Viking Products Inc. shall be identified as instructed by the Viking Products Inc. (**Typically an AIAG conforming label**) or any unique requirements will be specified by the Viking Products Inc. team at the Pre-Award Meeting. Identification shall permit traceability back to specific supplier manufacturing and inspection records. Safety related identification criteria shall conform, at minimum, to all legal, and/or Viking Products Inc. customer requirements. No exceptions to this requirement shall be permitted unless acknowledged in writing by the Viking Products Inc. team at the Pre-Award Meeting. In order to ensure that the supplier's products are transported in a manner that prevents damage, deterioration, etc., suppliers are responsible for maintaining written instructions, detailing proper packaging, storage, and shipping of its products that conform to the Viking Products Inc. plant requirements.

All pallets shipped into Viking Products, Inc. must conform to the new regulations **for wood packaging material (WPM)** will be in place on September 16th, 2005. U.S. Customs and Border Protection (CBP) will begin enforcement of the United States Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) import regulation for wood packaging material (WPM). **The rule requires WPM, such as pallets, crates, boxes, and dunnage used to support or brace cargo, to be treated and marked as being treated.** In cases of noncompliance, the WPM will be subject to immediate export along with the accompanying cargo. Additional information on the enforcement of the wood packaging material regulations will be available at the U.S. Customs and Border Protection's Web site at www.cbp.gov.

3.8 Delivery Performance Expectation

The supplier shall provide 100% conformance to the delivery requirements as specified by Viking Products Inc. purchase order. Any Costs incurred as a result of delivery non-conformance shall be the responsibility of the supplier. Suppliers are required to update Viking Products, Inc. on all shipments due dates and any tracking of product as requested by Viking Products, Inc.

3.9 Sub-Supplier Control

Each Viking Products Inc. supplier is also responsible for the control and continuous improvement efforts of its suppliers. Sub-suppliers that furnish production goods and services must implement and document appropriate controls. On a periodic basis, the supplier shall review sub-supplier controls, quality management systems, and improvement plans.

Viking Products Inc. suppliers shall require their suppliers to conform to the requirements specified herein. For the purpose of sub-supplier development, ISO 9001/2000, TS16949 and QS-9000, as applicable, are acceptable systems. Viking Products Inc. reserves the right to visit sub-suppliers as required.

Unauthorized changing or addition of suppliers without written approval from Viking Products Inc. is prohibited.

3.10 Applicable Administrative Charges for Non-conformances

A mandatory minimum charge of \$125.00 USD (or equivalent) shall be imposed for the following.

- a) Nonconformance Report (e.g. DMN, QPR) or Non-Conforming Service.
- b) Non-Conforming Product Deviation Requests.
- c) PPAP Submission Rejections or shipments of unapproved product.
- d) Delivery Performance Failures (in addition to any actual costs associated with the failure).

Appendix A

SUPPLIER PRE-AWARD MEETING CHECKLIST

Supplier Date

Parts / Families Being Submitted

Checklist of items for Discussion

Part Specific Requirements Production Part Approval Process (PPAP)

MATERIAL FLOW

Manufacturing Location

Capacity

Release System

Electronic Data Interchange (EDI) requirements

Transportation

Packaging

Coatings & Rust Prevention Requirements

Material Safety Data Sheets

Service Requirements / Delivery

ENGINEERING/KEY CHARACTERISTICS

Supporting Documents (Attachments)

Material and Process Specifications

Tolerancing, GD&T and Part I.D.

Change Request Procedure

Warranty / Product Liability

Divisional / Plant specific Design & Build Standards

QUALITY

Prototype Quality

Quality Planning Requirements

Capability / SPC Requirements

Rating System

Known Problems

Cost Recovery Mechanism

Return Material Policy

Corrective Action System

Responsiveness to Problems

Record Retention

Manufacturing Process Review (PSO, Run @Rate, etc.)

TOOLING

Tool Ownership / Identification

Part Processing

Gage Requirements

REQUIREMENTS FOR PART APPROVAL

Part Submission Warrant (PSW)

Appearance Approval Report (AAR)

Design Records

Engineering Change Documents

Dimensional Results

Material, Performance and Durability Test Results

Process Flow Diagram

Process Failure Mode and Effects Analysis (Process FMEA)

Design Failure Mode and Effects Analysis (Design FMEA)

Control Plan

Initial Process Studies

Quality Indices

Size of Process Study Lot _____

Measurement system analysis

Qualified Laboratory Documentation

Checking Aids / fixtures
Sample Product
Sample Size _____ Submission Level _____
Master Sample

PPAP RESUBMISSION CRITERIA

- Engineering change to design records, specifications or materials
- Use of optional construction or material
- New or Modified Tools, Dies, Moulds, Patterns
- Refurbishment or rearrangement of existing tooling or equipment
- Tooling or equipment transfer from a different location
- Subcontractor change for parts, materials, services
- Production resumes after tooling has been inactive for one year
- Any change in process or method of manufacture
- Change in Test / Inspection Method
- Following a Viking Products Inc. request to suspend shipment due to a quality concern
- Annual Validation Requirements

Describe:

Supplier Attendees Viking Products Inc. Attendees

Comments:

SUPPLIER REQUEST FOR PRODUCT OR PROCESS CHANGE

Request for Process Change **Date:** _____

Request for Product Change

*** A corrective action report and modified process control plan must be submitted with request.**

Supplier Name: _____ Requestor Name: _____

Supplier Plant: _____ Requestor Title: _____

Address: _____ Requestor Phone: _____

City/State/Zip: _____

Part Number: _____ Revision: _____

Quantity: _____

Description of Change requested: (Be specific, Include marked drawing if applicable)

Reason for Change:

Piece Price affected?

Yes Comments:

No

Supplier Signature: _____ **Date:** _____

Viking Products Inc. Response:

Request Denied Request Approved

Comments:

Viking Products Inc. Signature: _____ Date _____