



H.B. Fuller

Supplier Quality Manual

INTRODUCTION

About H.B. Fuller

For 130 years, H.B. Fuller has been a leading global adhesives provider focusing on perfecting adhesives, sealants and other specialty chemical products to improve products and lives. With fiscal 2018 net revenue of \$3.0 billion, H.B. Fuller's commitment to innovation brings together people, products and processes that answer and solve some of the world's biggest challenges. Our reliable, responsive service creates lasting, rewarding connections with customers in electronics, disposable hygiene, medical, transportation, clean energy, packaging, construction, woodworking, general industries and other consumer businesses. And our promise to our people connects them with opportunities to innovate and thrive.

Scope

The purpose of this manual is to define the quality systems and business procedures required of current or future Suppliers who supply direct and indirect materials/services to H.B. Fuller.

This manual also defines quality requirements, business practices and applicable documents for these Suppliers, in order to maintain their status as a Supplier to H.B. Fuller.

This procedure applies to H.B. Fuller Suppliers of direct and indirect materials/services that directly affect the form, fit, function, quality or reliability of the finished product manufactured by H.B. Fuller, referred to herein as "Supplier(s)".

Quality Policy

Our commitment to quality is driven by our core beliefs that *quality of work* is the foundation of all that we do. It is better to design quality into the product and business processes, rather than to inspect defects out. *Quality Matters* are most essential to success:

Quality Matters

- M** Meet and exceed customer requirements
- A** Achieve total employee involvement
- T** Take the time to do it right the first time, every time
- T** Train employees on quality and continuous improvement
- E** Establish quality systems and processes that support system
- R** Reduce and prevent risks to enable achieving zero defects
- S** Set measurable quality goals-objectives directing persons to contribute to effectiveness



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1.0 Expectations of H.B. Fuller Suppliers

At H.B. Fuller Company, we take pride in maintaining high standards of ethical conduct and in complying with the wide range of laws and regulations governing our business. We strive to conduct business in ways that bring credit to us, collectively as a company and as individuals within it. H.B. Fuller does business only with partners that also adhere to high standards for ethics and compliance.

We request that you review the [H.B. Fuller Code of Business Conduct](#) and ensure your compliance with the laws and regulations that underpin our Code.

H.B. Fuller's core, minimum expectations for each of its suppliers encompass compliance with laws and regulations in all geographies in which the supplier does business, including but not limited to the following:

Anti-Bribery and Corruption

H.B. Fuller complies with anti-bribery laws wherever we do business and expects the same of our suppliers. Specifically, suppliers must comply with: (a) the provisions of the U.S. Foreign Corrupt Practices Act, which specifically prohibits U.S. companies or their affiliates from making or offering to make any payment to any foreign government official in order to influence such official, to obtain or retain business or to obtain an improper advantage; and (b) international anti-bribery standards (including the U.K. Bribery Act) and local laws that prohibit the offering or receipt of bribes in general commercial practice. The offering, giving or receiving of any bribe, whether directly or indirectly, is prohibited. We expect our suppliers to honor the same commitment.

Gifts and Entertainment

H.B. Fuller prohibits its personnel from offering to or accepting from its suppliers and any of their personnel any gifts and entertainment with the exception of nominal non-cash items and reasonable, non-lavish meals provided in direct connection with business meetings. We expect our suppliers to honor the same commitment in their dealings with H.B. Fuller and its personnel.

Fair Treatment for Workers

H.B. Fuller does not discriminate on basis of race, color, gender, religion, sex, sexual orientation, gender identity, national origin, gender, age, veteran status, or against qualified individuals based on their disability status, and expects the same of its suppliers. Moreover, H.B. Fuller complies with the requirements of 41 CFR §§ 60-1.4(a), 60-300.5(a) and 60-741.5(a) for U.S. government contractors and subcontractors and requires covered subcontractors with which it contracts to prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and to prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity, or national origin. H.B. Fuller also requires that covered subcontractors with which it contracts take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, protected veteran status or disability.

H.B. Fuller does not employ persons younger than the age of 18 unless under the guidance of legally recognized apprenticeship programs within the countries in which the Company operates. We expect our suppliers to honor the same commitment.

H.B. Fuller recognizes the rights of workers to freely associate or not associate with third-party organizations, form and join worker organizations of their choosing or seek representation, and bargain collectively, as permitted by and in accordance with applicable laws and regulations. We expect our suppliers to honor the same commitment.

H.B. Fuller does not use any form of forced, bonded, indentured, or prison labor. All work is voluntary and workers are free to leave work or terminate their employment with reasonable notice in adherence to local guidelines. We commit to taking steps to ensure that no slavery or human trafficking is taking place within our organisation or supply chain. We expect our suppliers to honor the same commitment.

Work weeks at H.B. Fuller do not exceed the maximum set by local laws, and we abide with applicable wage laws, including those related to minimum wages, overtime hours and legally mandated benefits within the countries we operate. We expect our suppliers to honor the same commitment.

H.B. Fuller is committed to respecting the personal data of workers and other individuals with whom we may interact. We expect our suppliers to honor the same commitment. Where applicable, suppliers may need to enter into additional “data processing agreements” with us to establish clear rights and obligations regarding the protection of personal data.

Conflict Minerals

H.B. Fuller is committed to ensuring that ‘conflict minerals’ (namely tantalum, tin, tungsten or gold) in any products supplied to it do not directly or indirectly finance or benefit armed groups that are perpetrators of serious human rights abuses in the Democratic Republic of the Congo or an adjoining country. We expect our suppliers to honor the same commitment.

Trade Compliance

H.B. Fuller is committed to full compliance with the import and export control laws of all jurisdictions in which it does business, including U.S. laws that apply to our activities outside of the U.S. It is H.B. Fuller's policy not to do business with the following countries and region, which are currently subject to U.S. sanctions and/or embargoes: **Iran, North Korea, Syria, Cuba, and the Crimea Region of Ukraine.** It is also H.B. Fuller policy to comply with U.S. sanctions against certain individuals, organizations or entities known as “Specially Designated Nationals” (SDNs) or other denied parties lists specified by various countries' laws. We expect our suppliers to honor these same commitments by not providing to H.B. Fuller, directly or indirectly, good or services sourced from the listed countries or region or from any SDNs or other denied parties. Additionally, we expect our suppliers to provide in a timely manner all information and documentation required to assure compliance with these laws, to take advantage of special or preferential programs (e.g., free-trade agreements) and to participate in supply chain security programs, as may be requested by H.B. Fuller from time to time.

Sustainability

H.B. Fuller recognizes the world’s finite resources require us to minimize our impact on the environment while creating value for our customers. To continuously improve our sustainability we focus on:

- * Enabling our customers to improve their products and processes through solutions that help achieve their sustainability goals
- * Optimizing our facilities’ operations and process efficiency
- * Engaging our employees to be knowledgeable about and responsible for safety, wellness, and reaching our sustainability targets

We expect our suppliers to help H.B. Fuller achieve its sustainability goals, and to have a policy and/or practices in place to reduce their own environmental impact.

Questions?

If you have questions regarding H.B. Fuller’s expectations for suppliers or your company’s compliance with these expectations, please email your questions to supplierexpectations@hbfuller.com.

Our Privacy Notice provides details on the information we collect, why we hold it and how we use it, as well as your rights in relation to the information you share with us. We invite you to read our full [Privacy Notice](#) to learn more.

2.0 Quality Management System Requirements

H.B. Fuller Suppliers are expected to have an effective Quality Management System in place, preferably one that conforms to ISO 9001:2015 at a minimum that assures consistent on-time delivery of conforming product. Registration by an accredited third party certification body is preferred. All third party certificates must include a valid certification body accreditation mark.

Supplier shall notify H.B. Fuller of any change in the status of their Quality Management System (e.g. change of scope, registrar, standard, etc.) in a timely manner. In addition, for some market requirements, H.B. Fuller may enforce the compliance to higher quality standards, such as IATF 16949 or FSSC 22000. In addition, Supplier must meet all other requirements of this manual.

2.1 Competence of Employees

Supplier shall determine the necessary competence of persons doing work under its control, ensure that these persons are competent based on appropriate education, training, or experience; where applicable, take actions to acquire the necessary competence, and evaluate the effectiveness of the actions taken; and retain appropriate documented information as evidence of competence.

2.2 Control and Monitoring of External Providers

Supplier shall ensure, when required, that customer-designated or approved external providers, including process sources (e.g., special processes), are used. Supplier shall identify and manage the risks associated with the external provision of processes, products, and services, as well as the selection and use of external providers.

2.3 Calibration Traceability

Measurement traceability is required for calibrated and verified measurement results against measurement standards traceable to international or national measurement standards. When no such standard exists, the basis used for calibration or verification shall be retained information.

2.4 Test, Inspection, and Verification

Supplier must provide test certificates for all purchase orders and lots of products provided to H. B. Fuller, verifying that all products meet H.B. Fuller's purchase order specification and requirements. All products and lots must be clearly identified and labeled and must be traceable. Supplier's records with respect to each purchase order must be retained for at least seven (7) years from date of manufacture, or as required by applicable law, whichever is greater.

2.5 Nonconforming Products and Materials

If at any time, Supplier becomes aware that any shipped product or material is nonconforming, Supplier will immediately notify H.B. Fuller by telephone and promptly confirm in writing. All nonconforming products and materials must be documented and investigated. Supplier's investigation shall include root cause analysis, impact/assessment of scope and identification and timely implementation of effective corrective actions. All investigations will be documented and records maintained. Supplier's records with respect to investigations must be retained for at least seven (7) years from date of manufacture, or as required by applicable law, whichever is greater.

Supplier shall obtain H.B. Fuller's prior written approval with respect to the disposition of any nonconforming products or materials rejected by H.B. Fuller.

Supplier shall obtain H.B. Fuller's prior written approval with respect to any deviation to specification of product, material or packaging. See selection on Supplier Deviation Request.

2.6 Prevention of Counterfeit Product

Supplier shall plan, implement, and control processes appropriate to the organization and the product, for the prevention of counterfeit or suspect counterfeit product use and their inclusion in product(s) delivered to H.B. Fuller.

2.7 Change Notification

Supplier shall provide a minimum of 90 days advance written notice and obtain H.B. Fuller's prior written approval before implementation of any changes, including changes to specifications, equipment or packaging in Supplier's manufacturing process, raw material, product or site of manufacture.

2.8 Right of Access

H.B. Fuller, its customers, governmental authorities and their respective representatives intend to perform verification activities at Supplier's premises when warranted and to assure product and services conform to specified requirements. Supplier shall provide H.B. Fuller, its customers, governmental authorities and their respective representatives with access to all of Supplier's facilities and records relating to the performance and processing of H.B. Fuller's orders.

2.9 Sub-Tier Supplier

Supplier may not outsource or subcontract any product, component, service or other work for or on behalf of H.B. Fuller to any sub-tier Supplier without the prior written approval of H.B. Fuller. If H.B. Fuller approves the use of any sub-tier Supplier, Supplier must flow down to such sub-tier Supplier any applicable customer, regulatory and/or ISO requirements, including, but not limited to, requirements in any purchase order or other purchase document issued by H.B. Fuller.

Supplier is responsible for the quality of materials and components provided by their sub-tier Supplier and sub-contractors. H.B. Fuller Supplier must impose controls on their sub-tier Supplier that provide quality results and documentation comparable to the controls applied to Supplier by H.B. Fuller. The extent of the controls may vary, depending on the nature and complexity of the product and processes, but should normally include:

- Evaluation and qualification of sub-tier Supplier facilities
- Control to ensure that raw materials used meet H.B. Fuller's requirements
- Controls to ensure that the sub-tier Supplier of components used are those approved by H.B. Fuller, where applicable
- Control of nonconforming material
- Corrective action and preventive action programs
- A continuous quality improvement program

Where appropriate, H.B. Fuller may specify the sub-tier Supplier that may be used, evaluate and qualify the sub-tier Supplier's facilities, and assist the Supplier in controlling the sub-tier Supplier. Typically, this occurs when the sub-tier Supplier is an essential component of the supply-chain process. H.B. Fuller reserves the right to evaluate the quality system and records of such sub-tier Supplier as necessary. In the event of H.B. Fuller's involvement, Supplier maintains responsibility for the quality performance of their sub-tier Supplier.

2.10 Production Part Approval Process (PPAP)

When applicable, Supplier is required to submit Production Part Approval Process (PPAP) packages for all new or transferred product and engineering changes, per the current version of the Production Part Approval Process.

2.11 Performance & Improvement

Self-Improvement Programs (SIP) are an effective tool used to ensure the effectiveness of the Quality Management System. A well-functioning SIP identifies and corrects in a timely manner any deficiencies present in the site's Quality Management Systems and causes permanent systemic solutions to be implemented. Supplier must have a regular, well-functioning SIP or internal auditing system in place and carried out by qualified individuals.

3.0 Supplier Qualification

Any Supplier of direct materials to H.B. Fuller must be a qualified Supplier. The extent of the qualification process is dependent upon the criticality of direct materials purchased and other factors determined by H.B. Fuller. H.B. Fuller's Global Strategic Sourcing department is responsible for the evaluation and selection of Suppliers for all direct materials, contract manufacturers and major indirect goods and services. H.B. Fuller's local facility buyers evaluate, select and qualify Suppliers of all other indirect goods and services that are not managed by the Global Strategic Sourcing department. Local facility buyers evaluate, select and approve Suppliers based on factors including, but not limited to, historical performance, cost and availability.

H.B. Fuller selects Suppliers based on the Supplier's ability to meet requirements including, but not limited to, those listed below.

- 1) Purchase order lead times
- 2) Quantity requirements and packaging
- 3) Supplier price volume brackets
- 4) Freight requirements and specifications
- 5) Material certification, inspection, and testing
- 6) Material requirement volatility and usage
- 7) Material shelf life and/or warranty
- 8) Terms of sale and payment terms
- 9) ISO 9001/IATF 16949 certifications
- 10) Supplier manufacturing capacity and market supply conditions
- 11) Material regulatory compliance requirements
- 12) Material quantities capable of being supplied or combined with other material quantities from the same Supplier
- 13) Material evaluation conducted by Research and Development, Process Engineering, and/or Production Management
- 14) Samples and trial quantities obtained from the Supplier
- 15) Quality tests run on trial material in compliance to material specifications
- 16) Quality assessment of potential Supplier
- 17) Customer specifies a specific package and/or material specifications from a specific Supplier
- 18) Financial condition of the Supplier

The quality assessment of potential Suppliers consists of a Quality Management System self-assessment which is completed by the Supplier, using the H.B. Fuller Supplier assessment survey form. This is returned, along with the Supplier's quality manual and documentation for review by H.B. Fuller. An on-site assessment by H.B. Fuller personnel or its authorized agents may also be required, at H.B. Fuller's sole discretion.

H.B. Fuller periodically reevaluates Suppliers through the use of quality performance data and/or on-site assessments, at its sole discretion.

3.1 New Supplier Questionnaire

In the early stages of the Supplier selection process, a potential Supplier is sent a questionnaire. This questionnaire solicits general information about the Supplier such as location(s), size, capabilities, and financial stability as well as detailed questions regarding the Supplier's Quality Management System and quality history.

3.2 Supplier Self-Assessment

Supplier may be re-evaluated regularly through the use of Quality Management System self-assessment survey. Upon request by Global Strategic Sourcing, Supplier must complete the self-assessment survey and return it along with a copy of its quality manual and supporting documents. H.B. Fuller will review the completed self-assessment survey and supporting documents to determine if the documented quality system meets H.B. Fuller's requirements.

3.3 On-site Assessments

For Suppliers of critical components, an on-site assessment of the Supplier's facility maybe performed, at H.B. Fuller's sole discretion. H.B. Fuller Global Strategic Sourcing and Quality personnel regularly review Supplier risk based on a risk matrix and identify required actions such as Supplier audits, Supplier self-evaluation, or Supplier on-site assessments.

The on-site assessment includes three components:

- A quality assessment to determine whether the Supplier's Quality Management System is in place and functioning effectively.
- A business assessment to determine whether the Supplier has financial resources, production capacity, and other business resources needed to fulfill H.B. Fuller's production needs.
- A technology assessment to determine whether the Supplier has the needed technical resources, including production and inspection equipment, facilities, engineering resources, etc.

If the assessment team determines that the Supplier meets H.B. Fuller's requirements, H.B. Fuller qualifies the Supplier to bid on new business and supply direct materials.

4.0 Manufacturing Control

4.1 Process Control

Supplier is required to control all manufacturing processes in accordance with a control plan, which is approved by H.B. Fuller during product qualification.

4.2 Statistical Process Control

Where specified in the control plan, Supplier is required to apply effective statistical process controls. Effective controls must include:

- The control chart displays control limits that are correctly calculated (specification limits may not be used as control limits).
- The control chart is at the process area, visible to the operator, or persons who are responsible for controlling the process.
- For each out-of-control condition, actions are taken to bring the process back into control. Actions taken to bring the process back into control are recorded.
- Product produced during any out-of-control condition is sorted, scrapped, reworked or dispositioned through Supplier's material review process.

4.3 Process Performance Requirements

Process Performance (P_{pk}) is the comparison of the actual process variation to the specification limits. When required to submit process performance data to H.B. Fuller, Supplier must report process performance using the following method:

Critical Characteristics: A P_{pk} at least 1.33 is required. Any critical characteristic failing to meet the minimum requirement requires a containment plan and an improvement plan.

Other Characteristics: A P_{pk} of at least 1.00 is required. Supplier is not required to calculate and report process performance for non-critical characteristics, unless requested by H.B. Fuller. When specified by H.B. Fuller, other characteristics failing to meet the minimum requirement also require a containment and improvement plan.

P_{pk} = the minimum of either

$$\frac{USL - Avg.}{3s} \quad \text{or} \quad \frac{Avg. - LSL}{3s}$$

USL = Upper Specification Limit

LSL = Lower Specification Limit

Avg. = Process Average = \bar{X}

s = Estimated Standard Deviation

$$s = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{(n-1)}}$$

n = Total number of parts inspected

For unilateral tolerances, the same logic is employed, except that only the side of the tolerance that is specified is used in to calculate P_{pk} .

4.4 Lot Control

A lot consists of product of one batch number and revision that are made at the same time, under the same processing conditions, from the same lot of raw materials. The primary purpose for identifying lots is to determine the scope of actions that must be taken when problems arise during further manufacturing or with customers. Each container of material shipped to H.B. Fuller must be identified with Supplier's lot number. Inspection records must be traceable to lot numbers.

The following are typical conditions that result in a change of lot numbers:

- Change of product number or revision
- Change of product number or revision of components
- Interruption of continuous production (typically for more than a few hours)
- Repairs or modification to the tooling or equipment
- Tooling changes (other than minor adjustment or replacement of consumable tooling)
- Change to a different lot of raw materials
- Process changes

4.5 Safety

At no time should any of H.B. Fuller's customers, or any person at a H.B. Fuller Supplier, be exposed to hazardous material or situations that are not inherent in a component's structure. Residues, films, out-gassing products and packaging materials should comply with OSHA (Occupational Safety & Health Association) standards. For items with inherent hazards, safety notices must be clearly observable. As applicable, MSDS sheets must be provided.

4.6 Maintenance

Supplier must maintain all facilities, manufacturing machines, tools, measuring devices, and other equipment in such a manner that the Supplier can support H.B. Fuller's production requirements, and the quality of products manufactured for H.B. Fuller is not degraded in any way.

4.7 Process Capability Studies

Process Capability (C_{pk}) is a comparison of the inherent variability of a process output to specification limits *under statistically stable conditions*. There are a number of techniques for assessing the capability of processes. When requested, Supplier must use methods defined in Statistical Process Control (SPC) published by AIAG for determining process capability and process performance, unless an alternate method is approved in writing by H.B. Fuller.

A Cpk of at least 1.33 is required for H.B. Fuller's product specifications.

When required to submit process capability data to H.B. Fuller, the Supplier must calculate process capability using the following method, unless an alternate method is approved by H.B. Fuller:

$$C_p = \text{Process capability ignoring process centering} = \frac{USL - LSL}{6 \hat{\sigma}}$$

$$C_{pk} = \text{Process capability including centering} = \text{the minimum of either: } \frac{USL - \text{Avg.}}{3 \hat{\sigma}} \text{ or } \frac{\text{Avg.} - LSL}{3 \hat{\sigma}}$$

USL = Upper Specification Limit

LSL = Lower Specification Limit

Avg. = Process Average = \bar{X}

$\hat{\sigma}$ = Estimated Standard Deviation = $\frac{\bar{R}}{d_2}$

\bar{R} = Average Range

d_2 = Constant from statistical tables

For unilateral tolerances, the same logic is employed, except that only the specified side of the tolerance is used to calculate C_{pk} . When \bar{X} & R charts are used for capability studies, the subgroups must contain pieces taken consecutively from the process and the subgroups must be arranged sequentially in the order they were produced.

4.8 Process Failure Modes and Effects Analysis (PFMEA)

When requested, Supplier must perform a Process Failure Modes and Effects Analysis (PFMEA), and submit it for approval by H.B. Fuller within 30 days of such request. For products that are designed by Supplier, Supplier will also perform a Design Failure Modes and Effects Analysis within 30 days of such request. The PFMEA considers all reasonably foreseeable potential failure modes of each process. Based on the potential seriousness and likelihood of the problem, Supplier develops manufacturing controls. The PFMEA should be a living document, and must be updated when process changes occur, or when defective material is produced. PFMEA methods and examples can be found in Potential Failure Mode and Effects Analysis published by AIAG.

4.9 Control Plan

When requested, Supplier must develop a control plan, and submit it for approval by H.B. Fuller within 30 days of such request. The control plan is a detailed description of the Supplier's proposed processing steps required to produce the product, and the controls that are put into place to control the quality at each step. The control plan must include all in-house processing, external processing, inspection, packaging, and shipping. Supplier may use their own format. Measuring devices and fixtures designed and built to check H.B. Fuller products must be identified with a gage number and drawing, and must be listed on the control plan.

The control plan must include all critical characteristics. Where detailed instructions are required, Supplier details those instructions in a work instruction, or equivalent, which must be listed in the control plan. Inspection methods, sample sizes, and sampling frequencies should be based on the process capabilities, seriousness and likelihood of

potential non-conformances, and process stability. Critical characteristics that do not meet H.B. Fuller's process capability requirements must be inspected 100%, unless H.B. Fuller approves alternate control methods in writing.

4.10 Safety Data Sheets (SDS)

As applicable, Safety Data Sheets (SDS) must be provided a) during the qualification process, b) upon any modification to the products, and c) upon request by H.B. Fuller.

4.11 Agency Approvals and Compatibility Reports

Supplier is responsible to provide the proper agency approval test reports per H.B. Fuller requirements. Examples are UL, CE, FCC, TUV, etc. Supplier is also responsible for agency test reports from their sub-supplier or other outside test agencies.

Supplier is responsible to submit test results that verify compatibility as required (USB, 1394 etc.). Testing may be done by Supplier or by a test facility certified by the Supplier.

4.12 Traceability

Supplier must plan for traceability of components. Supplier will provide a written plan specifying how components will be marked with serial or lot numbers and date codes if required, or how containers will be identified with lot numbers or date codes if component marking is not required. The plan will also include sizes of lots or batches. Where possible, batch sizes should be minimized to aid in containment should quality problems be found.

4.13 Supplier Process Change Request (SPCR)

A Supplier Process Change Request (SPCR) is used to request a change to a released product, process, drawing, or specification. H.B. Fuller encourages SPCRs for process improvement with the stipulation that before an SPCR is submitted, Supplier thoroughly reviews their FMEA and control plan (if applicable) to assure that all process-related issues have been addressed and resolved.

The originator of an SPCR must include the following information:

- Product number
- Product description
- Description of problem or recommended change
- Reason for change or "rationale"
- Proposed effective date

Supplier submits the SPCR with the revised FMEA and control plan (if applicable) to H.B. Fuller for evaluation of the following:

- Supplier-demonstrated process capability and stability
- Comparison to first batch data
- Industry standards
- Supplier process engineering capabilities
- Supplier's adherence to control plan

After H.B. Fuller has completed the review, and concurs with Supplier, H.B. Fuller will notify Supplier as to the final disposition of the SPCR and product submittal requirements and dates. When applicable, Supplier is required to submit an updated Production Part Approval Process (PPAP).

When monitoring is required, the appropriate markings must be identified on the lots etc. for a specified time frame as decided jointly with H.B. Fuller and Supplier.

4.14 Supplier Deviation Request

Supplier is never permitted to knowingly ship product that deviates from the print, specification limits, or design intent without written authorization from H.B. Fuller. If such a condition exists, Supplier may request that H.B. Fuller allow shipment of the product. This is accomplished by initiating a Deviation Request.

If requested by H.B. Fuller, Supplier must send samples of non-conforming items to H.B. Fuller for evaluation. The cost of any testing required to determine the acceptability of the product will be charged to the Supplier. H.B. Fuller will determine the item's acceptability and what corrective actions (if any) are required beyond the deviation. If approved, H.B. Fuller will send a written deviation approval to Supplier.

The deviation is only intended to be an interim action and **is not** to be construed as an engineering change. Supplier must begin work immediately to correct the condition in question. This must be accomplished within the time frame stated on the deviation. Failure to comply with the mutually agreed upon closure date for the deviation may result in the Supplier's rating being affected.

In all cases, Supplier must fully contain all product suspected of being non-conforming at Supplier's facility. In addition, Supplier may be required to sort any suspect product at H.B. Fuller's facility.

Any products sent to H.B. Fuller that have been approved on a Deviation Request must be clearly identified on the box, container, or other packaging method with the appropriate markings decided jointly by H.B. Fuller and the Supplier.

5.0 Packaging & Labeling

5.1 Packaging

Supplier must adequately plan for packaging. H.B. Fuller encourages Supplier-initiated packaging improvements. Supplier will provide packaging that provides protection from any damage that may occur. Packaging, labeling, and shipping materials must comply with the requirements of common carriers, in a manner to protect the product and enable the lowest transportation costs.

Packaging for Electrostatic Discharge (ESD) sensitive items must meet appropriate ESD packaging requirements. Contamination is a serious concern to H.B. Fuller. Packaging must protect the components from contamination, including fibers from the packaging materials.

Expendable materials and packaging must be legal and safe for standard "light industry" disposal. The preferred maximum weight of manually handled packs is 40 lbs. The maximum acceptable weight is 45 pounds (20 kg), unless approved by H.B. Fuller in writing.

Whenever possible, only one product number and one Supplier lot is to be packaged in a shipping container. When more than one product number or lot number is packaged in a shipping container, each product number and/or lot number must be separately packaged (i.e. bags or boxes) inside the container, with each labeled as to the contents.

All paperwork must be with the load. The paperwork must include the Certification of Analysis (CoA), Bill of Lading (BOL), and packaging slip. When requested, the paperwork must be emailed prior to the load arriving. If this is an Over the Road (OTR) tanker, a scale ticket and a signed Wash out sheet or last contained is also required. If this is a railcar, confirmation that all their lettering and weights are correct on the railcar and the inlet and outlet are labeled correctly is also required. Full truckloads and OTR tankers must have a delivery appointment with the H.B. Fuller facility.

5.2 Labeling

Each shipping container or inside package must contain the following information:

- H.B. Fuller product number (if no H.B. Fuller number exists, Supplier product number is used)
- Quantity
- Supplier's Name
- Purchase Order Number
- Lot identification
- Required ESD Susceptibility Label on packaging for ESD sensitive items, using the Electronic Industries Association Standard EIA-471 symbol or equivalent.
- All containers must have material name, lot number, net weight, production date and expiration date.
- At least 2 skid labels (front and back), preferably 4 (all four sides) with material name, lot number, number of containers and net weight.
- If skid has mixed lots, label must list lot number with how many containers of each lot.
- Skid should be properly wrapped.

5.3 Certification of Analysis (CoA)

Supplier will provide a copy of CoA with each shipment. The CoA needs to have the manufacture date listed. CoA paperwork must be with the load arriving at H.B. Fuller.

6.0 Corrective Action System

H.B. Fuller requires Supplier to utilize a closed-loop corrective action system when problems are encountered in their manufacturing facility, or after nonconforming product has been shipped to H.B. Fuller.

6.1 Corrective Action Process Approach

The corrective action system utilized should be similar to the process outlined below. The focus should be on identifying the root cause(s) of the problem and taking action to prevent its recurrence.

- Use a team approach
- Describe the problem
- Contain the problem
- Identify and verify root causes(s)
- Implement permanent corrective actions
- Verify corrective action effectiveness
- Close the corrective action

6.2 Supplier Corrective Action Request (SCAR)

H.B. Fuller issues a Supplier Corrective Action Request (SCAR) to Supplier when non-conforming products are found at incoming inspection, in production, in test, or by a H.B. Fuller customer. A SCAR can also be issued as a result of a Supplier audit. Supplier is required to respond by returning the completed SCAR form back to H.B. Fuller. The following provides a brief outline of the SCAR procedure:

- H.B. Fuller requires that Supplier take immediate containment action upon notification of the nonconformance. Supplier must submit a written response to H.B. Fuller, reporting the Supplier's initial observation and defining the interim containment plan within 48 hours of notification by H.B. Fuller. The Supplier's Initial Observation is an acknowledgement that Supplier has been informed of the problem, and has begun to gather information about the problem.
- The containment plan must clearly define the containment actions at Supplier's facility to assure that no nonconforming product is shipped to H.B. Fuller. If suspect product has already been shipped, Supplier must address all suspect stock in transit and any stock at H.B. Fuller. Supplier will assist H.B. Fuller in identifying customer risk by identifying all suspect lot numbers and associated quantities involved.

- Within 2 weeks after the initial notification, Supplier must report the results of the Supplier's investigation into the cause of the problem.
- Within 3 weeks from the initial notification date, Supplier must submit the corrective action to be taken to prevent recurrence of the problem, and the effectivity date (the date the corrective action will be implemented). Actions such as "train the operator," "discipline the operator," or "increase inspection," are typically not acceptable corrective actions.
- Supplier is required to keep H.B. Fuller informed of progress towards implementing the corrective action. When corrective action implementation is complete, Supplier and H.B. Fuller verify that the corrective action is effective in preventing the problem's recurrence.

7.0 Supplier Monitoring

H.B. Fuller continually monitors Supplier's product to ensure it continues to meet H.B. Fuller's requirements, and to ensure that Supplier continues to ship acceptable product. This may consist of:

- A Quality Management System surveillance audit at the Supplier's facility
- An on-site audit of the Supplier's control plan
- A random incoming inspection audit of a batch of product
- Source inspection of product at the Supplier's facility
- 1st batch inspection
- Review of Supplier-furnished data packages
- On time shipping performance, quality incidents, and SCAR responses.
- A Supplier progress review meeting conducted periodically at the Supplier's site or H.B. Fuller to review Supplier performance and progress

7.1 Supplier Audits

Periodically, H.B. Fuller may audit Supplier's Quality Management System. Supplier must make its facility available for on-site process verification by H.B. Fuller personnel at any time, with reasonable notice. This may be a full or abbreviated review of documentation and on-site audit. The purpose is to evaluate any changes that may have occurred in the Supplier's quality management system, and to assess Supplier's continuing commitment to quality improvement.

Periodically, H.B. Fuller may also audit Supplier's continuing conformance to the control plan approved in the first batch process.

7.2 Inspection Audits

H.B. Fuller expects Supplier to furnish material that conforms to all requirements, and that does not need to be inspected when H.B. Fuller receives it. Material that has not achieved Ship-to-Use status, or that is on STU suspension is inspected on a lot-by-lot basis. H.B. Fuller uses a C=0 sampling plan that rejects the entire lot when a single non-conforming product is found in the sample. At H.B. Fuller's discretion, in order to meet production requirements, 100% sorting may be done as necessary at Supplier's expense.

H.B. Fuller may inspect product at Supplier's facility to detect potential problems prior to shipment. H.B. Fuller may also inspect product at sub-tier Supplier.

7.3 1st batch Inspection

Supplier must perform annual 1st batch inspections of each product to verify continuing conformance of the product to the specification. This is also required if an engineering change affecting form, fit, or function occurs. The 1st batch requirement is not applicable to non-critical products.

For all sub-components, the manufacturing Supplier is responsible to ensure that the components that make up each assembly are qualified and monitored through the Supplier's own product qualification system.

At the discretion of H.B. Fuller, 1st batch can be postponed beyond, or required prior to, the annual expiration. Considerations such as component volume, program life cycle and Supplier/product performance are used in the decision to pull in or extend the requirement for 1st batch.

7.4 Supplier-Furnished Lot Documentation

H.B. Fuller may require Supplier to furnish inspection, test, process performance, or other quality data with each shipment to ensure that the product meets H.B. Fuller's specifications. When data submission is required, the data must accompany each shipment, or be e-mailed or faxed to H.B. Fuller at the same time the lot is shipped. All documentation must be clearly identified with H.B. Fuller's product number and Supplier's lot number.

When specified by H.B. Fuller, Supplier must submit data packages. Data packages must include copies of control charts and process capability calculations for specified characteristics and any other items required by H.B. Fuller.

Once Supplier has completed two consecutive quarters of data submissions, Supplier may request elimination of the data submission if records show that the characteristic consistently satisfies H.B. Fuller's requirements for process stability and process performance, and if the characteristic has caused no problems in H.B. Fuller's production. H.B. Fuller will notify Supplier in writing if the data submission may be discontinued.

8.0 Appendix (Available upon request)

Supplier Self-Assessment Questionnaire
Supplier Audit Form
New Supplier Assessment
SCAR Form
8D Form
Deviation Request Form

This Supplier Quality Manual is for informational purposes only and does not constitute an offer by H.B. Fuller to purchase or a warranty of any kind.