Supplier Quality Handbook
Good Quality Is Good Business

This handbook is intended to help production material suppliers understand Knoll’s expectations for supplying top quality components. It includes an overview of Knoll and the company’s approach to doing business, along with the procedures, required documentation and expectations for supplier quality.

Our goal is to deliver cost-effective products of outstanding quality to our customers on time. Knoll’s Supplier Quality Handbook is designed to ensure that our suppliers understand their direct role in achieving that goal. If there are any questions or situations that do not appear to be covered by this handbook, they should be addressed with the appropriate Knoll representative.
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This Supplier Quality Handbook is designed to be and shall be interpreted as non-binding statements of intention. The written agreements between the parties will outline the rights, duties and responsibilities between the parties. Knoll expressly reserves the right to do business with suppliers and to amend or terminate its relationship with its suppliers as it deems appropriate, with or without notice.
Company Information

Good Design Is Good Business

Since its founding more than 60 years ago, Knoll has helped customers realize the value of design in the modern office. Knoll and its supplier partners have a tradition of working closely with its customers to create solutions to meet their specific needs. Knoll’s design approach, founded on careful listening and innovative thinking, considers the potential of new inventions, the impact of new materials and the emergence of new workplace models.

Design integrity has been Knoll’s guiding principle.

Knoll is firmly committed to sustainable design and environmentally responsible manufacturing. Knoll structures the company around the belief that strong, healthy relationships make for strong, healthy business.

Sharp and stylish, Knoll has established an international reputation for design leadership in the furniture industry. Knoll’s products and furnishings have been revolutionizing the workplace and the home since the 1940’s. Knoll creates a comprehensive range of high-quality furniture products, textiles and accessories that offer choice and value to its customers.

Knoll office systems offer choice at every level, from the method of organizing space to the location of power and data support at the desktop. Knoll’s office systems furniture can define or adapt to virtually any office environment. Knoll designs its systems to stand the test of time: non-obsolescence is a core goal of Knoll designers.

Knoll designers have played a leading role in chair design for 65 years. This tradition of integrated engineering and aesthetics continues in Knoll’s collection of seating today. Knoll seating offers superior ergonomic support, comfort and quality at every level and for every use, from executive and task chairs to seating for conference and meeting rooms and reception areas.

Knoll storage products maximize storage capabilities without compromising available workspace. They can be used as stand-alone furniture, in conjunction with other Knoll office systems or even in open-plan or collaborative workplace environments. Knoll also creates stand-alone and adjustable desks, as well as conference, training, café, and dining tables.

These specialty products of Knoll reinforce its commitment to design leadership by offering customers a portfolio of modern classics and contemporary innovations for the workplace and include KnollStudio®, KnollTextiles™, KnollExtra®, and Spinneybeck®.

Knoll’s commitment to service is an integral part of every facet of its business.

Knoll measures service in the customers’ terms – what they want, when they want it.

Reliability. That’s how Knoll sustains the innovation, service, and design vision that define the Knoll experience.

Knoll operates four manufacturing sites in North America – one in Pennsylvania, one in Ontario, two in Michigan and two in Italy – all of which are ISO 9001:2000 and 14001 certified.

Knoll also has two manufacturing facilities in Italy. Knoll has implemented a culture of continuous improvement throughout its product development and manufacturing operations, targeting quality and customer satisfaction. Knoll’s Lubin facility in East Greenville, Pennsylvania has earned a Gold Level LEED® (Leadership in Energy and Environmental Design) certificate from the U.S. Green Building Council.
Knoll acknowledges its role in the support of small and disadvantaged businesses in meeting its customer’s needs.

Knoll believes that pursuing diversity in its supply chain advances economic opportunity, enhances the communities in which it operates, supports its overall business objectives, and promotes the development of innovative business solutions, which benefit its customers.

It is Knoll’s policy to select and purchase from suppliers who offer the greatest value. Within this general policy, Knoll will make a reasonable effort to ensure that small, HUBZone (Historically Underutilized Business Zone), disadvantaged, woman-owned, veteran-owned, service-disabled veteran and multicultural businesses have an equitable opportunity to compete for contracts as suppliers of materials and services to Knoll. The Multicultural Program and its goals are some of many factors in Knoll’s supplier selection process. Certifications by federal and/or independent agencies with jurisdiction are gathered as part of the program. Knoll encourages eligible suppliers not certified to become so.

Knoll routinely seeks to solicit and develop its relationships with small, HUBZone, disadvantaged, woman-owned, veteran-owned, service-disabled veteran and multicultural businesses by offering support in engineering, design, information systems and other business assistance programs. These offerings are consistent with those available to all suppliers of subcontracted materials and services to Knoll. In addition, Knoll works to identify candidates and opportunities for these suppliers with the National Minority Supplier Development Council and the Women’s Business Enterprise National Council.

Life™ Chairs
Environmental Policy

Knoll's Environmental Principles

- Protection of the Biosphere: Knoll is committed to helping safeguard all habitats affected by its operations.
- Sustainable Use of Natural Resources: Knoll strives to make the best use of natural renewable resources, such as water, soil and forests, and to conserve non-renewable natural resources.
- Waste Reduction and Disposal: Knoll reduces, recycles and disposes of all waste using safe and responsible methods.
- Conservation: Knoll conserves energy by improving the efficiency of its internal operations and the goods and services it sells, and by making efforts to use environmentally safe and sustainable energy resources.
- Risk Reduction: Knoll strives to minimize the environmental, health and safety risks to its associates and communities where it operates.
- Safe Products and Services: Knoll reduces and, where possible, eliminates the use, manufacture or sale of products and services that cause environmental damage as well as health or safety hazards. Knoll will inform its customers of the environmental impact of its products and use independent testing to help assure the safety of its products.
- Environmental Restoration: Knoll complies responsibly with the law to address conditions it has caused that endanger health, safety, or the environment.
- Informing the Public: Knoll complies with the law to inform, in a timely manner, those who may be affected by conditions caused by its operations that might endanger health, safety or the environment and encourages its associates to report dangerous incidents or conditions to management.

Environmental Commitment

Knoll has a proud history of environmental activism and responsibility. At Knoll, environmental responsibility is an ethic. Each year Knoll strives to embrace a higher standard of environmental activism and sustainability, measuring the ecological effects of materials, processes and products.
Knoll expects its suppliers to be environmentally conscious by working with Knoll during the development process to investigate appropriate material alternatives. As part of Knoll’s program to enhance the sustainability attributes of its products, Knoll will request certain information about each product, including product recycled content (both post-consumer and post-industrial), Material Safety Data Sheets (MSDS), and product wood certification (categories A, B and C). Suppliers will be sent a request form on which they submit the information at the appropriate time. For new product launches, this information is required as part of the First Article Inspection Report (FAIR) submission before production approval is given.

A supplier must also meet the following Purchased Part Environmental Specifications:

### Indoor Air Requirements

The following average formaldehyde emission factors are required for the commodities listed below.

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Formaldehyde Emission Factor (EF) (ug/m² hr)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiberglass (low density)</td>
<td>46.5</td>
<td></td>
</tr>
<tr>
<td>Fiberglass (high density) w/ attached mat</td>
<td>50.0 - 70.0</td>
<td></td>
</tr>
<tr>
<td>Particle board</td>
<td>456 - 659</td>
<td>Emission rate will vary based on thickness</td>
</tr>
<tr>
<td>Plastic laminate</td>
<td>41.5</td>
<td></td>
</tr>
<tr>
<td>Gatorply backer</td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>

Note: Adhesive and coating shall be supplied without added urea or phenol formaldehyde.

### Recycling Requirements

All production materials supplied shall meet the minimum recycled content as listed below.

<table>
<thead>
<tr>
<th>Material</th>
<th>Recycled Content</th>
<th>Post Consumer Recycled Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel</td>
<td>25% - 30%</td>
<td>16%</td>
</tr>
<tr>
<td>Aluminum Extruded</td>
<td>20%</td>
<td>n/a</td>
</tr>
<tr>
<td>Aluminum Cast</td>
<td>70%</td>
<td></td>
</tr>
<tr>
<td>Paper products</td>
<td>75%</td>
<td>75%</td>
</tr>
<tr>
<td>Wood products</td>
<td>80% - 100%</td>
<td>Greater than zero</td>
</tr>
<tr>
<td>Plastic products</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>High Density Polyethylene (HDPE)</td>
<td>95%</td>
<td>70% - 75%</td>
</tr>
</tbody>
</table>

Note: If noted on the applicable engineering drawings, major parts shall be stamped with a composition code for future recycling. The Society of the Plastics Industry (SPI) resin identification code shall be used. Major plastic part refers to a main part of the component and is integral to the design of the component. For example, items considered as a major component would be an overhead bin door, pencil trays or base cover.

### The following controlled wood categories shall not be used in the manufacture of Knoll purchased products:

- Wood harvested from forest areas where traditional or civil rights are violated.
- Wood harvested from non-FSC certified forest areas having high conservation values that are threatened or not managed using sustainable forest practices.
- Wood harvested from primary tropical moist forests that are not managed using sustainable forestry practices as verified by an independent third-party audit.
- Wood harvested from intact forests as defined by World Resources Institute’s (WRI) Global Forest Watch mapping as they are developed.
- Wood harvested from primary forests in temperate or boreal forest regions that are not managed using sustainable forestry practices as verified by an independent third-party audit.
- Wood harvested from genetically modified (GM) trees.
- Illegally harvested wood.
- Natural forests that have been converted to plantations or non-forest use.
Quality Policy

It is the policy of Knoll to deliver Total Quality goods and services and that all associates perform their duties with a customer-focused attitude and Total Quality consciousness.

General Quality Requirements

All materials used in part manufacture shall satisfy current legal and regulatory requirements for restricted, toxic and hazardous substances applicable to both the location of manufacturing and location of the customers. Knoll will define, as necessary, the specific requirements for volatile organic compound (VOC) emissions and the recycled content of products to meet customer needs.

Packaging methods and materials used by the supplier must ensure satisfactory protection against damage, contamination and corrosion during shipment. Knoll will define specific packaging requirements and materials when necessary. Labels for Knoll products received from suppliers need to have the following information:

- Knoll part number
- Knoll part revision level
- Quantity in box
- Knoll purchase order number
- Supplier manufacture date or lot code

Supplier Quality Expectations

Supplier quality design and manufacturing systems should prioritize defect prevention above defect detection. Both countermeasures should be confirmed on a regular basis to ensure that good products are consistently supplied to Knoll. Sub-suppliers should also be held to the same quality expectations and it is the responsibility of the tier-one supplier to ensure that these expectations are met, which include the following items:

- Zero defects
- On-time deliveries
- Competitive prices
- Technical support
- Statistically based continuous improvement implementations

At Knoll, Quality is defined as “conformance to requirements” that are comprised of engineering drawings, Knoll QAR’s and testing requirements.

Engineering Drawings

- Standard dimensions and tolerances
- Critical dimensions and tolerances as indicated by the ellipse symbol around certain dimensions on the drawing
- Raw material requirements, including Material Certifications supplied by raw material suppliers
- Notes and/or special processing instructions
- Any other applicable information to ensure a solid design

Knoll Quality Assurance Requirements (QAR)

- Developed with the supplier to ensure that the quality expectations are clearly defined and agreed upon and include such things as color, texture, visual details and items that are better quantified in words than with numbers.

Testing Requirements

- BIFMA (Business & Institutional Furniture Manufacturers Association) as provided and indicated by Knoll Engineering for each specific supplied part.
- Knoll testing requirements as provided and indicated by Knoll Engineering for each specific supplied product.
Purchasing Policy

It is expected that all suppliers will provide economic benefit to Knoll’s supply chain and understand Knoll’s customer needs. In addition, while Knoll seeks a mutually beneficial relationship with all its suppliers, it reserves the term “partnership” for those special relationships continually characterized by:

- A joint commitment to information exchange, planning, continuous improvement and cost reduction
- Agreed-upon measures of key performance factors that are met.
- The sharing of risk to achieve mutual benefits
- The supplier maintaining a leadership position in technology, service and cost
- The supplier being actively involved in Knoll’s new product design and development
- The willingness of the supplier to enter into a contractual agreement that clearly demonstrates their complete responsibility for their product
- The execution of a Knoll Purchasing Agreement

Knoll expects each of its associates to adhere to the Knoll Quality Policy - the expectation of its suppliers is nothing less. Knoll’s associates are given every opportunity to succeed. Suppliers will also be given that opportunity; as partners, suppliers own a portion of the responsibility in creating that opportunity.

Knoll’s customers demand that it stay ahead of the competition with better quality, leadership in design, and shorter leadtimes.

An absolute requirement is the delivery of 100% complete, correct, and on-time goods and services that meet or exceed expectations.

Strong supply-chain communication will help to create a win/win/win relationship between our suppliers, Knoll and our customers.

Supplier Selection Requirements

Potential new suppliers will be evaluated on, among other things, their capability to meet Knoll’s requirements of Quality, Cost and Delivery. Knoll’s supplier selection is based on the following items:

- Completion of a “Supplier Self-Assessment Profile” form which is then submitted to Knoll for review.
- A supplier’s industrial experience and capability to meet the needed processes to ensure the supply chain will be as strong as it can be.
- Evaluation of the supplier to assess its acceptability in regard to factory conditions, technical capabilities, quality systems, environmental and multicultural programs, as well as commitment to improvements in Quality, Cost and Delivery.
- Communication and ease of doing business.
- The demonstrated ability of the potential supplier’s to be cost-competitive and deliver products on time to its customers on a consistent basis.

Once selected, a Knoll production material supplier will be expected to maintain the same high level of capabilities throughout the relationship.

Paperwork Requirements

To ensure proper receipt of goods and timely payments to its suppliers, Knoll requires the following information to be clearly indicated on these documents:

<table>
<thead>
<tr>
<th>Paperwork Requirements</th>
<th>Packing Lists</th>
<th>Invoices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Knoll Purchase Order</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>(Each purchase order number must be invoiced separately)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line Item Number</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>(Multiple items not recommended per invoice)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knoll Part Number</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Quantity Shipped/Unit of Measure</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Ship To Address</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Supplier Name and Address</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Packing List Number</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Unit Price, Extended Price</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>“Bill To” must be Knoll address as indicated on PO</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Payment Terms</td>
<td></td>
<td>✔</td>
</tr>
</tbody>
</table>

Any product that will ship directly to another supplier or customer of Knoll requires notification to the purchaser within two (2) business days. Copies of packing lists and bills of lading will be required.

Documentation that does not include this information can result in delayed payment or possible return of inaccurate invoices.
Knoll utilizes the Production Part Approval Process (PPAP) with its suppliers to ensure that the parts supplied will be of the best quality. Detailed documentation on PPAP is available for purchase at the Automatic Industry Action’s Group website at www.aiag.org. Blank forms can be provided by Knoll, or the supplier may use its own existing forms if agreed upon by Knoll. Overviews of Knoll’s quality Documentation Requirements that directly relate to supplier activities and to parts supplied to Knoll are described in the following sections. The sample documents shown are only for reference and do not reflect any actual data.

These requirements have been created to provide a consistent method to monitor the quality of the products and services from Knoll’s supplier base in accordance with ISO 9001:2000 requirements.

A supplier’s compliance with these procedures is essential to both companies’ success.

All quality documentation shown is developed during the preproduction phase of a new project, a tool or process relocation, or changing of a supplier for an existing Knoll product, and will be updated by the supplier when any engineering, process or quality specification is changed throughout the life of the product. These changes will be reviewed by Knoll for approval prior to implementation. Knoll works closely with its suppliers and these submitted documents are utilized to ensure that good products are consistently supplied to Knoll.
Supplier Quality Documentation Requirements

All parts and components purchased for Knoll produced parts must adhere to the Knoll Quality General Requirements and the completed documentation submitted to Knoll as outlined below.

1. Process Flow Diagram
2. Process Failure Modes Effects Analysis (PFMEA)
3. Process Control Plan
4. Gage Repeatability and Reproducibility (R&R) Study
5. Material Certification
6. Appearance And Color Approval
7. 30 Piece Capability Study
8. Part Submission Warrant
9. First Article Inspection Report (FAIR)
10. Production Part Dimensional Report
1. Process Flow Diagram

A visual map of the production process showing inputs, outputs and units of activity, including decisions, receiving, shipping, planned inspection, rework or repair.
Supplier Quality Documentation Requirements, Continued

2. Process Failure Modes Effects Analysis (PFMEA)

A systematized technique that identifies and determines the severity, frequency and likelihood of potential failures of a manufacturing process to prioritize improvement actions. The main purpose is to aid in the prevention of defects through prioritization, although this technique also shows where detection or prevention of defects may need to be put in place.

3. Process Control Plan

Written descriptions of the system for controlling production parts at each process written by the supplier to address the critical characteristics and engineering requirements of the product. Each of the supplier’s manufacturing processes defined in the Process Flow Diagram must have its own Process Control Plan.
4. Gage Repeatability and Reproducibility (R&R) Study

Used to ensure that the specialty gages are capable of consistently and accurately measuring products. Gage R&R is a statistical method that accounts for the amount of variation in a measurement system from the measurement device, the people performing the measurement, the interaction between them and the error seen from the parts. A maximum of 20% is required for all critical dimensional gages.

5. Material Certification

For certain commodity raw materials, a detailed sheet is supplied by the raw material vendor to a supplier, showing the chemical and physical properties of a particular production lot or run of raw material, which acts as a confirmation that the correct material will be used in the production of parts for Knoll. This document will look different depending on the commodity, the sub-supplier and other factors but should contain the same type of information. The supplier needs to receive this document with every order of raw material from its vendor, and keep it on file, for audit or inspection by Knoll at any time.
6. Appearance And Color Approval

Appearance Approval Report

A supplier-completed document listing quantified measurements of color, texture, and other visual specifications using applicable test equipment and techniques.

Color Approval

In office furniture, as well as with any home furnishing, the color of materials, whether wood, plastic, metal, textile or paint, is a primary concern to designers, architects and customers. The potential for a customer to order additional products at a later time requires that Knoll’s products not change color over time, to ensure matching of the initial purchase.

Knoll has put a great amount of effort into the standardization of its color program. A large investment in color measuring and monitoring equipment and technical training of associates has ensured that Knoll has reduced warranty costs relating to color issues.

Suppliers are required to formulate finishes and materials to Knoll’s master samples, and to submit color samples for approval just as they would any first article submission.

“Grand Masters” become the measurement standard for Production Color Masters. All Grand Master numerical color data is stored in Knoll’s spectrophotometer. Samples, when submitted for Production Master approval, are compared both numerically and visually to the “Grand Master”. Approved matching Production Masters will be maintained at the supplier and at Knoll. Numerical data is maintained in the spectrophotometer for future comparisons.
7. 30 Piece Measurement Capability Study

A statistical process performed on all critical dimensions of a part whereby an appropriately sized population of parts (minimum 30 pieces) are measured to statistically determine the total range of inherent variation and stability of the manufacturing process.

\[
C_p = \frac{(USL - LSL)}{6\sigma}
\]

\[
C_{pk} = \min\left\{\frac{(USL - \bar{X})}{3\sigma}, \frac{(ar{X} - LSL)}{3\sigma}\right\}
\]

- \(C_p\) = the capability of the process
- \(C_{pk}\) = the deviation between the target and the mean
- \(USL\) = the upper specification limit
- \(LSL\) = the lower specification limit
- \(\sigma\) = the standard deviation of the sample population
- \(\bar{X}\) = the mean of the sample population

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8. Part Submission Warrant

A process performed on all parts or parts that have been revised for dimensional changes, new or revised tooling, manufacturing processes or tooling that has been relocated, and any product produced by an alternate or new process method. This process, including the First Article Inspection Report (FAIR) should be followed and submitted to Knoll if there are any of these changes with Knoll’s sub-suppliers as well as its tier one suppliers.
9. First Article Inspection Report (FAIR)

Suppliers are required to submit three representative samples from production materials, tooling, processes, gages, operators and environment and document findings on all characteristics and dimensions specified by Knoll. The FAIR submitted to Knoll by the supplier must include the following items:

- A marked drawing with all dimensions and specifications identified by ballooned numbers.
- One sample part from the submitted samples must have a full dimensional check, which includes all dimensions and specifications listed on the drawing.
- The remaining required two FAIR sample parts need only the major and critical dimensions and specifications checked as indicated by the nomenclature on the drawing.
- The dimensional data submitted to Knoll must include:
  - The nominal dimension as it corresponds to the ballooned numbers on the drawing
  - The upper and lower tolerances for all dimensions
  - The actual part measurement
  - The out-of-tolerance amount indicated with + or – as applicable
- The report should also indicate the methods of measurement and/or testing for each of the specifications checked.
- Any aesthetic or dimensional concerns should be noted.
- Any differences between the First Article samples submitted, and the regular production (methods, tooling, equipment, material, adjustments, etc.) should be indicated.
- For parts with a color finish, the CIE-LAB (International Commission on Illumination, Light/Dark, Red/Green, Blue/Yellow) measurement is required for all colors specified. Actual parts should be measured. The data should indicate illuminate, angle of observance, and color formula used (i.e. CIE-LAB, FMC II).
- The FAIR package should also include a Process Control Plan for all new parts and a revised Process Control Plan when the revision alters the existing Process Control Plan.
- Material Certification data is required, where applicable, to ensure conformity with the material requirements indicated by Knoll, to ensure that the specifications are being met.
- Environmental data as applicable, including product recycled content (both post-consumer and post-industrial), Material Safety Data Sheets, and product wood certification.

Upon completion of all the requirements of the FAIR, the supplier will send three sample parts and documents to its Knoll Quality Assurance representative for review. Upon approval, Knoll will provide a signed document indicating approval to proceed with production.
10. Production Part Dimensional Report

A three-piece measurement analysis submitted with every preproduction sample, consisting of a measurement of all dimensions on one part and all critical dimensions, as defined on the drawing of two other parts. If needed, this document will also accompany production shipments and show data for critical dimensions for three parts. It confirms that the parts shipped meet all other agreed-upon specifications to ensure that Knoll does not receive discrepant material. Specific requirements concerning this document will be evaluated on a case-by-case basis.
Ownership Of Quality

Knoll relies on the principle of Ownership of Quality. This principle is applied internally at Knoll as well as to its suppliers. The production and delivery of quality products are the responsibility of everyone in the supply chain.

When new suppliers or products are introduced at Knoll, or when component quality concerns are noted, inspections will be conducted until acceptable quality levels are assured.

Characteristics subject to inspection may include dimensions, material properties, testing performance, and color/finish/feel properties. Any inspections needed are required to be performed prior to Knoll’s warehouse receipt of material from the supplier and are to be conducted in accordance with the quality specifications agreed upon with Knoll.

In the event Knoll is supplied with product that does not meet its specifications or for which a specification does not exist; discrepant material in the work environment can lead to production slowdowns, costly rework time, no-build situations or, at worst case, a dissatisfied end customer. Knoll requires that suppliers notify it if any of the following conditions exist or arise:

- The supplier has been supplying product under unauthorized specifications, written notes, verbal instructions, etc.
- The supplier has been supplying product known to differ from the part drawing or specifications.
- The supplier discovers, during production, that material produced is out of Knoll specifications.

The type and magnitude of the discrepancy will determine the action taken by Knoll. Rejections can trigger:

- Discrepant Material documentation and needed supplier actions
- Product moved from a “ship-to-stock” status to an “inspection-upon-receipt” mode.

In the event Knoll is supplied with product that does not meet its specifications or for which a specification does not exist; discrepant material in the work environment can lead to production slowdowns, costly rework time, no-build situations or, at worst case, a dissatisfied end customer. Knoll requires that suppliers notify it if any of the following conditions exist or arise:

- Issuance of a Supplier Corrective Action Request (SCAR)
- Supplier on-site sorting of product at Knoll
- Supplier replacement of the parts, with expedited freight as needed.
- On-site audits, by Knoll quality and/or purchasing personnel, of the supplier’s facility.
- Warranty claims
- Negative impact on Supplier Rating, which could affect the opportunity for receiving business from Knoll
- Requirement of the supplier to pay for the total cost incurred by Knoll caused by the discrepancy

Suppliers are expected to be responsive and timely with their corrections to any issues that may arise and to take ownership of quality for their products.
Discrepant Material Procedure

Any non-conforming purchased product that does not meet the agreed-upon specifications will be documented by Knoll as a Rejection Notice (RN) with a copy being sent to the supplier requiring that they decide on the disposition of the material. When an RN is created, a copy is sent to the supplier to inform it that there will be an upcoming debit on future payments.

Disposition of non-conforming purchased product can be worked out with the appropriate Knoll contact for each occurrence.

The supplier may choose to allow Knoll to directly scrap the parts, or the supplier may request that Knoll return the defective parts, at the supplier’s expense, to allow a thorough root-cause investigation and permanent corrective actions to prevent any future recurrence of the problem.

The supplier is expected to work with the appropriate Knoll representative to ensure that the specific quality problem does not recur in the future and to complete any needed quality paperwork, such as a Supplier Corrective Action Request. Any countermeasures implemented may be audited during a future Knoll visit. Knoll’s corporate Supplier Quality department may also become involved, as needed.

For the rejected parts, Knoll will debit the supplier for the cost of the products, and any incoming freight charges, as well as a potential processing fee for each rejection notice written. Details of applicable charges will be worked out by the Knoll materials group and the supplier on a case-by-case basis.

If replacement parts are required to fill a gap in the supply chain due to the rejection, Knoll expects its supplier to take any and all necessary steps to produce new product that meets all specifications and to deliver the product so that it arrives at Knoll in a timely manner to satisfy Knoll’s manufacturing requirements.
The Knoll Supplier Corrective Action Request (SCAR) form is used in any of the following situations:

- Material is not rejectable, but the level of quality is becoming a concern
- Clarification of a major rejection
- An addendum to a First Article Inspection Report (FAIR)
- Additional information is needed to determine appropriate receiving inspection levels
- When non-conforming supplier material is found at Knoll or a Knoll customer

Knoll’s suppliers are required to answer all inquiries by the due date indicated on the SCAR form.

If the supplier misses the due date without contacting Knoll Quality Assurance, Knoll Purchasing may request the supplier to visit Knoll to clarify the quality issue and corrective actions.

The completed form should be sent to the Quality Assurance Department.
Knoll suppliers are rated for their delivery and the quality accuracy of their supply of production parts. All measured components – Quality, On-Time Delivery, Cost and paperwork accuracy are combined for a composite score and are reported regularly to the Knoll Purchasing department for evaluation.

The Supplier Rating value is a strong component in supplier selection decision for the awarding of new Knoll business as well as retaining any Knoll supply relationship.

It is also the cornerstone of Knoll’s Quality Recognition Program, where positive ratings can allow suppliers to have a preferred status for new business quoting and possible awards.

Suppliers not meeting the agreed-upon standards will be considered for elimination if they cannot implement acceptable corrective actions to problems encountered.

Knoll reserves the right to visit a supplier’s manufacturing facility or escort a customer to a supplier to ensure the quality of purchased materials.
Knoll utilizes a number of continuous improvement tools such as Kaizen events, Six Sigma analysis, Value Stream Mapping, set-up time reduction, 5-S programs, Mistake Proofing, Lean principles and Total Productive Maintenance. Knoll’s activities involve all of its associates and supply-chain partners in evaluating and improving quality, shortening Delivery leadtimes, improving Safety in all areas of the supply chain, and reducing Costs by eliminating waste in its many forms. These continuous improvement activities within the complete supply chain will improve Knoll’s competitiveness in the ever-growing global market and ensure future opportunities for its suppliers and associates.
Supplier Checklist

The following checklist is intended to aid the supplier to ensure compliance with Knoll’s Supplier Quality Guidelines outlined in this brochure.

Initial Supplier Establishment and Preproduction Activities

☐ Supplier Self Assessment Survey completed and submitted to Knoll
☐ Knoll visit and audit of supplier’s manufacturing facility
☐ Supplier understands all of Knoll’s requirements
  • Engineering specifications
  • Environmental requirements
  • Testing requirements
  • Quality specifications and Quality Assurance Requirements
  • PPAP requirements
  • Color and texture requirements
  • Packaging specifications
  • Quoting requirements

Production Part Approval Process

☐ Design records (part drawings, industry specifications, CAD/CAM files, engineering change documents, etc).
☐ Process Flow Chart
☐ Development of Knoll Quality Assurance Requirements (QAR)
☐ Process Failure Modes Effects Analysis (PFMEA)
☐ Process Control Plans
☐ Drawings and/or descriptions of specialty gaging or measurement equipment to be used for production parts
☐ Gage Repeatability and Reproducibility study for all specialty gages
☐ Material Certifications
☐ Design engineering approval via Knoll’s FAIR and Functional Approval
☐ Successful test results, including material certification with structural testing when required
☐ Process Capability Studies on at least 30 pieces for all critical dimensions
☐ Appearance approval report and color approval
☐ Environmental information of recycled content, air quality testing data and MSDS
☐ Part Submission Warrant
☐ Dimensional results via Knoll’s First Article Inspection Report (FAIR)
  • 1 piece ALL dimensions
  • 2 pieces all CRITICAL dimensions
☐ Knoll approval to begin producing production parts

Production Parts Supply

☐ Production Part Dimensional Report when applicable
☐ Knoll label requirements
☐ Knoll part number and revision level, quantity in box, Knoll purchase order number, and supplier’s manufacture date or lot code
☐ Packing lists and invoices contain all of the required Knoll information
☐ Supplier is utilizing all items listed in PPAP documentation and will consistently supply the highest quality parts to Knoll on time
☐ On-going continuous improvement of Quality, Cost and Delivery
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