



Diamond Innovations

Supplier Quality Manual

WORTHINGTON, OHIO

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SECTION

1

OVERVIEW

This Supplier Quality Document is intended to assist current direct material suppliers and potential new direct material suppliers with the basis for understanding the quality expectations of Diamond Innovations.

1.1 Statement of Purpose and Intent

A total commitment to customer satisfaction and continuous quality improvement must be shared by Diamond Innovations and all direct material suppliers. As part of the supply chain, together we must maintain effective quality management systems if we are to remain competitive in the market place. Diamond Innovations quality is complemented by the combined efforts of our direct material suppliers.

It is the intent of Diamond Innovations to purchase from suppliers who consistently meet expectations for quality, delivery, value and service. This manual is a tool to inform suppliers of Diamond Innovations expectations and how suppliers will be measured against these requirements.

1.2 Application

The requirements stated in this manual do not replace or supersede any of the purchase order, engineering drawing or specification requirements. They do not relieve the supplier from the responsibility of ensuring that all materials supplied meet all of the requirements specified by Diamond Innovations.

1.3 Validation of Supplier Quality

Diamond Innovations adheres to the requirements of ISO 9001:2008 as the fundamental quality management system

standards. Suppliers with current registration to ISO 9001:2008, or a recognized equivalent will be preferred potential suppliers to Diamond Innovations. It is expected that these suppliers will maintain all elements of the quality system as defined in the applicable standard.

To assure Diamond Innovations' expectations are met, on-site surveys, self-surveys and supplier profile information may be requested from potential or current suppliers. Other disciplines subject to evaluation via on-site surveys may include, but are not limited to, management structure, cost, delivery, technology, and the supplier's expertise in lean production techniques.

SECTION

2

SUPPLY BASE
MANAGEMENT

2.1 Organizational Responsibility

All raw material and component purchases are managed thru Diamond Innovations' sourcing team. Under this structure, each raw material or component is assigned an internal Diamond Innovations part number, or engineering specification for qualification to ensure consistent sourcing considerations across all suppliers. The sourcing department is responsible for establishing a list of suppliers to submit quotes, award new business, and establish commercial terms and conditions.

2.2 New Suppliers

A new supplier is defined as a company that Diamond Innovations has not purchased production materials from in the last 2 years, at Diamond Innovations' discretion. All new suppliers must be qualified prior to the awarding of new business. The complete list of approved

suppliers is maintained by the sourcing department. Profiles are updated when supplier information changes. Requests for updates are made manually.

SECTION

3

QUALITY PLANNING

3.1 Product Quality Planning

Product quality planning is a structured method of defining and establishing the steps necessary to assure the product satisfies the customer. Suppliers must understand that their material is critical to Diamond Innovations' process.

3.2 Critical to Quality Characteristics

The purpose of Critical to Quality (CTQ) Characteristics is to aid in the economical manufacture of quality products. CTQs require extra controls because excessive variation may affect product performance or the quality of subsequent manufacturing operations. Diamond Innovations will identify CTQs by placing an asterisks (*) next to the specification.

3.3 Control Plan

The supplier shall develop control plans at the system and/or component level for the product supplied. Throughout the product launch process, the technology and sourcing personnel at Diamond Innovations will work closely with suppliers to communicate all necessary planning and delivery information. The control plan should cover three distinct phases:

- Engineering Samples – A description of dimensional measurements, material, and performance tests that will occur during the initial phase.

- Development Drawings – A drawing is provided to the supplier, an agreement shall be reached to produce the parts within specification at an agreed upon price.
- Production – The supplier will be given the production released drawing from sourcing. The supplier will be expected to have the necessary process controls in place to deliver qualified material within the stated lead time.

The Diamond Innovations sourcing department will notify suppliers of any revisions to production drawings as they occur.

SECTION

4

ONGOING QUALITY REQUIREMENTS

4.1 Material Certifications and Certificates of Compliance

Approved suppliers are required to submit certificates of compliance and/or material certifications with each shipment of material unless otherwise agreed upon. These certificates should state actual test results and measurements for each characteristic listed on the drawing/specification or Diamond Innovations inspection criteria. The material certification should identify the purchase order, lot or batch and specific quantity of material tested and covered by the certification. The certification may include, but is not limited to, the following:

- Dimensional Results – The supplier shall provide evidence that dimensional verifications required by the drawing have been completed and results indicate compliance with specified requirements. The supplier will submit a copy of the results with each dimension, test, and or specification with a unique number.

- Material Test Results – The supplier shall provide test results when chemical, metallurgical, dimensional, physical, electrical, and reliability requirements are specified.
- Performance Test Results – The supplier shall ensure that all tests are completed when performance or functional requirements are specified. With disclosure on the certification, suppliers may use outside accredited lab/test facilities to perform required tests.

The Material Certification must be provided to Diamond Innovations before or at the time of material arrival. If certification is not received prior to or upon material arrival, a corrective action will be requested and will impact the supplier's performance rating. When not required to send material certification, the supplier will maintain records of material compliance at the supplier facility for a minimum of 2 years. The records shall be made available upon request by Diamond Innovations.

4.2 SPC and Process Capability

Statistical Process Control information may be required to be submitted to Diamond Innovations on a regular basis as supporting verification of material quality.

CTQs identified by specifications or drawings or other quality acceptance criteria shall be recorded and monitored with out-of-control conditions noted and acted upon. Suppliers shall ensure that out-of-control material is verified as compliant to specifications before release for shipment to Diamond Innovations. Special causes of variation should be investigated, identified and eliminated.

Where applicable, Cpk shall be calculated and monitored to ensure long-term process capability of material supplied. Suppliers shall target a minimum Cpk of 1.5 to ensure production with minimal variation. Other

measures of long-term capability and stability of material will be considered on a case-by-case basis depending on the type of process and risk level of the material provided.

4.3 Nonconforming Material

Nonconforming material should be contained and quarantined when identified. Suppliers are responsible for ensuring proper procedures to avoid cross contamination.

Suppliers must obtain pre-approval from a Diamond Innovations sourcing leader before any shipment is made of nonconforming or suspect material. The supplier may be liable for any damage/injury resulting from the use of unapproved non-conforming material.

Shipments of non-conforming material received by Diamond Innovations without pre-approval will count against the supplier's quality performance score. Quality performance will be communicated to the supplier by the sourcing team.

4.4 Notification of Nonconforming Material after Shipment

A supplier must immediately notify Diamond Innovations purchasing department if it is discovered that nonconforming material may have been shipped to Diamond Innovations. Immediate notification should be made by telephone followed by written documentation of the problem, lot size, shipment dates, etc.

4.5 Disposition of Nonconforming Material

If material is rejected, Diamond Innovations reserves the right to reject the entire lot or make other disposition. Diamond Innovations sourcing department will notify the supplier. Diamond Innovations utilizes a structured system for identification, containment, and disposition of supplier nonconforming material. A cross-functional team convenes as necessary

to evaluate the risks of using the nonconforming material and considers the impact on the production schedule and customer delivery.

4.6 Chargeback

If shipment of nonconforming product requires Diamond Innovations to implement containment and inspection actions, the supplier can be held responsible for the cost of labor, material handling and rejections. If containment action is required, the supplier will be contacted for approval to:

- Use a third party sorting source at supplier's expense
- Scrap parts in house
- Rework and / or sort material at Diamond Innovations
- Return product to supplier at suppliers expense

4.7 Supplier Corrective Action Requests

Diamond Innovations will issue a request for corrective action when a quality issue occurs. Issues requiring a response from the supplier will be communicated in a timely manner. Suppliers are expected to use a structured problem solving technique to generate a response plan within 10 days with corrective actions that permanently eliminate the root cause of the defect. Structured responses are expected in a Diamond Innovations' provided form and should be submitted via e-mail to the appropriate purchasing personnel.

4.8 Material / Process / Equipment Changes

Diamond Innovations expects our suppliers to demonstrate an effective change management process to ensure that changes do not adversely affect material quality. All potential changes should be requested in writing and must have the approval of appropriate Diamond Innovations personnel prior to implementation.

Diamond Innovations may require test samples for plant trial run requirements prior to implementation. Failure to seek approval for changes negatively impacting material could result in "chargeback" actions taken (See Section 4.6) and / or product disqualification.

4.9 Packaging / Labeling

Labeling requirements may be developed and agreed upon prior to delivery of material. Diamond Innovations purchasing personnel may work with the supplier to develop packaging specifications, quantities, and label identification requirements for material safety, accuracy in performance reporting, quality issue containment practices and logistics information requirements.

Suppliers are responsible for necessary label content requirements to maximize effective traceability. Diamond Innovations expects suppliers to define and maintain total lot traceability with all supplied parts.

SECTION

5

SUPPLIER PERFORMANCE

5.1 Purpose

The purpose of providing supplier performance feedback is to communicate to suppliers an assessment of their performance. Feedback also provides an internal measurement system in order to better evaluate and manage Diamond Innovations' supply base along with assisting in determining new business awards.

5.2 Frequency of Assessments

Supplier performance feedback will be provided to suppliers on a minimum of an annual basis,

where applicable. Overall performance of suppliers assists in determining frequency of assessment and / or audits.

5.3 Performance Rating

Suppliers are rated with respect to their pricing, quality, delivery and responsiveness. Diamond Innovations utilizes statistical data to provide an objective performance rating for suppliers and identify action requirements for unacceptable levels of performance. The ratings for responsiveness are combined with the performance rating for a total supplier score.

5.4 Unsatisfactory Levels of Performance

A supplier with a “Probationary” level of performance is required to submit the necessary corrective actions to the Diamond Innovations’ sourcing leader.

In the event the formal corrective action plan is not acceptable or the rating does not improve within the agreed time frame, the supplier may be prohibited from receiving new opportunities until there is resolution.

Suppliers who demonstrate unwillingness to achieve mutually agreeable and effective corrective actions, or continue to maintain a “Probationary” level of performance, may be removed from the approved supplier listing.

5.5 Supplier Awards

Diamond Innovations will award exceptional supplier performance annually based on scorecard results.

REVISION HISTORY

Date	Rev #	Section	Description
04/26/11 Todora/rrh	0	Entire	New