



thyssenkrupp Engineered Plastics

Supplier Quality Manual

Contents

Quality Pledge.....	Error! Bookmark not defined.
Safety	4
Code of Conduct	4
Compliance	4
Communication of Requirements	5
Technical Data.....	5
Conditions Applicable to All Purchase Orders	6
Supplier Qualification Process	6
Supplier’s Incoming Material.....	6
Competence	7
Training Program	7
Interactions	7
Supplier Performance Monitoring	7
Onboarding Verification.....	7
Supplier Scorecard	7
<i>Quality Non-Conformance</i>	7
<i>On-Time Delivery</i>	8
Yearly Evaluations	8
Onsite Verification.....	8
Special Requirements.....	8
Handling, Storage, Packaging, Preservation, and Delivery.....	8
Product Identification and Traceability.....	8
Manufacturer Certs	9
Process Control	9
Certifications.....	9
Use of Customer Designated Suppliers	9
Control of Nonconforming Product	9
Non-conforming Material.....	9

Deviations	10
Corrective Action Reporting	10
Counterfeit Parts	10
Change Notice	10
Control of Subcontractors	10
Test Specimens	11
Control of Quality Records	11
Survey/Audit	11

Purpose

As a leader in the materials distribution industry, we understand the importance of creating and managing relationships with reliable and competitive suppliers who are committed to a long-term partnership with our company. Our vision is to have an integrated supply chain that mutually benefits all parties and meets or exceeds our customers' expectations. tkEP recognizes that in order to be a world-class company, we need to have world class suppliers. We look to partner ourselves with only those suppliers that produce a world-class product conforming to requirements and delivered on time. To do this, they should have operational excellence, be responsive, and be committed to tkEP.

The intention of this manual is to communicate how thyssenkrupp Engineered Plastics approves, monitors, and partners with their suppliers to be our customer's first choice. Suppliers must understand their contribution to Safety, Ethical Behavior and Conformity to Requirements. To the extent, the terms of this Supplier Quality Manual conflict with any applicable General Terms and Conditions of Purchase the Supplier Quality Manual will take precedence.

Safety

tkEP is committed to providing a safe work environment for all employees, customers, and suppliers. Because of the nature of our business and the possible consequences involved, we have a zero policy for risk-taking as it relates to safety. Our employees are empowered to take any action required in order to keep tkEP a safe place to work.

Code of Conduct

At tkEP, we expect our suppliers to comply with applicable national statute, the principles of the United Nations Global Compact, and with the thyssenkrupp Supplier Code of Conduct. Furthermore, we expect our suppliers to introduce suitable processes within their organizations that support compliance with applicable statutes and that drive continuous improvements with regard to the principles and requirements laid out in the thyssenkrupp Supplier Code of Conduct. Moreover, we expect our suppliers and their affiliates to ensure compliance with these principles and requirements. The current Supplier Code of Conduct and required Code of Conduct Declaration can be found [here](#) as part of our onboarding and monitoring processes, included evaluation.

Compliance

tkEP expects our suppliers to adhere to all applicable International, National, State, and/or Local Statutory & Regulatory Requirements. Commonly, material and services provided to tkEP are subject to the following regulations, and as a supplier, your duty is to comply with those that are required: Conflict Mineral Compliance, DFARS; ITAR; USMCA; REACH; ROHS; U.S. Customs and any compliance requirements stated or referenced on a purchase order. Part of our onboarding and monitoring process includes research tools to identify possible issues.

Communication of Requirements

tkEP uses a SAP ERP-based system to generate the Purchase Orders that are used to communicate requirements to its suppliers. Along with the information provided in the actual text of the Purchase Order, there are always additional requirements incorporated by reference. tkEP makes every effort to ensure the adequacy of the communicated requirements. Requests for required clarifications or exceptions are the responsibility of the supplier's organization. Agreements made between the supplier and tkEP shall not be binding upon either party unless authorized by a purchase order or an amendment made to a purchase order.

tkEP has a very diverse customer base, which requires us to consider its purchases in two separate categories.

- Catalog items are industry standards, not produced to a specific customer standard. Products are those products produced by our suppliers to the appropriate industry recognized standards (ASTM, NEMA, MIL) for a grade, size, finish, and length.
- Non-catalog items are produced to specific customer standards as noted on our purchase orders. As such, there may be some requirements that are not applicable. Material and services produced to customer specific requirements are identified with an "X" at the start of the material number or have a Pre-Production Approval Process (PPAP) referenced.

In the event referenced requirements conflict with any other documented requirements, tkEP uses the following order of precedence to establish the applicability:

1. Purchase order line item requirements
 - a. Specifically identified requirements
 - b. Referenced requirements including drawings and standards
 - c. Referenced commercial standards
2. Purchase order general requirements
 - a. Order specific requirements
 - b. This quality manual
 - c. Our Terms and Conditions.

tkEP may require Supplier to participate in electronic data interchange (EDI) or similar data and document management programs for notification of material releases, shipping confirmation, Material Test Reports (MTR), Certificates of Conformance or Compliance (COC), and other information.

Technical Data

Material and services identified on the purchase order will, in most cases have the latest revision of the standard identified. If there is no revision identified, the Supplier is expected to produce the material to the revision active at the time of order. In some rare cases, tkEP may not be aware of a new revision or its customers may request material to

conform to outdated revisions. It is the Supplier's responsibility to verify the correct revision if outdated and have any purchase orders updated by tkEP to reflect any changes.

Commercially available referenced requirements are the responsibility of the Supplier to obtain. Customer-specific requirements will be supplied by the tkEP purchasing department upon request.

Conditions Applicable to All Purchase Orders

The most current and binding terms and conditions can be found at:
<https://www.thyssenkrupp-materials-na.com/resources/purchasing-resources>

Supplier Qualification Process

At tkEP, we hold ourselves to a very high standard and expect our suppliers to meet those same standards. We take the evaluation and selection of new suppliers very seriously, therefore we consider many factors in the process. In our on-going efforts to be your number one customer and form close, long-term supplier relationships, we will choose to work only with those suppliers who deliver a quality product, at a competitive price, and at the right time.

The supplier should maintain an effective written quality control system, which ensures compliance with the purchase order requirements.

Suppliers may be asked to supply any or all of the following before becoming qualified:

- ISO 9001:2015 certification or completed Quality Survey
- Sample of material
- Defective material resolution agreement
- Sample of paperwork

Once a supplier has been approved, they will be placed on the Approved Supplier List. This list is updated on an on-going basis for both approved and disqualified vendors.

Suppliers are required to provide quality certifications to tkEP.

Supplier's Incoming Material

Parts and material supplied to tkEP shall be subject to inspection using the tkEP incoming inspection procedures. These procedures may utilize test reports, outside laboratory testing, specifications, certifications and dimensional verification as appropriate. All appropriate paperwork, i.e.: manufacturer certification, packing lists, and statistical data as required, must accompany each shipment and must be present at delivery. Product found to be non-conforming may be returned to the supplier. tkEP shall not be required to submit suspect material to 100% inspection.

Competence

Training Program

The Supplier should have a documented program in place to assure that employees are competent in any work performed that impact the quality of product or service supplied to tkEP. This includes, where appropriate, qualification activities, training, and/or experience obtained on the job.

Often referenced documentation, including national standards and customer specific requirements that are flowed down to the supply chain, require specific competency to be demonstrated. The Supplier's competency program should also address those details.

Interactions

tkEP looks for its suppliers to be partners. Our goal is to be our customer's first choice in part by the use of our suppliers' materials and services. Part of our partnership evaluation reflects how well a supplier interacts with our organization. Some of our expectations are:

- Notification, as soon as it is known, there will be a change in delivery
- Timely responses to quotes and purchase orders ideally less than one (1) business day
- Initial response to non-conformances within five (5) days, if not sooner
- Sharing of business opportunities best served by a distribution supply channel
- Technical training of our employees
- Cost, quality and efficiency efforts, including Kaizen, Lean and other types of activities

tkEP requires that mutually agreed upon requirements and any subsequent changes are documented on our purchase order.

Supplier Performance Monitoring

tkEP uses these main processes for performance monitoring for its key suppliers.

Onboarding Verification

The information supplied during the initial onboarding process is verified as needed. tkEP will often perform a verification of certification or product capability.

Supplier Scorecard

Key suppliers are evaluated based on quality non-conformance and delivery timeliness, compared to the quantity supplied.

Quality Non-Conformance

tkEP takes into account the number of quality issues that affect our ability to satisfy our customers.

On-Time Delivery

Our customers expect 100% on-time delivery. As such, we expect 100% on-time delivery from our suppliers. We define OTD as four (4) days early up to two (2) calendar days late. Suppliers are evaluated on trends in OTD performance.

We also will work with suppliers to move and adjust due dates, timing, and/or releases as needed to ensure the most efficient delivery possible. As such, we may approve a revised delivery schedule, require shipment of any of the Products by a more expeditious method of transportation, or adjust any quantity requirement under the order accordingly.

Supplier Evaluations

tkEP evaluates our Strategic Suppliers on a monthly and semiannually basis. On-time delivery and quality performance, as well as the following, may be considered: Strategic Planning/Dev of Target Market or Customers, Price Support & Cost Reduction programs, Outside Sales Support, Inside Sales Support, Response Time, Flexibility, Product and Market Training, Market/Product Dev/R&D.

tkEP may evaluate Suppliers for conformance and/or delivery performance and based on risk actions are taken for improvement for those not identified as Strategic Suppliers.

Onsite Verification

tkEP and its customers may, with appropriate notice, request onsite validation of products and processes. In some cases, onsite validation is an integral and specified part of the product or service program. Those requirements will be communicated as required.

Special Requirements

tkEP requires our suppliers to meet any customer requirements that are part of the PO directly or through reference. These requirements may include, but are not limited to, approval and specific requirements for “Special Processes”, which are most typically annealing, etching, and centerless grinding. Key characteristics may be defined by tkEP or our customers, and any requirements related to Key Characteristics will be flowed to the suppliers via our Purchase Order.

Handling, Storage, Packaging, Preservation, and Delivery

The supplier shall control the product to ensure that it is not damaged during manufacture or transportation to tkEP. The supplier shall adhere to any special packaging and/or preservation requirements that may be included in the purchase order.

Product Identification and Traceability

The supplier shall establish and maintain documented procedures for identification of individual product lot/batch. This identification must be recorded, and be made available to tkEP personnel, its customers, or any appropriate regulatory agency upon request.

Manufacturer Certs

A Manufacturer Certification must accompany all materials with shipment. An authorized representative should sign document. It must contain, as a minimum, supplier name and address, purchase order number, quantity, date shipped, all acceptance criteria for specification, which would apply to the shipment.

Process Control

Controls shall be established and maintained by the supplier on appropriate manufacturing process. Where specific approval of manufacturing process is required, this process must not be altered or changed without prior written approval from tkEP.

Certifications

It is the policy of tkEP that all strategic suppliers be ISO 9000:20015 certified or other national standard or working towards it. Those not yet in compliance must complete a questionnaire and are subject to on-site audits by tkEP lead quality auditors. Suppliers are also required to inform tkEP of any changes to these certifications. This includes additional certifications awarded, suspension of certification, mergers and acquisitions.

Use of Customer Designated Suppliers

When the use of customer-designated suppliers is a requirement of a purchase order, the supplier is responsible for the conformity of all externally provided processes, products, and services.

Control of Nonconforming Product

The supplier shall establish and maintain a system for the control, identification, and segregation of non-conforming material. Product found to be non-conforming to the requirements of the purchase order shall be submitted to tkEP for review and disposition. Product returned to the supplier due to nonconformance must be controlled under this system.

Non-conforming Material

In the event that material is sent to tkEP that does not conform, it is the responsibility of the supplier to provide disposition within 21 days of notification (and/or receiving a sample). Disposition can include authorization to scrap material or return authorization to send material back to the supplier.

In the event that disposition is not accomplished in 21 days, tkEP reserves the right to sort, rework, or return material via collect shipment at the supplier's expense.

Deviations

Deviations will be allowed only under approved circumstances. Deviations will be clearly approved and should never be assumed by either party.

Corrective Action Reporting

tkEP reserves the right to request a corrective and/or preventive action from any supplier. Corrective actions are issued where nonconformity exists including but not limited to unsafe situations, customer initiated claims, or documented reoccurring issues.

All actions are to be completed within the requested deadline date stated on the corrective action. If the deadline cannot be met, it is the responsibility of the supplier to notify the originator of the corrective action in writing.

Counterfeit Parts

Suppliers shall have a program in place to prevent the delivery of counterfeit materials to tkEP. This program shall include the selection of reliable sources for procured materials/services incorporated into tkEP-supplied products. Processes to support validity of certification, material traceability, and testing and/or inspection activities are required. Immediate notification of suspect material shipped to tkEP is required. tkEP reserves the right to review information and process upon reasonable request.

Change Notice

tkEP separates our items into two categories – catalog and non-catalog items.

tkEP requires notification prior to any change in product, processing methods, or manufacturing location for non-catalog items. This notification must provide a description of the proposed changes along with any applicable information, which will aid us in determining if there are associated product risks. tkEP must approve these changes prior to the product being shipped to our location(s). tkEP does not require notification on catalogue items where the Purchase Order requirements and industry level requirements are met.

Control of Subcontractors

Suppliers are not to subcontract this order unless authorized in writing by tkEP. If allowed, the supplier shall be responsible to ensure that their subcontractors are on the tkEP Approved Vendors List. tkEP may refuse to allow work to be performed by any subcontractor. Suppliers must flow down to any sub-contractor the applicable requirements in the purchasing documents including any key characteristics where required.

Test Specimens

Test specimens may be required to verify production method, number, and storage conditions.

Control of Quality Records

Records on inspections, tests, purchased materials, special processing, engineering changes, and other quality assurance activities, shall be maintained by the supplier for ten (10) years minimum unless otherwise directed by tkEP customer requirements. Disposition of the records at the end of the retention period is at the discretion of the supplier unless otherwise communicated in the Purchase Order. Records shall remain legible and readily available for review by tkEP, its customers, or any appropriate regulatory, Aviation, Space and defense industries / agency.

Survey/Audit

tkEP, its customers or any appropriate regulatory agency shall have the right to conduct surveys/audits of the supplier and supplier's subcontractor's operations in order to evaluate their capability to comply with contractual requirements. All appropriate documentation/records concerning supplied products will be made available.