

P.O.Box 11 31
 84544 Aschau am Inn
 Germany
 Status: 1st May, 2011

General Quality Assurance Requirements for Suppliers of Bayern-Chemie

These requirements shall be part of the contract (Purchase Order), unless agreed otherwise.

For best compliance of testing scopes and documentation, the following regulations shall apply:

1. In the case of a Purchase Order "**with Report of measurement data according to each control dimension**", the dimensions are measured by the operator and documented in the Inspection Report.
2. In the case of a Purchase Order "**with Inspection Certificate 3.1** according to EN 10204:2004", the control dimensions (normally marked with an oval on the drawing) are measured during the manufacturing process, and/or in a final and separate inspection, and recorded in the Inspection Certificate with the statistical properties **min, max, mean, standard deviation, cp*** and **cpk*** (* for information) for the random inspection samples according to § 7. An Inspection Certificate 3.1 for the raw materials used to manufacture the items shall be enclosed with the Manufacturer's Inspection Certificate 3.1, or shall be handed over to the customer on demand. Owing to the required full traceability, a reference note to the material lot used shall be made in the Manufacturer's Inspection Certificate.
3. All expenses for the documentation of the product quality are an integral part of the contract (Purchase Order) between Bayern-Chemie and the contractor.
4. Measured dimensions shall be documented in the Inspection Report with the required accuracy. The results of checks by means of go/no-go gauges or matching parts shall be recorded in the Inspection Report or Inspection Certificate as: "tested with gauge XY" or "matching part XY".
5. Measuring and inspection devices must be clearly marked, regularly calibrated and adequately maintained. Calibration standards must be traceable to their related national standards. The calibration status must be clearly visible. If inspection devices can not be marked clearly with a calibration sticker due to their size (as e.g. small cylindrical gauges, measuring pins, high-temperature thermometers etc.), the safekeeping container shall then be marked with the label.
6. Technical modifications that appeared to be necessary during manufacturing shall be approved by Bayern-Chemie in written form. In any case the BC Purchasing dept. shall be notified of such modifications to ensure their recording in the technical documentation.
7. **Random inspection sample:**
For delivery lot quantities of more than 280 pieces, it is allowed to switch to a sampling plan by variables if the following conditions are fulfilled:
 - The complete lot is produced continuously on an automatic CNC device.
 - A statistical test (e.g. Student t-Test) shall demonstrate that the relevant attribute follows a Normal (Gaussian) Distribution. This demonstration shall be part of the delivery documentation.
 - The related attribute shall be reported in its numeric value.

The definition of the sample plan is as follows:

Delivery quantity (pcs)	Sample size	Delivery quantity (pcs)	Sample size	Sample size by variables
1 to 2	all	91 to 150	20	
3 to 15	3	151 to 280	32	
16 to 25	5	281 to 400	50	20
26 to 50	8	401 to 500	50	25
51 to 90	13	501 to 1,200	80	35

For lot quantities of more than 1,200 pcs, DIN ISO 3951 (inspection by variables) and DIN ISO 2859 (inspection by attributes) shall be used, both initially starting at Level II, normal inspection, single sampling plan. AQL (Acceptable Quality Level) definitions shall be agreed in the contract (purchase order).

8. Failures/deviations are to be reported in a written concession and to be sent to Bayern-Chemie, Quality Assurance or Purchasing dept., for decision. Delivery of such items can only be made upon written approval by Bayern-Chemie.
9. All Inspection Reports and/or the Inspection Certificate shall be delivered together with the delivery note and the parts.
10. All delivery documents shall refer to the purchase order details, such as order number, date, part number, drawing number etc.
11. All incoming deliveries are inspected for their quality, timely arrival and completeness of delivery documents and assessed on a quarterly basis by Bayern-Chemie.
12. All Purchase Order relevant documentation and manufacturing data shall be retained for a period of at least **15 years** from delivery date onwards, unless agreed otherwise.