Technical Delivery Conditions

Comte Galvanotechnik GmbH & Co.KG & Comte Metallveredelung GmbH & Co. KG Berliner Str.60 27232 Sulingen January 2022

1. Condition of Base Material

The goods must be delivered in a condition suitable for electroplating.

The raw parts must be free from:

- solder residues
- welding residues
- scale / oil carbon
- baked-in oils and greases
- molding sand / casting skin
- paint coatings
- graphite
- vibratory finishing residues
- chemically non-removable residues
- halogen- or silicone-based preservatives
- heavy oiling
- foreign objects such as punching waste / chips

If an additional pretreatment is required due to the condition of the raw parts, this will be carried out and charged separately.
Base material defects such as pores, cracks, cavities, laminations, etc., as well as corroded material, can lead to defective coating results and thus to exclusions of liability.
For hardened and/or tempered parts, the hardening process and the degree of hardness must be indicated, as this has a significant impact on the coating process.
For electrolytic zinc plating, the components must be made of steel. If other materials are delivered for coating and unexpected reactions and/or results occur during or after the coating process, we reserve the right to charge for any additional costs incurred.

2. Delivery

The goods provided by the customer must meet certain requirements to ensure a smooth process and the health of our employees.
The following are the requirements for deliveries:

- Sufficient labeling including at minimum customer name, article, and quantity
- No overfilled containers/packaging
- No hazards due to, for example, parts falling out when opening the container
- Undamaged packaging units
- Maximum weight for small containers: 15 kg
- If possible, different coating processes should be delivered separately
- If possible, the containers should be stackable
- If possible, environmentally friendly packaging material should be used

3. Coating Specifications

The goods are coated according to the specifications in your order and our offer. The coating standards referenced by you serve as the basis for the coating requirements. If no coating standard is specified by you, the generally accepted DIN standards will be applied.
If any changes occur in series parts, this must be communicated by the customer in writing.

4. Process Reliability and Requalification

Our coating systems are cyclically monitored by our process control and managed using control charts. Once a year, a corrosion test is carried out on all types of coatings we offer, using test panels. The highest known requirements from the applicable DIN and OEM standards are used as the benchmark for corrosion resistance of the individual coating systems.

5. Coating Thickness

We apply the coating thicknesses according to the specifications in the order and the applicable standards. If only a minimum coating thickness is specified, the maximum coating thickness is 25µm. If no specifications are provided, we apply coatings within a range of 6 – 25µm.
Due to the geometry of the parts, there may be undershooting of the minimum coating thicknesses as well as uncoated areas, for example in interior sections, physical shielding zones, recesses, or holes.
For threads and fit dimensions on components, the required coating thicknesses must be accounted for by the customer in the manufacturing process.
The measurement of the coating thickness is carried out as part of the series production at the measuring point specified by the customer in the drawing or order. If no measuring point is specified, the galvanically most favorable measuring point will be assumed.
For surfaces that will be deformed after coating, we recommend reducing the minimum coating thickness to 6µm to minimize the risk of coating detachment.

6. Corrosion Resistance

The corrosion resistance of the surface is a combination of the base material and the applied coating. Since not all base materials are identical, we cannot give a blanket confirmation for this overall system. For our coatings, we can ensure compliance with the corrosion resistance requirements in accordance with the specified demands.
Testing of corrosion resistance on parts during series production is not part of our standard service and must be ordered separately.
Subsequent processing steps, such as deforming the parts, reduce the corrosion resistance of the coating, and we cannot assume any liability for the processed areas.

7. Special Tests

Special tests on components, such as thread inspections, are not part of our standard service and must be ordered separately. Any necessary testing equipment must be provided and maintained by the customer.

8. Visual Apperance

Most surfaces are technical coatings that fulfill the requirements for corrosion resistance. No visual or aesthetic claim is made in these cases.
The passivations we use have an iridescent coloration, which can be minimized by subsequent sealing. Depending on the geometry, sealing may produce streaks and accumulations of varying appearance, which cannot be completely avoided.
Components with specific requirements regarding visual appearance—such as visible parts—must be defined and requested as such in advance.
For decorative surfaces (e.g. nickel-chrome), it must already be clear at the time of inquiry whether the surface is to be technical or high-gloss. High-gloss surfaces require special pretreatment by grinding and/or polishing. High-gloss surfaces require special pretreatment by grinding and/or polishing.

9. Hydrogen Embrittlement

Unless explicitly stated, our quotations do not include additional measures for the prevention of hydrogen embrittlement.
If the tensile strength of the base material exceeds 1000 N/mm², a note indicating the hardness/strength of the material must be included in the order/inquiry. In such cases, measures to prevent hydrogen embrittlement during the coating process can be jointly determined.
The effectiveness of these measures is typically verified through stress tests on the parts using article-specific test fixtures. These tests must be carried out by the customer.

10. Exclusions and Limitations in Rack Coating

Due to the process, contact points with reduced corrosion resistance and visual impairment cannot be avoided. Permissible contact points must be defined by the customer prior to the start of production.
If parts must be coated in a closed state due to geometry or process conditions, residues or corrosion products present on the interior cannot be removed.
Welded constructions made from tubular elements or hollow bodies must be equipped with drain holes.
A production-related reject rate of up to 1% is unavoidable; the necessary additional raw parts must be provided by the customer free of charge. Compensation for this will not be accepted.

11. Exclusions and Limitations in Barrel Coating

Due to the nature of the process, mechanical damage is possible in barrel coating.
For parts with flat geometries, there is a tendency for them to stick together and adhere to the drum wall (perforation marks).
To what extent the visual appearance and/or corrosion resistance are affected must be tested in advance by trial if necessary.
A mixture with foreign parts cannot be ruled out.
A production scrap rate of up to 1% is process-related and cannot be avoided; the necessary raw parts must be provided free of charge by the customer.
Compensation for this cannot be accepted.

12. Use of Coats

Due to the nature of the process, residues from sealers such as accumulations, drip marks, etc. cannot be completely avoided.

13. Rework

For the reworking of components, they are stripped and recoated.
If this is not possible due to the base material or specific requirements of the part, the customer must provide an explicit notice.

14. **Packaging after Coating**

The packaging of goods after coating is generally carried out in the same manner as they were delivered.
If special packaging is required, the customer must inform us of this with a packaging data sheet upon placing the order.
For packaging with exact piece counts, a deviation of up to 2.5% is possible.

15. REACH

Comte GmbH & Co. KG is, in terms of REACH, a downstream user of chemicals and is therefore not responsible for the registration and approval of the chemicals used.
Comte GmbH & Co. KG has obligated its chemical suppliers to comply with REACH regulations.

16. Tools / Electroplating Racks

The calculated prices are based on processing the items on already existing universal racks. In case special racks are necessary due to particular part geometry or other specific characteristics and requirements, the rack costs will be indicated during the quotation process. For the order of special electroplating racks, a lead time of approximately 6 weeks and at least two sample parts are required.