

Technical Delivery Conditions and General Information regarding Electroplating

1. Base material consistency

Parts must be delivered in a condition suitable for electroplating. This means, free of soldering and welding residue, scales, molding sand, forge scales, oil carbon, and graphite, paint coatings, slightly oiled with halogen-free / silicone-free oils. If additional pretreatment is necessary, it will be separately executed after cost release. Flaws in the base material (pores, cracks, bubbles, laminations) and corroded material may cause poor coating results. Third-party parts, turnings, chad, etc. may not be mixed with the parts. The empirically poor initiation behavior of hardened materials may lead to failures in the electroplating process.

For process reasons, manufacturing scrap of up to 0.5 % cannot be avoided. The raw parts required for that are to be provided free of charge by the commissioning party. Charges resulting from that cannot be acknowledged.

2. Packaging

Goods are delivered back in the original delivery packaging or packaging provided by the customer. Please use environmentally friendly packaging.

If possible, delivery should be in stackable containers. For occupational safety reasons, small container may not weigh more than 15 kg. In case of packaging specifications based on quantities, a deviation of +/- 2.5 % is possible.

3. Process reliability and quality management

Duscher Galvanotechnik is certified according to ISO 9001:2000 and ISO 14001 and is subject to yearly monitoring audits (ISO 9001, ISO 14001). In case of initial sample inspections, we charge prorated EMPB-costs of 250 Euro per initial sample inspection report (EMPB). Information necessary for IMDS entries are provided together with the initial sample inspection report. Usually, the part manufacturer is responsible for inputs into the IMDS.

In case of batch sizes below the minimum batch size, parts are processed in near-series conditions without warranty.

In case of system malfunctions, parts are usually reworked by stripping and re-coating. If this is not possible due to the base material or special requirements on the part, explicit information/instructions must be provided by the commissioning party. Cross-references to standards contained in standards are only considered to the extent explicitly confirmed in the quotation or order / drawing confirmation.

4. Layer thickness

Depending on the part geometry, uncoated locations, locations with low layer thickness or discolorations may occur (e.g. blind holes, recesses, inner side of pipelines). Reduced corrosion resistance is to be anticipated at these locations, especially during a Kesternich test.

For surfaces, which are formed after coating, we recommend to reduce the minimum layer thickness to 6 µm. Corrosion resistance against base metal corrosion is not impacted by this. Depending on the forming radius and the bending tool quality, reduced resistance is to be anticipated in the forming area during testing for white rust.

5. Scrap and restrictions during drum coating

Process-related damage may occur during drum coating. Outer threads are especially sensitive to this. We would like to point out that this can possibly not be avoided. Thread testing is not performed. In case of parts with flat (sheet-like) geometries, tendencies of bonding and adhesion to the drum wall (perforation spots) exist. To what extent visual appearance or corrosion resistance is impacted, is to be experimentally clarified as needed. The same applies to parts tending to get jammed due to their geometry. Mixing with third-party parts cannot be 100 percent excluded.

6. Scrap and restrictions during rack coating

Process-related contact points with reduced corrosion resistance and optical impairment cannot be avoided. Contact points must be defined prior to manufacturing start as needed. If due to geometry or process reasons, parts must be processed in closed condition, residue or corrosion present in the interior cannot be removed.

7. Use of finishing treatments

Process-related residues of sealings and anti-friction coatings (e.g. dripping spot) cannot be avoided. Anti-friction coatings are processed taking into account manufacturer's specifications. Possible deviations in the coefficient of friction caused by different combination pairings must be investigated by the customer. Anti-friction coating can only be verified via UV indicator for a limited time frame. Passivations used in electroplating feature iridescent coloring (rainbow colors). Specific cleanliness requirements and their verification are only considered after explicit definition in the quotation.

8. Hydrogen embrittlement

Unless explicitly mentioned, our quotations do not include hydrogen de-embrittlement. A tensile strength of the material >1000 N/mm² or thermal treatment required for different reasons must be specified. In this case, hardness / strength of the material must be specified by the customer. Processing is then executed after agreement and signature of a separate quality assurance agreement. Parameters of any offered thermal treatment are based on empirical values and must be tested for every component for effectiveness using tensioning tests (unfortunately not possible at DGT).

9. Reach

Within the meaning of REACH, Duscher Galvanotechnik is a downstream user of chemicals, and is thus, not responsible for registration and approval of chemicals used. Duscher Galvanotechnik has committed their chemical suppliers to comply with the REACH regulations.

10. Tools / electroplating racks

The calculated prices are based on the customer assuming tooling costs (electroplating racks/frames). A lead time of 6 weeks and at least 2 sample parts or CAD drawings in CAD formats are required for ordering the electroplating racks. In the case that costs are amortized via the parts price, and if 50 % of the yearly demand is not reached, not amortized rack charges shall be invoiced.