

## **AA 032 Technical terms and conditions of delivery for electroplating**

### **TLG 011:**

The present "Technical Delivery Conditions" (TL) serves to ensure the quality of the purchase of electroplating services. This is intended to optimize processes and avoid complaints.

### **1. Scope of Application**

The validity of this TL extends to all services requested and/or commissioned by hapema GmbH from an electroplating company - hereinafter referred to as the contractor - (strip, rack, drum goods / bulk material, degreasing, etc.). If the order specifications contain instructions that differ from this TL, they are valid. The following procedure has priority of validity,

Drawing ☐ Order text ☐ AA 032 (Technical Terms and Conditions for Electroplating).

The remaining provisions of this instruction are not affected.

### **2. Applicable standards ( in current version )**

DIN 50960, Part 1+2 (galv. coatings), DIN EN 60068, Part 2 - 20 (soldering test), factory standards of hapema customers, insofar as they are available and apply (including layer thicknesses, adhesion test, bondability, etc.) as well as hapema packaging specification AA 022.

### **3. Packaging, logistics**

#### **->Bulk materials and racks:**

The delivery of bulk goods and rack goods from hapema GmbH is mainly in cartons. Before the goods are returned in the same containers, they must be roughly cleaned by the contractor if necessary.

#### **->Ribbon fabric:**

Solid strips from a material thickness of 0.5 mm are wound without a core and with a paper intermediate layer, each coil must be bound at least three times. When using cores, the end of the belt must not be attached to them. The galvanized coils are always to be arranged centrally on top of each other for transport and 4 pieces of spacers (not made of pressboard!!!) are to be inserted between the rings in a star shape. Solid strips with strip electroplating must always be wound up according to a winding instruction or winding plan communicated by hapema GmbH.

#### **-> Punched grid:**

Die cutting grids are always delivered on a suitable spool with paper intermediate layer in spool racks or lying on pallets. Punched grids must always be wound up according to a winding instruction or winding plan communicated by hapema GmbH.

#### **-> General:**

Two spools may not be transported on a pallet next to each other. In the case of sensitive products, it is essential that the contractor pays special attention to the standards listed in point 3. If goods are delivered with moisture protection, the contractor must ensure that the goods do not lose their moisture protection during the entire process and that the goods are delivered to hapema GmbH with moisture protection. Partial deliveries must be notified in good time. Empty spools provided must be reattached to the delivery.

**4. Marking**

The packaging units must be marked by the contractor as follows:

- Name and address of the contractor
- Batch No.
- Coil No.
- Gross and net weight of the material for full belts.
- Exact quantity per coil for punched grids.
- Number of starts per coil for punched grids.
- In the case of partial deliveries for a specific order no. this partial delivery must be clearly marked.

**5. Documentation requirements**

Depending on the electroplating service performed, the Contractor must confirm one or more of the test methods specified below in an acceptance test certificate 3.1 in accordance with DIN EN 10204:2005:

- Coating thickness measurement (incl. indication of the measuring point)
- Solderability test (DIN EN 60068-2-20)
- Aging test
- Bending test
- Adhesion test with the specification of the method used (e.g. tape test)
- Visual inspection of the surface (deformations, bubbles, stains, etc.)
- Structure of the galvanic layer(s) or chemical composition
- In the case of degreasing: information on the measuring method ( e.g. Arcotec test pins, etc. ) for testing the surface tension in mN/m.
- Confirmation of winding direction
- Customer-specific requirements are defined and communicated for each project.

**Other requirements for the contractor's documentation:**

For traceability, hapema GmbH requires the following information, both on the acceptance test certificate and on the delivery note:

- Part designation
- Article number
- Order number
- Order number
- Batch number (incl. coil number, if applicable)

The order must be confirmed by the contractor within 24 hours of receipt of the goods, stating the quantity of goods received.

In the event of complaints, an initial statement must be submitted within 24 hours.

A complete 8D report must be received by hapema GmbH within 72 hours. The galv. To enter coatings into the IMDS database in accordance with the specifications of the IATF (International Automotive Task Force). You can find information on this under [www.mdsystem.com](http://www.mdsystem.com).

**6. Miscellaneous****6.1 Initial sampling:**

The Contractor must submit an initial sample of the products to be delivered to hapema GmbH in accordance with VDA (PPF) or QS 9000 (PPAP).

**6.2 Order confirmation:**

If the information in the Contractor's order confirmation deviates from the requirements of the order, the Contractor must immediately inform the hapema purchasing department in writing before processing the order. If this is not done, the goods are to be regarded as returns.

hapema GmbH must be informed in advance of any process changes at the contractor and written approval must be obtained. If this does not happen, the Contractor shall be liable for all resulting damages.

**6.3 Coil List:**

The Contractor shall keep a list of the quantities to be supplied, on which the individual spool numbers and the quantities shall be noted.

**6.4 Sample sections:**

For all punched grid and full strip deliveries on bobbins or rings, the contractor must supply two separately packaged sample strips (200-300mm) per coil or ring, these must be assignable to the bobbin or ring list. For bulk material parts, no separate sample parts need to be provided. All series and pre-series production, as well as drawing changes, must be resampled by the contractor.

**6.5 Interruptions**

A maximum of one further interruption to the delivery status of the coil is permitted.

**6.6 Connection points:**

Joints must be separated by the contractor and clearly marked on the coil or on the ring outside, as a separation point.

**7. Applicable documents**

- hapema Packaging Instruction AA 022
- Work instructions
- Production plans
- Drawing
- Order documents
- DIN ISO EN standards
- Customer standards

**8. Verbal agreements**

are only valid in written form.