

Regarding to our "General Terms and Conditions", the received goods have to be in a suitable condition for coating.
Tools/Components are coatable if they fulfill the following properties:

Coatable Materials

Materials such as different kinds of steels like high-speed steels, hot and cold work tool steels, stainless steels, heat resisting steels, cemented carbides and cermets can be coated.

Heat Treatment

Heat treatments should be performed in a way that the coating temperature (up to 500 °C) does not result in any loss of hardness and dimensions. Coatings between 250°C and 350°C can be offered on request.

The hardness of the coated tools/components should never be less than the uncoated tools/components used in order to give sufficient support for the coating.

Condition of Tools/Components

The tools/components have to be fixed for coating; therefore, they have to have holes, threads or surfaces which may remain uncoated.

Surfaces which are to remain uncoated must be identified in the delivery documents.

Tools/Components with internal contours (holes, slots) can also be coated. Depending on the geometry of the tool/component, the coating thickness decreases with the increasing depth.

Soldering joints have to be temperature resistant up to 600 °C and free of shrinkage cavities, flux and cadmium.

It has to be taken into account that the strength of soldering joints is reduced as a result of the thermal load during the coating process. This also applies to vacuum compatible solder.

Welded tools/components must have been stress relieved.

It is not allowed that tools/components are assembled by gluing or press-fitting.

Blind holes and internal threads must be free of hardening salts and other contaminants.

Cooling channels must be opened and cleaned.

Surface Condition of Tools/Components

Surfaces have to be bare metal. They must not be chrome-plated, burnished, steam-tempered or bath-nitrided.

Polished surfaces must be free of micro-cracks, oxide layers and new hardening zones.
For grinding processes do not use blunt grinding wheels.

Cutting edges should be free from burrs, so that they can achieve full performance after coating.

In electric-discharge machining (EDM) multiple trim-cuts are recommended to reduce the formation of the white layer. In general, good coating adhesion on surfaces machined by electric discharge is possible if the surfaces are pretreated by micro-blasting.

Polished surfaces must be free of residual polishing compound.

Photo etched surfaces can be coated without pretreatment if they are free of residues and spots.

Surfaces have to be free of rust, swarf, wax, adhesive tape, paint, mould deposits etc.

Tools/Components must be free of abrasive dust, residues of cleaning agents and fingerprints.

Tools/Components should be demagnetized.

Maximum Dimensions

Please verify the coatability of your tools/components by consulting the dimensional table overleaf.

Packaging for Shipment

Tools/Components should be packed in such a way, that they cannot be damaged by other objects or each other. The packaging should also be suitable for return shipment.

To protect tools/components against corrosion, they should have a thin layer of water displacing oil. The oil has to be removable without leaving residues by our alkaline cleaning process.

We recommend that bright polished surfaces should be protected with acid-free PVC-film which is at least 50 µm thick. Soft materials with abrasive qualities, such as cotton wadding, paper or foam, are not recommended.

Important Note

This Customer Information is part of our „General Terms and Conditions of BALINIT® Coating Service“.

To expedite your order and in the interest of optimized coating results, we need information on the material, the heat treatment and the last performed machining operation steps. Do not forget to identify a contact person on your documents.

Oerlikon Balzers Coating Austria GmbH

Burgstallweg 27
A-8605 Kapfenberg
T +43 3862 34144-0
F +43 3862 34155
info.balzers.at@oerlikon.com
www.oerlikon.com/balzers/at/