



16616 W. Rogers Drive, New Berlin, WI 53151-2226
Tel: (262)784-6100, Fax: (262)784-6101

COATING GUIDELINES for CUTTING TOOLS

Thickness

2 – 3 microns is typical.

Three microns is approximately 0.00012”.

Therefore, the total thickness added to a round shank tool would be approximately 0.0003”.

Recoating Tools

Most coatings can be recoated over several times. Previous coatings can affect adhesion of the new coating and may result in some cosmetic flaking. It is very important to remember that the coating adhesion on the newly sharpened surface of the tool will be very good and result in like-new performance.

Salvaging undersized tools by multiple coatings is not recommended.

Stripping of Coatings

Coatings can be stripped off of high-speed steel with little or no harm to the steel substrate. It is very challenging to strip PVD coatings off of carbide without causing leaching of the Cobalt binder. Please note that ZrN, CrN, and CBC *cannot* be stripped off of steel or carbide.

Please inquire about Swiss-Tek Coatings' stripping services.

Existing Surface Treatments

For best coating performance we suggest tools have a bright finish prior to coating. Tools that are nitrided cannot be coated. Tools with Black Oxide or Steam Oxide finish must first be blasted to remove the black oxide. There is an additional charge for blasting.

Coolant Holes

All coolant holes must be open prior to coating. Swiss-Tek Coatings will check each coolant hole to ensure that it is not plugged. We will make every effort to clear a blocked coolant hole. However, if the coolant hole cannot be opened the tool cannot be coated.

Brazed Tools

Due to the high temperature and extremely low pressure the tools experience during the coating process all braze must be Cadmium and Zinc free. Tools of unknown braze content that have not been coated before cannot be coated. Braze material containing Cadmium and/or Zinc will outgas during the coating process and damage the tools and contaminate the coating chamber.

Temperature

Process Temperature: 475 °C, (890 °F)

Low Temperature TiN: 300 °C, (572 °F) Special process, please inquire.

Tool Steels and Heat Treatment

Tool steels (such as A2, D2, S7, H13 and P20) should be triple tempered at 950 °F (minimum) to ensure dimensional and hardness stability at the coating process temperature.