

## What is the HAKKO FS-100 Tip Polish and how do I use it?

The HAKKO FS-100 Tip Polish is a proprietary blend of a pure tin solder powder and a suspending medium that is made mostly of petroleum jelly and just a small amount of a flux.

The purpose of the HAKKO FS-100 Tip Polish is to help the user of a soldering station remove the oxidation that may build up on their tip using a safe method that does not reduce tip life and is not harmful to the user, tip, PCB, or environment. It is designed for use with the HAKKO FT-700 Tip Polisher, but can be used by itself.

Unlike other tip tinning products, the HAKKO FS-100 does not contain diammonium phosphate, commonly referred to as DAP, which is a harmful chemical and highly corrosive. Other tip tinning products use DAP as the chemical agent that eats away the oxides that can build up on a soldering iron tip when it is not well maintained. But using those products also means that the critical iron plating layer on the soldering iron tip is chemically eaten away whenever the product is used, and thereby reducing the soldering iron tip service life.

With the HAKKO FS-100, the polish is very gentle to the iron plating surface while still attacking the oxidation that may be built up on the surface of the tip. The type of flux used evaporates at soldering iron tip temperatures so as not to leave a residue on the soldering iron tip, and the inclusion of the pure tin solder powder ensures that a solder coating is applied to the iron plating surface as soon as the oxidation is removed, preventing further oxidation. Pure tin solder powder is used to mitigate the addition of any stray elements into a solder joint that could affect the quality and durability of the connection.

HAKKO conducted corrosion and insulation resistance testing to determine the effects of the use of HAKKO FS-100 Tip Polish during the soldering process for PCB assemblies in accordance with JIS-Z-3197 and found at typical soldering tip temperatures of 350°C and 400°C, there was no evidence of corrosion or insulation breakdown on the test samples.

While the HAKKO FS-100 Tip Polish is an excellent choice for the reconditioning of soldering iron tips when used with the HAKKO FT-700 Tip Polisher, it should not be used as a crutch in place of proper soldering iron tip maintenance.

For help with your soldering iron tip maintenance or for a demonstration of the HAKKO FT-700 Tip Polisher with FS-100 Tip Polish, please contact your HAKKO Representative or call 1-800-88-HAKKO (42556) for more information.

HakkoUSA Knowledge Base

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