

What does ESD SAFE mean

ESD, or electrostatic discharge, is the transfer of an electric charge that takes place when two objects that have been charged to different electric potentials, or have different electric potentials due to static induction, are brought into contact with each other. This discharge can cause product defects as well as equipment failures. The most common example of damage caused by electrostatic discharge is when a person or tool that is charged touches a grounded device which has a low resistance to static electricity.

There are four steps that can be taken to help control electrostatic discharge. They are as follows:

1. Grounding of any person that may come in contact with ESD sensitive devices.
2. Grounding of the working surface including any tools being used.
3. Remove from use any materials in the work area that can create static electricity.
4. Place ESD sensitive devices in the appropriate protective packaging when moving them from areas where the above 1-3 above are being enforced.

HAKKO products that are labeled ESD SAFE meet the following requirements in accordance with industry accepted standards and practices and an ANSI/ESD S-20.20-2014 program:

1. The unit is grounded and the resistance between tip and ground is less than 2 ohms.
2. The tip to ground potential does not exceed 2 millivolts.
3. ESD safe materials are used in the construction of the unit which have a surface resistivity of less than 10¹¹ ohms/square and/or pass a static decay test as defined in MIL-STD-3010A TM-4046.

The components of the unit that are subject to ESD requirements are the cases (covers and chassis), housings, handles, connection cords, and connection hoses. Exempt from ESD requirements are power supply cords, power switches, power receptacles, fuses, potentiometers, and other similar components of the product that are required to be insulative for electrical safety.

HAKKO product ESD SAFE standard has been validated by independent third-party testing conducted by an iNARTE certified engineer. As such, a Certificate of Compliance for those products that are labeled as ESD SAFE is attached for your reference.

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<https://kb.hakkousa.com/Knowledgebase/10094/What-does-ESD-SAFE-mean>