

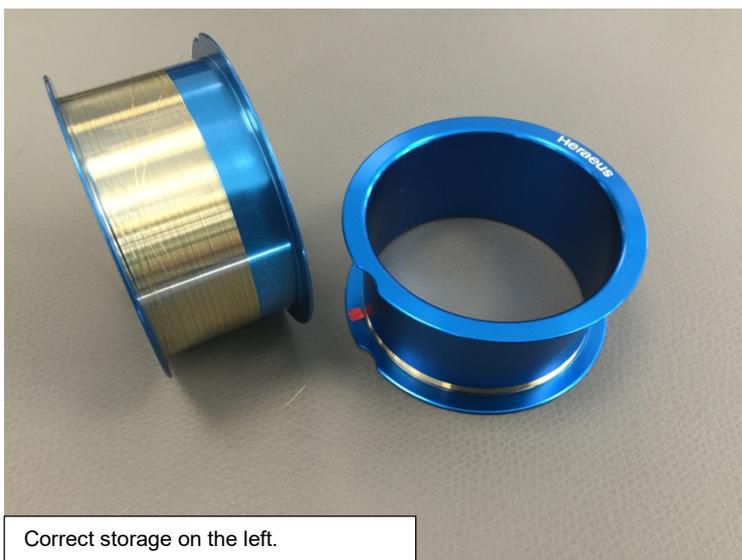
- SCOPE: A guide on how to correctly handle and store bonding wire.

**Storage**

Wire Bonding in the Electronics Industry is typically carried out using either Gold (Au), Silicon / Aluminium (1%SiAl), Aluminium (99.99% or 99.999%), or Copper (Cu), with diameters ranging from 12.5µm to 500µm. Ribbon is also used in a variety of sizes for low impedance / high frequency applications.

It is very important to store this wire in accordance with the manufacturer's recommendations. Typically bond wire will have a shelf life, because while the build-up of oxides can be reduced, it cannot be fully eliminated. This is especially true for aluminium and copper wires.

Typical storage instructions would be to store the wire spools in a humidity controlled cabinet and away from direct heat. Spools should never be spooled on their edges, as this may causing de-spooling.



Correct storage on the left.

Bonding wire is usually spooled from one end of a spool to the other in a single layer. Each end is usually secured to the edge of the spool with a piece of coloured tape. Each end of the wire will have a different colour indicating the start and the end of the spool. It is important when starting a new spool to check the manufacturer's instructions on what end is the beginning, this information will usually be on the packaging of the wire spools.

Wire bonding fine wire is usually supplied in two spool types, 0.5 inch diameter spools and 2 inch diameter spools.

**Handling**

One of the most common process challenges to overcome in wire bonding is contamination. Any organic contamination can seriously affect the consistency and quality of wire bonding. So it vital that the wire and any items that touch the wire are clean and free from contaminants such as oil from fingertips.

It is necessary to wear gloves or finger cots while handling the wire during threading and also to ensure tools such as tweezers are clean - this will help eliminate cross contamination. Alcohol may be used to clean any parts / tools that have direct contact to the wire.

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**PATH: Wirebonding - Accessories - Wire Handling Considerations**