Lead-free, halide free no-clean solder wire

RoHS compliant

Interflux® **IR 3** for lead-free alloys is a halide free no-clean solder wire with extremely low spattering properties. Furthermore **IR 3** is developed for fast wetting on most common surfaces.

Flux spattering is a typical phenomenon for lead-free solder wires.

IR 3 has been specifically designed to counter this problem. That's why it is very suitable for applications like **laser soldering**, **automated soldering** (soldering robot) but also for normal hand soldering.

IR 3 is absolutely halogen free and is classified as RO L0 according to IPC and EN-standards.

Products pictured may differ from the product delivered

Key properties

- Extremely low spattering
- Very suitable for soldering robots and laser soldering
- Absolutely halogen free

Availability

Flux type: IR 3
Flux content: 3,0% w/w

alloy	melting point	diameters 0,35	0,5	0,7	1,0	1,5	2,0
Sn96,5Ag3,0Cu0,5	+/-217°C	•	•	•	•	•	•
Sn95,5Ag3,8Cu0,7	+/-217°C	•	•	•	•	•	•
Sn99Ag0,3Cu0,7	+/- 217-227°C	•	•	•	•	•	•
Sn99Q[c]	226 –231°C	•	•	•	•	•	•

Other alloys upon request

Other diameters upon request

• = available • = upon request

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ISO 9001

Work Instructions

Manual soldering and soldering by robot

The advised working temperature is between 320°C and 390°C. For more dense metals like Nickel, the temperature may be elevated to 420°C. The use of a good soldering station is important. Use a soldering station with a short response time and with enough power for your application. Choose the correct soldering tip: to reduce the thermal resistance, it is important to create a large contact area with the surfaces to be soldered. Heat up both the surfaces simultaneously. Slightly touch with the solder wire, the point where soldering tip and the surfaces to be soldered meet (the small quantity of solder ensures a drastic lowering of the thermal resistance). Add subsequently without interruption, the correct amount of solder close to the soldering tip without touching the tip. This will reduce the risk on flux spitting and premature flux consumption!

Laser soldering

In laser soldering, the main focus is on time optimisation. Usually, a profile is created in three stages: preheating, soldering and holding. Therefore the capacity of the lasers and heating time can be adjusted. These settings depend on the thermal mass of the materials to be soldered and are often retrieved from experience. It is advisable to have a preheating of at least 300°C before feeding the solder wire. The amount of solder wire fed, depends on the volume of the solder joint.

Handling

Storage

Store the solder wire in a clean environment at ambient temperature.

Handling

To avoid spool and wire damage, handle package with care.

Safety

Please always consult the safety datasheet of the product.

Packaging

Spools of 100g, 500g and 1000g

Not all diameters are available on all spool sizes

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Test results

Conform EN 61190-1-3(2007) and IPC J-STD-004

Property	Result	Method
Chemical		
flux designator	**RO L0**	J-STD-004A
qualitative copper mirror	**pass**	J-STD-004A IPC-TM-650 2.3.32D
qualitative halide		
silver chromate (Cl, Br)	**pass**	J-STD-004A IPC-TM-650 2.3.33D
spot test (F)	**pass**	J-STD-004A IPC-TM-650 2.3.35.1
total acid number (10%sol.)	**21,7 mg KOH/g**	J-STD-004A IPC-TM-650 2.3.13
spread test	**94,71 mm²**	J-STD-004A IPC-TM-650 2.4.46
dryness test	**pass**	J-STD-004A IPC-TM-650 2.6.47
Environmental		
SIR test	**pass**	J-STD-004B IPC-TM-650 2.6.3.7
qualitative corrosion, flux	**pass**	J-STD-004A IPC-TM-650 2.6.15

Trade name: IR 3 Halide Free Robot application Solder wire

Disclaimer

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