

450-01RWF

450-01RWF is a tacky flux designed for use in a wide range of electronics assembly and rework processes on assemblies built with HARIMA solder pastes and other lead-free materials. It is based on a blend of carefully selected solvents, activators, and modified resin. It has a mild characteristic odour and leaves clear, colourless residues that do not require cleaning.

FEATURES AND BENEFITS

- Halogen-free flux, with no intentionally added halogen
- Halogen-free flux, passes IC with pre-treatment as per IPC-TM-650, EN14582
- Sufficient activity to deal with difficult surface finishes
- Good tack force to assist flip chip attach
- Compatible with C400 halogen free cored solder wire
- Low colour residue
- Supplied in syringes or cartridges for application by automatic and manual dispensing

TYPICAL PROPERTIES

Property	Value
Halide Content (% Cl)	Zero
Acid Value (mgKOH/g)	70
Brookfield Viscosity (cP)	550.000
Colour	Colourless

Reliability:

Test	Specification	Test Method	Results
Copper Plate Corrosion*	IPC/J-STD-004A	2.6.15C	Pass
Copper Mirror Corrosion	IPC/J-STD-004A	2.3.32D	Pass
Chlorides & Bromides	IPC/J-STD-004A	2.3.33	Pass
Surface Insulation Resistance (SIR) (without cleaning) *	IPC/J-STD-004A Telcordia GR-78-Core	2.6.3.7 13.1.3	Pass Pass
Electromigration (ECM) * (without cleaning)	Telcordia GR-78-Core	13.1.4	Pass
Halogen Content (Pre-treatment EN14582, 2.3.28.1)	IPC/J-STD-004B	2.3.34	Pass
Flux Activity Classification (without cleaning)	IPC/J-STD-004A		ROLO

* tested with suitable alloy

RECOMMENDED OPERATING CONDITIONS

There are many applications for this product and users may find that their own process requires particular conditions. The following information can therefore be for guidance only.

REWORK: The main function of 450-01RWF is threefold:

- It provides a thermal pathway from the heat source to the workpiece, ensuring that it is evenly heated.
- The viscous fluid protects metal surfaces from rapid oxidation at soldering temperature.
- It breaks down surface contaminants to allow solder spread. On tin plated surfaces, this may be a purely physical effect causing oxide skins to flow away from the molten coating but chemical dissolution may also be required.

Where a component is to be soldered into place for the first time, the alloy for the fillet may be provided by the fusible coating on the PCB and to some extent, on the component termination. The PCB may be of conventional design or it can be specially fabricated with a flat, thick solder coating (Solid Solder Deposition, SSD). In either case, 450-01RWF is suitable and will provide a sufficiently tacky surface to hold the component in place.

When a component is to be soldered to a board having little or no fusible coating, 450-01RWF will clean the surface to be joined. Solder for the joint is supplied by solid or flux cored wire. If flux cored wire is used, it is recommended that C 400 solder wire is selected since the residues are minimal and totally compatible with 450-01RWF.

Where components have been removed from a PCB, it is important to prepare the site for the replacement device in order that the resoldering process can be carried out efficiently. Excess solder should be removed from the PCB with HARIMA No Clean De-soldering Wick. Areas showing abnormally high levels of oxidation may benefit from pre-tinning with a suitable HARIMA no clean flux cored solder wire.

NOT FOR PRODUCT SPECIFICATIONS

THE TECHNICAL INFORMATION CONTAINED HEREIN IS INTENDED FOR REFERENCE ONLY. PLEASE CONTACT YOUR NEAREST HARIMA LOCATION FOR ASSISTANCE AND RECOMMENDATIONS ON SPECIFICATIONS FOR THIS PRODUCT

In all cases, a variety of heating methods may be used to produce a solder joint with this product. These include soldering irons, hot gas and hot bar devices, condensation reflow, and IR/convection reflow. Specialist tools and workstations are available to assist the operator but training will often be required to adapt these to particular situations. 450-01RWF is tolerant of a wide range of temperature profiles and any residues left after reflow will be hard, clear and non-tacky.

Cleaning:

450-01RWF is designed as a no-clean flux, however some applications may require board cleaning for which MCF 800 cleaner may be used.

For a completely no-clean process, use HARIMA no-clean cored solder wire, liquid flux and/or no clean solder paste. These products also generate low levels of VOC emissions due to their low flux content and heat stable resins. Soldering iron tips should be kept clean with TTC-LF Tip Tinner/Cleaner (data sheet available).

Storage:

It is recommended to store 450-01RWF in a dry environment at room temperature.

Shelf Life:

Provided 450-01RWF is stored as recommended above a shelf life of 12 months can be expected.

GENERAL INFORMATION

For safe handling information on this product consult the relevant Safety Data Sheet (SDS)

Disclaimer

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. HARIMA is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

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