



MULTIFIX™ 425-01 & 450-01

September 2006

REWORK FLUXES

Multifix 425-01 and 450-01 are tacky fluxes designed for use in a wide range of electronics assembly and rework processes. They represent a range of activities and residue levels to meet different customer requirements.

- **No Clean Formulations**
- **Low residue**
- **Range of activity to deal with different component solderability**
- **Halide free**
- **Suitable for dispensing**
- **Compatible with solder coatings and/or No Clean flux cored solder wire product range**

Both products are supplied in syringes or cartridges for application by dispensing. The user should select the product most appropriate to the application.

Multifix 450-01 leaves visible but clear residues that do not require cleaning. It has good activity for rework operations.

Multifix 425-01 is less active. However, the residues are clear and barely visible while soldering activity is still sufficient for many users.

RECOMMENDED OPERATING CONDITIONS

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

The main function of these fluxes is threefold. They provide 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 and, finally, they break down surface contaminants to allow solder spread. On tin/lead 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 (eg. produced by the Solid Solder Deposition (SSD) process). In either case, Multifix 425-01 and Multifix 450-01 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, it may be necessary to use Multifix 425-01 or Multifix 450-01 to clean the surface to be joined. Solder for the joint is supplied by wire which may be solid or flux cored. If flux cored wire is used, it is recommended that the low residue product Multicore X39 is selected since the residues from this material are minimal and totally compatible with both of these Multifix products.

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 Multicore MCF800.

Desoldering Wick and areas showing abnormally high levels of oxidation may benefit from pretinning.

In all cases, a variety of heating methods may be used to produce a solder joint with these products. These include soldering irons, hot gas and hot bar devices, condensation reflow and IR/convection reflow. Specialist tools and workstations are available to assist operators but skill will often be required to adapt these to particular situations. Both Multifix 425-01 and Multifix 450-01 are tolerant of a wide range of temperature profiles and any residues left after reflow will be hard, clear and non-tacky.

TECHNICAL SPECIFICATION

The following Table summarises typical product properties. Full details of test methods are available on request.

NOT FOR PRODUCT SPECIFICATIONS
THE TECHNICAL INFORMATION CONTAINED HEREIN IS INTENDED FOR REFERENCE ONLY. PLEASE CONTACT HENKEL
TECHNOLOGIES TECHNICAL SERVICE FOR ASSISTANCE AND RECOMMENDATIONS ON SPECIFICATIONS FOR THIS
PRODUCT.

 **Technologies**

FLUX PROPERTIES		
TEST	425-01	450-01
Halide content, %	Zero	
Acid Value, mg KOH/g total flux	35	68
Flux Classification		
IPC-SF-818	LR3CN	LR3CN
EN 29454	1.1.2	1.1.2
J-STD-004	RO L0	RO L0
Copper Mirror Test	Pass	
Chromate Paper Test	Pass	
Corrosion Test	Pass (10 days)	
IPC-SF-818	Pass	
BS5625	Pass	
DTD 599A	Pass	
DIN 8516	Pass	
JIS-Z-3197	Pass	
SIR Test (without cleaning)		
IPC-SF-818 Class 3	Pass	
Bellcore TR-NWT-000078	Pass	
J-STD-004	Pass	
Electromigration Test (without cleaning)		
Bellcore TR-NWT-000078	Pass	
Flash point (°C)	>100	>100
Viscosity (cP)		
Unstirred	436,000	705,000
Stirred	250,000	550,000

PACKAGING

Multifix Rework Fluxes are available in 10cc and 30cc cartridges and syringes.

GENERAL INFORMATION

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

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 **Henkel Technologies**