Updated:	**TECHNICAL DATA SHEET**	
Ref. : Flux	**Water based soldering Flux : WATER-RISE 3**	
Created: 10/02/2020	**Volatile Organic Compounds (VOC) FREE**	

APPLICATION: WAVE SOLDERING

GENERAL CHARACTERISTICS:

Environmental protection is a daily reality in all areas. In the field of Electronics, this is also the case: removal of CFCs for PCB cleaning and obligations are made on the use of volatile organic compounds (VOCs).
Finally, for safety reasons during transport (fire risk), alcohol contained in solder fluxes should be avoided.
In order to address these issues, MBO offers **WATER-RISE 3 Flux**, a low solids, no-clean flux in which the solvent is water.

WATER-RISE 3 is a water-based, no-clean soldering flux developed for wave soldering.

The **WATER-RISE 3** flux offers a large process window for wave soldering.

The **WATER-RISE 3** flux is suitable for soldering circuits with high thermal mass and therefore for high temperatures and long-lasting soldering processes. Thanks to its special composition, the flux reduces residues after soldering compared to traditional fluxes used for that application.

The **WATER-RISE 3** flux limits the phenomenon of micro balls formation.

The flux is compatible with lead and lead-free alloys.

Similarly, due to its halogen-free composition, **WATER-RISE 3** flux guarantees high reliability after soldering.

PHYSICOCHEMICAL CHARACTERISTICS:

Solution	: Water
Colour	: Colourless
Density at 20°C	: 1.011 ± 0.005
Acid value	: 30 mg/ml
Chloride content	: Halide free
Dry extract	: 3.5 %
Corrosiveness	: None
Insulation resistance	: > 10 GΩ
Efficiency (SAR)	: < 30° SAR – grade III
J-STD 004 classification	: **ORL0**

ADDITIONAL INFORMATION:

Our manufacturing processes have been subjected to FMECA analysis (equivalent of AMDEC in France).

A quality Certificate can be obtained on Request

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INSTRUCTION OF USE :

The **WATER-RISE 3** Flux is ready for use.

In wave soldering, the optimal amount of flux depends on parameters such as surface finish, oxidation level, thermal mass of the circuit and components,...and other parameters of the soldering process such as the alloy used, temperature and duration of the soldering process ... The primary goal should always be to apply a minimum amount of flux with the achievement of a good soldering. In practice, the optimal flux quantity is determined by consecutive tests or by copying parameters already used for other circuits and components.

In general, a preheating is used to limit the thermal shock and to evaporate the water from the flux. It is advisable to evaporate the water contained in the flux before the soldering operation (to avoid alloy splashes). In this case, a preheating to temperatures in the range of 120-140 °C is recommended. A good preheating can improve the wetting behaviour of the alloy.
For wave soldering, the contact time with the wave will be about 4 to 6 seconds on average. This parameter must be adapted according to the preheating, the thermal mass of the board and components, the wettability of the finishes, the Solidus value of the alloy contained in the wave and the soldering temperature.
The contact time is determined by consecutive tests or by copying parameters already used for other circuits and components.

MISCELLANEOUS:

Packaging : Throwaway plastic containers of 5, 10 and 20 litres.

Storage : In original hermetically sealed containers, stored at an ideal temperature near 20°C for 12 months maximum.

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