



MetaFlux™ WS-1055S

Product Bulletin

Alcohol Based Water Soluble Flux

Metallic Resources' MetaFlux WS-1055S is an isopropyl alcohol based low solid content water soluble soldering flux specially formulated for lead free wave soldering applications where post soldering residues are washed with water. It contains a neutral halide activation system that achieves peak efficiency and activity at 500°F (260°C); it thus promotes excellent solderability. It is available in 1-gal. containers, 5-gal. pails, and 55-gal. drums.

Designed for Spray Fluxing

MetaFlux WS-1055S is specially designed for wave soldering applications, component tinning, and wire tinning where post-solder residues are water washed. It is successfully used in spray and drag fluxing soldering processes.

Versatile and Economical

MetaFlux WS-1055S solder flux can be used over a wide variety of electronics applications, thus creating versatility and economy. The high activity makes it ideal for high production rates for greater cost-effectiveness. The neutral pH ensures that a neutral residue remains on the printed circuit board and components after soldering; the residue is easily cleaned in water.

Application Directions

MetaFlux WS-1055S is formulated for spray or drag fluxing applications as supplied. The flux is formulated for use as supplied.

A topside board temperature of 190-240°F (88-115°C) is recommended for the best results. Solder as quickly as possible after fluxing. After soldering, the residue should be cleaned off and washed with hot distilled or de-ionized water (140°F of 60°C minimum).

Physical Properties

Form	Clear liquid
Color	Colorless
Specific Gravity	0.821@ 71.6°F (22°C)
Solids Content	1.5 – 2.4%
Flash Point	60°F (15.5°C)
Boiling Point	180.5°F (82.5°C)
Freezing Effects	None
Discoloration	None
Halide Content	0%
Water Content	<1.0%
Acid Number	20-24
Optimum Soldering Temperature	490 - 520°F (or 255-270°C)



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Safety Precautions

MetaFlux WS-1055S is flammable and should be stored in plastic containers away from heat, sparks, open flame, and other sources of ignition. Use adequate ventilation to remove fumes. Avoid contact with eyes and skin. Do not inhale vapors of fumes. Keep away from children. Dispose in accordance with all applicable regulations. This product has a two year shelf life. Refer to the material Safety Data Sheet (MSDS) for additional information.

Standards Met

IPC ANSI J-STD-400, Type ORL0

IPC J-STD-004 Specification Test Results

Metallic Resources' MetaFlux WS-1055 meets IPC J- STD-400, Type ORL0 classification.

Fluorides by Spot Test

This test method is designed to determine the presence of fluorides in soldering flux.
(IPC-TM-650, 2.3.35.1)

Result: Passes

Halide Content

This test method is designed to determine the halide content of fluxes attributable to chlorides, bromides, and fluorides. The halide content is reported as the weight percentage of halide to the solid portion of the flux.
(IPC-TM-650, 2.3.35 or 2.3.28 and 2.3.35.2 or 2.3.28)

Result: Passes (chlorides or bromides: 0.6%.

Result: Passes No fluorides present (0%)

Solids Content

This test method is designed to determine the residual solids content of the liquid flux after evaporation of the volatile chemicals.
(IPC-TM-650, 2.3.34)

Result: 2.2%

Corrosion Test

This test method is designed to subjectively determine the corrosive properties of the flux residue under extreme environmental conditions. (IPC-TM-650, 2.6.15)

Result: Moderate Corrosion.