

Technical Bulletin



Solder plus Support

WS715M Water Soluble Flux

DESCRIPTION

WS715M is an alcohol based, organically activated, rosin-free, water soluble liquid flux designed for wave and selective solder applications. WS715M may be applied by spray, foam, dip or brushed. WS715M is a buffered pH-neutral flux with a highly durable activator providing excellent wetting characteristics producing bright, shiny solder joints even on difficult to wet materials. WS715M performs well on all surface finishes including ENIG, OSP and HASL. WS715M residues must be removed after soldering.

FEATURES AND BENEFITS

- Excellent Wetting
- Lead-Free and Tin-Lead Compatible
- Easy to Clean with DI Water
- Low Foaming in Wash
- pH-Neutral

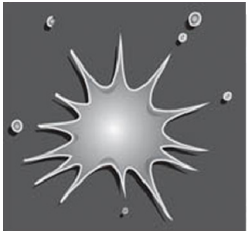
CHARACTERISTICS



STORAGE & SHELF LIFE

WS715M has a sealed shelf life of one (1) year when stored at room temperature. Do not store near fire or flame. Keep away from sunlight as it may degrade product. WS715M is shipped ready-to-use, no mixing necessary. Do not mix used and unused chemicals in the same container. Reseal any opened containers. Storage conditions range from 4-40°C (40-100°F).

Parameter	Time	Temperature
Sealed Shelf Life	1 year	Room Temperature



SOLDER CONNECTION

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APPLICATION

WS715M is formulated for application via spray, foam, brush, or dip. WS715M is ready to use directly from its container, no thinning required. When spray fluxing, proper flux coverage and uniformity are imperative. A dry flux coating of 500-1500 micrograms per square inch is typical.

PROCESS GUIDELINES

Using thermocouples attached to the top of the PCB, the topside assembly temperature should be between 85-110°C (185-230°F). It is important that the flux be dry prior to entering the wave regardless of temperature or spattering will occur. Smoking may occur and is considered normal if it is not excessive. Recommended contact time with the wave is dependent on wave configuration, pot temperature, alloy type and thermal mass of the assembly with 3-8 seconds being typical.

CLEANING

WS715M residues must be cleaned using DI water or DI water in combination with appropriate cleaners. Deionized water is recommended for the final rinse. It is recommended that boards be cleaned within 8 hours of processing. Contact AIM for additional information.

HEALTH & SAFETY

Use with adequate ventilation and proper personal protective equipment. Refer to the accompanying Safety Data Sheet for any specific emergency information. Do not dispose of any hazardous materials in non-approved containers.

TEST DATA SUMMARY

Name	Test Method	Results
IPC Flux Classification	J-STD-004	ORH1
IPC Flux Classification	J-STD-004B 3.3.1	ORH1
Name	Test Method	Results
Copper Mirror	J-STD-004B 3.4.1.1 IPC-TM-650 2.3.32	HIGH
Corrosion	J-STD-004B 3.4.1.2 IPC-TM-650 2.6.15	HIGH
Quantitative Halides	J-STD-004B 3.4.1.3 IPC-TM-650 2.3.28.1	>2.0
Qualitative Halides, Silver Chromate	J-STD-004B 3.5.1.1 IPC-TM-650 2.3.33	Halides Present
Qualitative Halides, Fluoride Spot	J-STD-004B 3.5.1.2 IPC-TM-650 2.3.35.1	No Fluoride
Surface Insulation Resistance (Cleaned)	J-STD-004B 3.4.1.4 IPC-TM-650 2.6.3.7	PASS
	J-STD-004 3.4.1.4 IPC-TM-650 2.6.3.3	PASS
Flux Solids, Nonvolatile Determination	J-STD-004B 3.4.2.1 IPC-TM-650 2.3.34	12.0 Typical
Acid Value Determination	J-STD-004B 3.4.2.2 IPC-TM-650 2.3.13	25.9 mg KOH per gram flux Typical
Flux Specific Gravity Determination	J-STD-004B 3.4.2.3 ASTM D-1298	0.82 (water = 1) Typical
Visual	J-STD-004B 3.4.2.5	Clear, Colorless
Wetting	J-STD-005A 3.9 IPC-TM-650 2.4.45	PASS

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