

## VF12 VOC-FREE NO CLEAN LIQUID FLUX

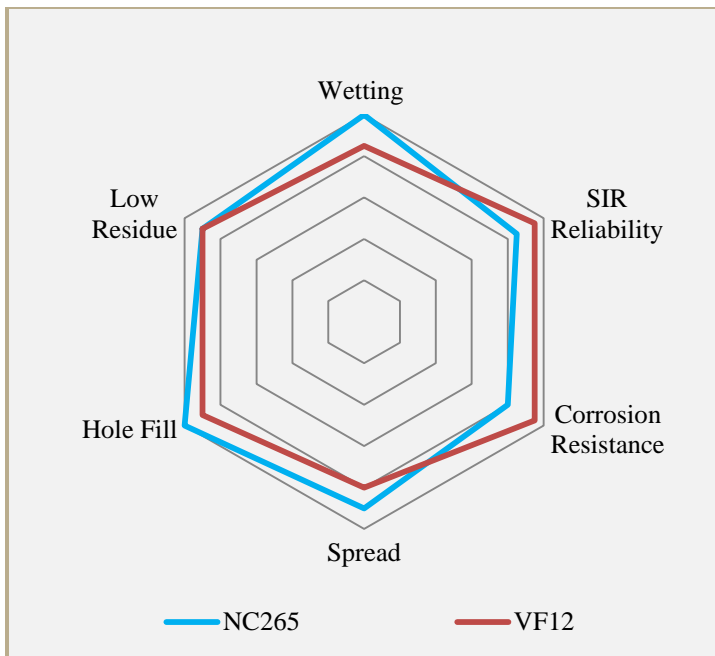
### FEATURES

- VOC-Free
- Halide/Halogen-Free
- ORL0 Per IPC J-STD-004B
- High SIR Performance
- Compatible with all Leaded /Lead-Free Alloys

### DESCRIPTION

VF12 liquid flux is a water-based VOC-Free flux with exceptional performance and reliability. A medium-solids/residue flux, VF12 offers excellent barrel fill and wetting performance while leaving non-corrosive and non-conductive residue, even without thermal exposure. These properties make VF12 ideal for all applications including selective, wave and hand soldering. VF12 can be used with all common leaded and lead-free solder alloys, as well as AIM REL alloys.

### CHARACTERISTICS



### HANDLING & STORAGE

Parameter	Time	Temperature
Sealed Shelf Life	6 months	Room Temperature

VF12 is shipped ready-to-use. Do not mix used and unused chemical in the same container. Keep away from sunlight as it may degrade product. Reseal any opened containers. Protect from freezing.

### APPLICATION

VF12 is formulated for application via spray, brush or dip. VF12 is ready to use directly from its container, no thinning required. When spray fluxing, it is imperative that proper flux coverage and uniformity be achieved and maintained. A dry flux coating of 900-1500 micrograms per square inch is typical.

### PROCESS GUIDELINES

Using thermocouples attached to the PCB, the topside assembly temperature should be between 80-140°C (175-285°F). It is important that the flux be dry prior to entering the wave regardless of PCB temperature or spattering will occur. Smoke 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 3-7 seconds being typical for lead-free applications. For processing assistance, please contact AIM Technical Support by visiting <http://www.aimsolder.com/technical-support-contacts>.



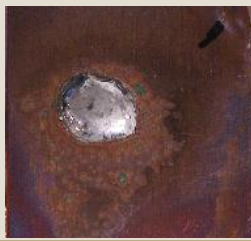

## CLEANING

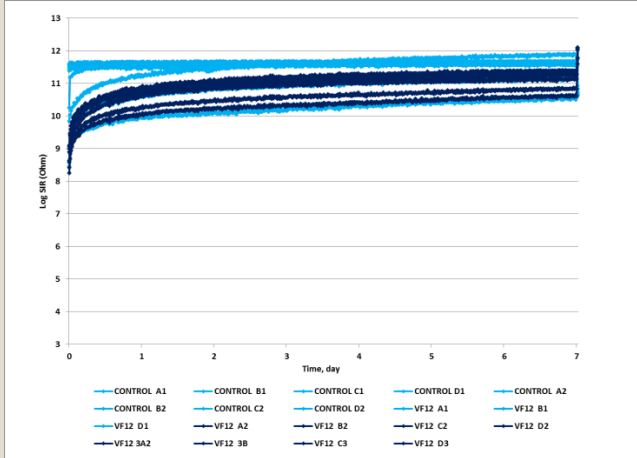
VF12 residues can remain on the assembly after reflow and do not require removal. Where cleaning is mandated, AIM has worked closely with industry partners to ensure that VF12 residues can be effectively removed with common defluxing agents. Contact AIM for cleaning compatibility information.

## 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	ORL0	
IPC Flux Classification	J-STD-004B 3.3.1	ORL0	
Name	Test Method	Typical Results	Image
Copper Mirror	J-STD-004B 3.4.1.1 IPC-TM-650 2.3.32	LOW	
Corrosion	J-STD-004B 3.4.1.2 IPC-TM-650 2.6.15	PASS	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Before</p>  </div> <div style="text-align: center;"> <p>After</p>  </div> </div>
Quantitative Halides	J-STD-004B 3.4.1.3 IPC-TM-650 2.3.28.1	Br: 0.0 Cl: 0.0 Typical	
Qualitative Halides, Silver Chromate	J-STD-004B 3.5.1.1 IPC-TM-650 2.3.33	PASS	
Qualitative Halides, Fluoride Spot	J-STD-004B 3.5.1.2 IPC-TM-650 2.3.35.1	No fluoride	

Name	Test Method	Typical Results	Image
Surface Insulation Resistance	J-STD-004B 3.4.1.4 IPC-TM-650 2.6.3.7	All measurements on all test patterns exceed the 100 MΩ	
Flux Solids, Nonvolatile Determination	J-STD-004B 3.4.2.1 IPC-TM-650 2.3.34	2.82 Typical	
Acid Value Determination	J-STD-004B 3.4.2.2 IPC-TM-650 2.3.13	20.6 Typical	
Flux Specific Gravity Determination	J-STD-004B 3.4.2.3 ASTM D-1298	1.03 Typical	
pH (1% solution /water)	ASTM D5464 ASTM G51	3.24 Typical	
Visual	J-STD-004B 3.4.2.5	PASS	
Wetting	J-STD-005A 3.9 IPC-TM-650 2.4.45	PASS	
VOC	ASTM D3960	None - Water	