



## ENABLING TECHNOLOGY LEADERSHIP



Introducing

# ALPHA EF-Series Environmentally Friendly FLUXES

Air.



Now you can protect the environment.

Earth.



- Remove VOCs
- Transition to lead-free

Fire.



And your boards can survive heat and humidity.

Water.



- Meet electrical reliability requirements
- Pass Bellcore
- Pass IPC
- Pass JIS



Now there's a revolutionary new water-based flux from Cookson Electronics that can help you meet rigorous electrical reliability specifications, while keeping your wave soldering process in compliance with local environmental regulations. Our new ALPHA EF-Series fluxes were developed using two new Cookson Electronics' proprietary technologies, resulting in four new high-functioning, environmentally friendly water-based fluxes that cover a wide range of electronics assembly applications. EF-2202, EF-3001\*, EF-3215\* and EF-4102 have little or no VOC content, and all four enable lead-free processing.

**Outstanding Solderability and Reliability:** ALPHA EF-Series fluxes provide superb soldering results with excellent hole fill and micro solder ball performance on all surface finishes, including Cu OSP. EF-2202, EF-3001 and EF-3215 also offer

superior pin testability, and all four EF-Series fluxes can help you meet tough electrical reliability standards (Bellcore, IPC and JIS). If your process calls for conformal coating, and your customer demands excellent board and joint cosmetics, there's an EF-Series flux that will meet these requirements.

**Environmentally Friendly:** To help you meet local air quality standards for plant emissions, water-based EF-Series fluxes have virtually no VOC content. All four ALPHA EF-Series fluxes are compatible with lead-free processes. Whether you are operating a lead-free line now, or planning to go lead-free in the future, there's an EF-Series flux that is right for your process.

Only Cookson Electronics has the ongoing commitment to technology leadership that can provide you with breakthrough products like ALPHA EF-Series Environmentally Friendly Fluxes. For more information, go to our web site at [www.alphametals.com](http://www.alphametals.com), or call the appropriate telephone number listed on the back.

\*Patent Pending



Cookson Electronics ASSEMBLY MATERIALS



# New Proprietary Flux Chemistries Enabled Cookson to Develop High-Functioning Water-Based Fluxes

Meeting stringent electrical reliability requirements and complying with increasingly demanding environmental regulations are challenges faced by many electronics assembly companies running wave soldering processes. Cookson Electronics employed its extensive R&D resources to meet this challenge by developing two new proprietary flux technologies. Based on these unique technologies, Cookson created four new ALPHA EF-Series environmentally friendly fluxes that round out the ALPHA water-based flux line. Now there's an ALPHA water-based flux that delivers excellent performance for every application. Refer to the Selector Guide below to determine the flux that is right for your wave soldering process.

## ALPHA EF-Flux Series Environmentally Friendly Flux Line



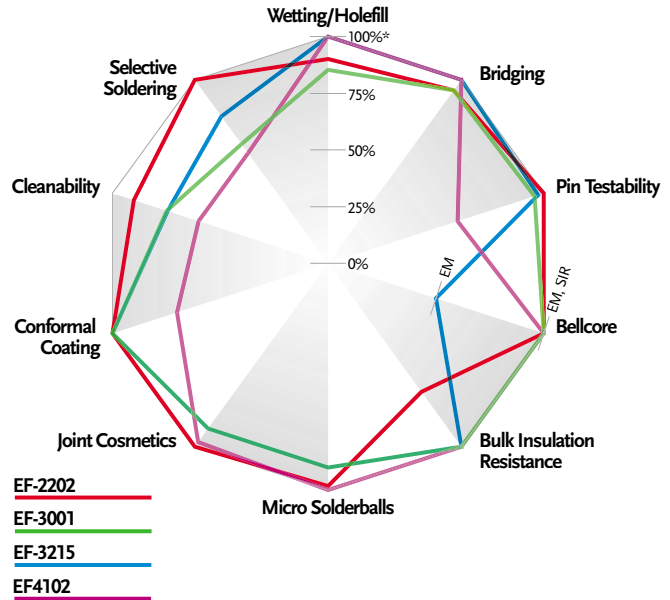
EF-2202

EF-3001

EF-3215

EF-4102

## Broad Range of Performance Capabilities



In addition to excellent wetting and hole fill, you may need a flux that meets stringent electrical reliability standards, allows for reliable in-circuit testing, and delivers excellent board and joint cosmetics. Also, it has to meet your environmental care needs and local regulations governing VOC emissions and lead-containing processes.

\* 100% = best-in-product-class performance

## ALPHA EF-Series Flux Selector Guide

FEATURES	EF-2202	EF-3001	EF-3215	EF-4102	PREDOMINANT MARKETS SERVED	KEY
Appearance	Clear	Milky	Milky	Amber	EF-2202: EMS, Telecommunications, Computer	1 Superior
Resin/Rosin Content	0%	<5%	<5%	<10%	EF-3001: Automotive, Consumer Products	2 Excellent
VOC Content	<2%	<1%	<2%	<10%	EF-3215: Consumer Products	3 Good
Lead-Free Compatible	Y	Y	Y	Y	EF-4102: Consumer Products	Y Yes
Bellcore Compliant	Y	Y	N	Y		N No
Wetting/Hole Fill	2	3	1	1		
Solderballing	1	2	2	1		
Pin Testability	1	3	2	—		
Cleanability	2	3	3	3		
Tack	—	2	2	2		
Conformal Coating	1	1	1	—		
Joint Cosmetics	1	2	2	1		
Selective Soldering	1	3	2	—		
Bulk Insulation	—	2	2	1		

This useful guide provides information that will assist you in selecting the right EF-Series flux for your specific application. There's a flux developed to meet the needs of electronics manufacturing services (EMS) companies involved in processing a variety of board types, usually in a high-product-mix environment. There are also fluxes for consumer products, telecommunications companies, and automotive companies with long production runs and high reliability requirements. Select the EF-Series flux that's right for you.

To learn more about ALPHA EF-Series water-based fluxes and to arrange a trial, contact us at one of our regional headquarters telephone numbers below. You can also visit our web site at [www.alphametals.com](http://www.alphametals.com).



**Cookson Electronics** ASSEMBLY MATERIALS

Worldwide Headquarters • 600 Route 440 • Jersey City, NJ 07304 • USA • 1-800-367-5460 • [www.alphametals.com](http://www.alphametals.com)  
 European Headquarters • Forsyth Road • Sheerwater • Woking GU215RZ • United Kingdom • 44-1483-758-400  
 Asia-Pacific Headquarters • 1/F, Block A • 21 Tung Yuen Street • Yau Tong Bay • Kowloon, Hong Kong • 852-3190-3100

