

Halogen-free Rosin Core Solder (SR-38RMA)

Of all solders, halogen-free solder is the most considerate to people and the environment. Materials containing halogen are added to solder fluxes to increase workability but have recently gained attention because they release dioxins when burned. With this new lineup, Almit has introduced halogen-free products that manage to maintain the same workability of halogen based solder, while helping the environment.

Halogen-free Specification

Element	General Required Specifications	
Chlorine (Cl)	900ppm or below	Total of 1500ppm or below.
Bromine (Br)	900ppm or below	
Fluorine (F)	Unintended	
Iodine (I)	Unintended	

SR-38RMA

Although these product fall under the halogen-free specification, their wettability is greater than or equivalent to competitor`s halogen based RMA level products. Not only are these products RMA compliant and usable in a wide range of applications, but they can easy drop-in replacement for general halogen based products.

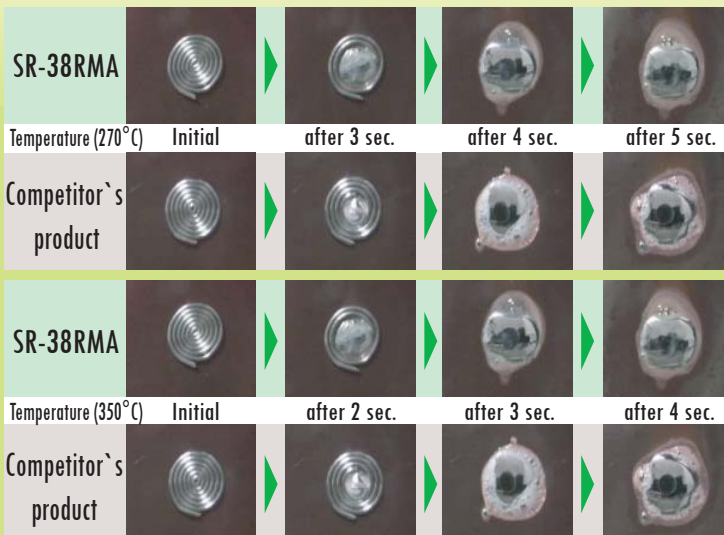


Product Name	SR-38RMA LFM-48	Competitor`s product
Flux Name	SR-38RMA	—
Flux Grade	RMA	RMA
Alloy Name	LFM-48	—
Alloy Composition	Sn-3,0Ag-0,5Cu	Sn-3,0Ag-0,5Cu
Meniscograph	270°C	0,90
	320°C	0,57
	370°C	0,48
Chlorine (Cl)	N.D.*	N.D.*
Bromine (Br)	N.D.*	900ppm or above
Features	Halogen-free RMA based	Halogen type RMA equivalent products

*N.D. = detection limit (50ppm) or lower

Initial Wettability and Spread Comparison

Evaluation Method: Test solder is melted on an oxidized copper board. The time of the onset of wetness and time needed for wetness (wetness time) are compared using a sequence of photographs.



Initial Wetness (270°C)

	SR-38RMA	Competitor
Onset of wetness	after 2,07 sec.	after 2,77 sec.
Period of wetness	2,03 sec.	2,33 sec.

Spread (270°C)

	SR-38RMA	Competitor
Oxidized copper board	82,9%	80,7%
Nickel board	72,3%	69,5%

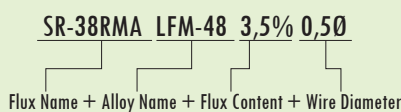
Initial Wetness (350°C)

	SR-38RMA	Competitor
Onset of wetness	after 1,36 sec.	after 1,60 sec.
Period of wetness	0,80 sec.	0,83 sec.

Spread (350°C)

	SR-38RMA	Competitor
Oxidized copper board	84,6%	84,1%
Nickel board	77,1%	73,1%

Line-up of Rosin-Core Solder



Product Specifications

Flux Name	Alloy composition	Melting Temperature	Flux Content	Wire Diameter (mm)	Alloy Features
SR-38RMA	LFM-48 (Sn-3,0Ag-0,5Cu)	217-220°C	2.5%, 3.5%, 4.5%	0.3, 0.38, 0.5, 0.65, 0.8, 1.0	JEITA alloy
	LFM-22 (Sn-0,7Cu)	227°C	3.5%	0.5, 0.65, 0.8, 1.0	Sn-Cu eutectic
	LFM-41 (Sn-0,3Ag-2,0Cu)	217-270°C	3.5%	0.5, 0.65, 0.8, 1.0	Anti-copper-leaching alloy

* LFM-48 has been sublicensed for JP Pat.No. 3027441 and US Pat.No.5527628