



TECHNICAL DATA SHEET

CATEGORY: **NO-CLEAN CORED WIRE SOLDER**
NAME: **LR-1W**

FEATURES

- VERY LOW POST-PROCESS RESIDUES
- VERY GOOD WETTING
- GREATER WETTING PROPERTIES
- HALIDE FREE
 - GLYCOL FREE
- GOOD THERMAL TRANSFER

DESCRIPTION

LR-1W is an organic acid and ester based no-clean formulation developed for the reduction of the post-process residues associated with wire soldering. LR-1W flux chemistry has an exceptional activity level for enhanced wetting to most metal surfaces used in electronic assembly and offers good thermal transfer for better solder penetration into plated holes or surface mount interconnections. LR-1W leaves very minimal post-process residues that are electrically safe and do not require cleaning. LR-1W no-clean wire is operator friendly, and is a drop-in for any no-clean application.

HANDLING

- LR-1W cored wire has an indefinite shelf life when proper storage conditions are observed.
- Store LR-1W in a clean, dry area away from moisture and sunlight. Do not freeze this product.

APPLICATION

- Solder iron tip temperature should be between 650° - 750°F for Sn63 and Sn62 alloys, 700° - 800°F for Sn/Ag and Sn/Ag/Cu alloys.
- Hold the solder iron tip at a 45° to 60° angle to the work surface.
- The solder iron should contact both the component lead and PCB pad surface.
- Solder and flux should flow onto the lead and pad or lead and barrel to promote optimum flux activity for the joint being worked.
- If additional flux is needed, the use of AIM flux dispensing pens is recommended for dispensing precise amounts of flux, eliminating over saturation.

CLEANING

- LR-1W can be cleaned, if necessary, with saponified tap water or an alcohol and water blend. AIMTERGE 520 is recommended. A water temperature of 140°F is recommended, and should be adequate for removing any post-process residues.

PACKAGING

- LR-1W cored wire is standard with a 1.5% flux core. Other flux cores %'s are available upon request.
- LR-1W is available in Sn60, Sn62, Sn63, Sn96, CASTIN® and other custom alloys upon request.
- Standard spool sizes: ½ lb. for .010 and .015 diameters; 1lb. spools for .020, .032, .040, .050, and .062 diameters. Other diameters and spool sizes are available upon special request.
- Packaging of ½ lb. and 1 lb. spools is available in 12 lb. and 24 lb. cases.

SAFETY

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

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PRODUCT TESTING RESULTS

CATEGORY:
NAME:

NO-CLEAN CORED WIRE MEDIUM
LR-1W

Surface Insulation Resistance

Surface Insulation Resistance (SIR) test for cored wire flux was carried out according to J-STD-004 and IPC-TM-650 method 2.6.3.3.

Pass-Fail Criteria and Data Evaluation

Reference	Property	Pass-Fail Criteria	Result
IPC-TM-650 method 2.6.3.3. §5.5.1	Control coupons	>1E9 Ω at 96 and 168 h	PASS
J-STD-004 §3.2.4.5.1	Sample coupons	>1E8 Ω at 96 and 168 h	PASS
IPC-TM-650 method 2.6.3.3. §5.5.2	Post-test visual inspection	No dendrite growth or corrosion	PASS

Conclusions

The result of the qualification test indicates that AIM LR1W cored wire flux complies with the requirements of IPC TM-650, Method 2.6.3.3 for Surface Insulation Resistance.

Test Data

Control		Initial	24 hours	96 hours	168 hours
#1	A	1.10E+14	2.90E+10	2.58E+10	2.21E+10
	B	1.00E+14	4.30E+10	2.72E+10	2.29E+10
	C	1.10E+14	3.97E+10	2.53E+10	2.12E+10
	D	2.01E+13	3.22E+10	2.42E+10	2.13E+10
#2	A	1.00E+14	3.57E+10	2.43E+10	2.06E+10
	B	1.10E+14	4.03E+10	2.62E+10	2.22E+10
	C	1.10E+14	3.22E+10	2.44E+10	2.05E+10
	D	1.10E+14	1.60E+10	2.40E+10	2.04E+10
#3	A	1.00E+14	2.98E+10	2.49E+10	2.12E+10
	B	1.00E+14	3.75E+10	2.60E+10	2.23E+10
	C	3.35E+13	2.01E+10	2.63E+10	2.20E+10
	D	1.00E+14	2.15E+10	1.74E+10	2.25E+10
LR1W					
#1	A	1.00E+14	5.88E+10	3.44E+10	2.85E+10
	B	5.03E+13	6.28E+10	3.57E+10	3.18E+10
	C	1.10E+14	5.33E+10	3.10E+10	2.56E+10
	D	1.00E+14	6.01E+10	3.46E+10	2.83E+10
#2	A	2.01E+13	6.71E+10	3.71E+10	3.01E+10
	B	1.00E+14	6.75E+10	3.73E+10	3.09E+10
	C	1.10E+14	6.53E+10	3.52E+10	2.87E+10
	D	1.10E+14	7.00E+10	3.78E+10	3.02E+10
#3	A	1.00E+14	6.28E+10	3.40E+10	2.74E+10
	B	1.00E+14	6.19E+10	3.34E+10	2.75E+10
	C	5.03E+13	6.27E+10	3.32E+10	2.66E+10
	D	5.03E+13	6.93E+10	3.60E+10	2.86E+10

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