

PRODUCT DATA SHEET

Nitinol Soldering Kit

Contents

- Indalloy® #121 (96.5Sn 3.5Ag 0.030") solder wire
- Indalloy® Flux #2
- Indalloy® Flux #3
- Nitinol #1 wire 0.017"

Nitinol requires a strong flux to remove surface oxides to facilitate wetting of the solder to the surface.



Indalloy® Flux #2

Indalloy® Flux #2 is a specialty, acid-based flux formulated for soldering Nitinol. It also works on high chromium-containing alloys including stainless steel.

Indalloy® Flux #2 is compatible with all types of solders. It can be brushed on, dispensed, or sprayed. All application equipment should be acid resistant. It is not recommended for electronics applications.

Indalloy® Flux #3

Indalloy® Flux #3 is a high viscosity liquid flux formulated for soldering Nitinol. It also works on aluminum.

Indalloy® Flux #3 works best with tin-containing alloys and because of its higher viscosity, is best applied by brush or swab. Any flux equipment should be resistant to halide corrosion. It is not recommended for indium-containing alloys or electronics applications.

Flux Technical Specifications

	Flux #2 (P/N 84002)	Flux #3 (P/N 84003)
Activation Range	100-371 °C	96-343 °C
Specific Gravity	1.53 gm/cc	1.33 gm/cc
Flash Point	Non-flammable	93 °C
Chloride Content	No zinc or other heavy metal chlorides	Contains chlorides
pH	1-1.5	8
Appearance	Water white	Yellow to pale green
Cleaning	Warm water (<50 °C) and mechanical scrubbing	Warm water (<50 °C) and mechanical scrubbing
Shipping	Transport in accordance with applicable regulations and requirements	Transport in accordance with applicable regulations and requirements

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Form No. 98790 R0

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Nitinol Wire Specifications

Nitinol #1		
Austenitic Finish Temperature (Af)	10-18 °C	
Flash Point	Non-flammable	
Chemical Composition	Element	Weight %
	Nickel	54.5 to 57.0 (Ref.)
	Titanium	Balance
	Carbon	<0.05 (500 PPM max.)
	Cobalt	<0.05 (500 PPM max.)
	Copper	<0.01 (100 PPM max.)
	Chromium	<0.01 (100 PPM max.)
	Hydrogen	<0.005 (50 PPM max.)
	Iron	<0.03 (300 PPM max.)
	Niobium	<0.025 (250 PPM max.)
	Oxygen	<0.05 (500 PPM max.)
	Any Single Trace Element	<0.1
	Total Trace Elements	<0.25
Ultimate Tensile Strength	> 180,000 psi	
Appearance	Shiny light brown color	
Cleaning	Alcohol wipe	
Shipping	Transport in accordance with applicable regulations and requirements	

Nitinol courtesy of Fort Wayne Metals.

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