



Metal Compatibility

EnTron solvents are specifically designed for compatibility with white metals, ferrous metals, precious metals and alloys in a variety of cleaning applications including immersion, vapor degreasing, ultrasonic and cold wipe cleaning.

Compatibility Testing for corrosion, etching, pitting, discoloration and other signs of degradation were conducted on EnTron in reflux and immersion environments. Metal coupons were prepared, tested and analyzed in accordance with Mil.T-81533A 4.4.9 and TM0193-2000, with the following results¹:

Legend: A= Liquid Immersion Area, B= Liquid/Vapor Interface Area, C= Vapor Only Area,
 n/e = no effects observed, m/e = minor effects, and s/e = significant effects

White Metals and Alloys

Metal Specimen	Compatibility with ENTRON ¹	Reflux Testing ²			Immersion Testing ³		
		A	B	C	D	E	F
Aluminum 1050	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Hastalloy –B	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Inconel 600	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Magnesium	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Nickel	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Titanium 5-2.5	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Zinc	Yes	n/e	n/e	n/e	n/e	n/e	n/e

Copper and Alloys

Metal Specimen	Compatibility with ENTRON ¹	Reflux Testing ²			Immersion Testing ³		
		A	B	C	D	E	F
Copper	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Al -Bronze 614	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Tin – Bronze 903	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Naval Brass 464	Yes	n/e	n/e	n/e	n/e	n/e	n/e



Ferrous Metals and Alloys:

Metal Specimen	Compatibility with ENTRON ¹	Reflux Testing ²			Immersion Testing ³		
		A	B	C	D	E	F
Iron							
Mild Steel	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Stainless 303	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Stainless 316	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Stainless 330	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Carbon Steel	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Tungsten Carbide	Yes	n/e	n/e	n/e	n/e	n/e	n/e

Lead and Solders:

Metal Specimen	Compatibility with ENTRON ¹	Reflux Testing ²			Immersion Testing ³		
		A	B	C	D	E	F
Lead	Yes	n/e	n/e	n/e	n/e	n/e	n/e
5 Sn/ 95Pb	Yes	n/e	n/e	n/e	n/e	n/e	n/e
70 Sn/30Pb	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Silver Solder B AG8	Yes	n/e	n/e	n/e	n/e	n/e	n/e

Other Pure Metals:

Metal Specimen	Compatibility with ENTRON ¹	Reflux Testing ²			Immersion Testing ²		
		A	B	C	D	E	F
Tin	Yes	n/e	n/e	n/e	n/e	n/e	n/e
Silver	Yes	n/e	n/e	n/e	n/e	n/e	n/e

FOOTNOTES:

1. As with any generalized testing, the results of our Metal Compatibility Testing represents outcomes within the specific parameters and conditions of the tests conducted and are provided for general guidance only. The User is responsible for testing for compatibility with their specific substrate in the context of their cleaning operation. Reliance Specialty Products, Inc. disclaims all warranties, actual or implied, in connection with this testing and compatibility for any particular application.
2. Metal coupons were prepared and tested in a reflux environment in accordance with Mil-T-81533A 4.4.9 for a period of 24 hours.
3. Metal coupons were prepared and tested in an immersion environment in accordance with NACE Standard TM193-2000 "Laboratory Corrosion Testing of Metals in Static Chemical Cleaning Solutions at Temperatures below 93°C (200°F).