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Metal Compatibility of 2% CLEANERS at Room Temperature

CONCLUSION: The results below show a worst case scenario by fully immersing the metal coupons in the cleaning solutions for two weeks. Actual cleaning protocols are designed to maximize detergency while incurring no damage to metal parts. **Customers are encouraged to conduct their own tests before using our cleaners.**

METAL	PROPERTY	1 Day, %Δ						14 Days, %Δ					
		MICRO-90®	MICRO® A07	LF 2100®	MICRO® GREEN CLEAN	SURFACE-CLEANSE/ 930®	Tap Water	MICRO-90®	MICRO® A07	LF 2100®	MICRO® GREEN CLEAN	SURFACE-CLEANSE/ 930®	Tap Water
ALUMINUM 1100	%Δ Mass	-0.70	+0.01	-0.23	-0.25	0.00	0.00	-0.40	-0.18	-0.18	-0.31	0.00	-0.05
	ΔAppearance	Darker overall	No change	Darker overall	Dark spots	No change	Several Pinpoints	Darker Overall	Etched	Darker overall	Darker overall	No change	Pinpoints
BRASS ALLOY 260	%Δ Mass	-0.08	-0.03	-0.04	-0.06	0.00	0.00	-0.44	-0.36	-0.18	-0.34	0.00	0.00
	ΔAppearance	Etched	No change	No change	Dark spots	Dark areas	Dark spots	Dark spots	Etched	Darker overall	Dark spots	Dark areas	Dark spots
BRONZE ALLOY 220	%Δ Mass	-0.07	-0.03	-0.02	-0.07	0.00	0.00	-0.40	-0.36	-0.08	-0.32	0.00	0.00
	ΔAppearance	Etched	No change	No change	Dark spots	Dark areas	Dark spots	Etched	Etched	Faded Appearance	Etched	Dark areas	Dark spots
1008 COLD ROLLED STEEL	%Δ Mass	-0.01	-0.05	0.00	-0.03	-0.03	-0.04	-0.27	-1.18	0.00	-0.92	-0.44	-0.47
	ΔAppearance	No change	Yellow Overall	No change	No change	Yellow area	No change	Etched	Yellow Overall	No change	Etched	Red rust	Rust spots
COPPER ALLOY CA 110	%Δ Mass	-0.02	-0.03	-0.01	-0.03	0.00	0.00	-0.12	-0.47	-0.07	-0.13	0.00	0.00
	ΔAppearance	No change	No change	No change	No change	Dark spots	Darker outlines	Dark spots	Etched	Faded Appearance	Dark spots	Dark spots	Darker outlines
MONEL 400	%Δ Mass	0.00	-0.03	0.00	0.00	0.00	0.00	0.00	-0.37	0.00	0.00	0.00	0.00
	ΔAppearance	No change	No change	No change	No change	No change	No change	No change	Darker Overall	No change	No change	No change	No change
304 STAINLESS STEEL	%Δ Mass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	ΔAppearance	No change	No change	No change	No change	No change	No change	No change	No change	No change	No change	No change	No change
TITANIUM ALLOY, 8% Mn	%Δ Mass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	ΔAppearance	No change	No change	No change	No change	No change	No change	No change	No change	No change	No change	No change	No change

Repeatability Precision

Instrument	Instrument Capability	Typical Average Measurements + Std. Dev	Coefficient of Variation
Analytical Balance	0.0001 g	16.9482 + 6.7E-5	4.0E-6%

Modified version of ASTM D471
Coupons were soaked at room temperature for 14 days. Measurements were recorded at the specified time periods.



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