



UNITED ELECTRIC CONTROLS

Manufacturers of
Threshold Detection
& Switching™ devices

CERTIFICATE OF CONFORMANCE
MATERIAL COMPOSITION OF METALLIC
WETTED PARTS
(UE Certification Code MC1)

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United Electric Controls (UEC) certifies that all vacuum, pressure, differential pressure, and temperature instrumentation it manufactures containing metallic wetted material have the following material composition as outlined in UEC Design Engineering document, DE733010002, attached.

Products are manufactured and inspected under Quality Control Procedures set forth by UEC and standards traceable to NIST (National Institute of Standards and Technology) and in accordance with International Organization for Standardization, ISO 9001.

Colleen Rogers
Quality Assurance Supervisor
United Electric Controls



Material Composition of Metallic Wetted Parts

Percentage composition by weight. Maximum percentage shown unless specified otherwise.



Stainless Steels	Material Type	UNS No.	C	Mn	P	Si	S	Cr	Ni	N	Other	Fe
	316	S31600	0.08	2	0.045	1	0.03	16 - 18	10 - 14	0.10	2 - 3 Mo	Balance
	316L	S31603	0.03	2	0.045	1	0.03	16 - 18	10 - 14	0.10	2 - 3 Mo	Balance
	304	S30400	0.08	2	0.045	1	0.03	18 - 20	8 - 10.5	0.10	--	Balance
	303	S30300	0.15	2	0.2	1	0.15 (min.)	17 - 19	8 - 10	--	--	Balance
	17-7 PH	S17400	0.09	1	0.04	1	0.03	16 - 18	6.5 - 7.75	--	0.75-1.5 Al	Balance
	15-5 PH	S15500	0.07	1	0.04	1	0.03	14 - 15.5	3.5 - 5.5	--	2.5 - 4.5 Cu, Cb+Ta 0.15 to 0.45	Balance

Copper Alloys	Material Type	UNS No.	Cu	Sn	P	Pb	Fe	Zn	Other
	Phosphor Bronze Grade A, 5% Tin	C51000	Balance	4.2 - 5.8	0.03 - 0.35	0.05	0.1	0.3	--
	Brass # 360	C36000	60 - 63	--	--	2.5 - 3.7	0.35	Balance	0.5
	Brass # 240	C24000	78.5 - 81.5	--	--	0.05	0.05	Balance	0.2

Aluminum Alloys	Material Type	UNS No.	Al	Si	Fe	Cu	Mn	Mg	Ni	Zn	Sn	Other
	2011	A92011	93.7	0.4	0.7	5 - 6	--	--	--	0.3	--	0.2 - 0.6 Pb, 0.2 - 0.6 Bi
	2024	A92024	Balance	0.5	0.5	3.8 - 4.9	0.3 - 0.9	1.2 - 1.8	0.05	0.2	0.05	0.2 Ti+Zr, 0.05 Pb, 0.1 Cr
	5052	A95052	Balance	0.1	0.4	0.1	0.1	2.2 - 2.8	--	0.1	--	0.15 - 0.35 Cr
	Alloy # 360	A03600	85.1-90.6	9 - 10	2	0.6	0.35	0.4 - 0.6	0.5	0.5	0.15	0.25

Nickel Alloys	Material Type	UNS.No.	C	Cr	Mo	Fe	W	Ni	Cu	Mn	Co	Other
	Hastelloy C 276	N10276	0.010	14.5 - 16.5	15 - 17	4 - 7	3 - 4.5	Balance	--	1	2.5	0.04 P, 0.08 Si, 0.03 S, 0.35 V
	Monel 400/405	N04400/ N04405	0.3	--	--	2.5	--	63 (min.)	28 - 34	2	--	0.06 S, 0.5 Si