

Hand Held XRF U

Single Layer

Ag/Al (Silver/Aluminum)

Part Number	Nominal Thicknesses	
	μin	μm
HHAG200AL999	200	5
HHAG800AL999	800	20
HHAG1000AL999	1000	25

Ag/Cu (Silver/Copper)

Part Number	Nominal Thicknesses	
	μin	μm
HHAG4CU999	4	0.1
HHAG10CU999	10	0.25
HHAG30CU999	30	0.8
HHAG60CU999	60	1.5
HHAG100CU999	100	2.5
HHAG120CU999	120	3
HHAG150CU999	150	3.8
HHAG350CU999	350	8.8
HHAG500CU999	500	12.5
HHAG600CU999	600	15
HHAG800CU999	800	20
HHAG1000CU999	1000	25
HHAG1200CU999	1200	30
HHAG2000CU999	2000	50

Ag/Kovar (Silver/Kovar)

Part Number	Nominal Thicknesses	
	μin	μm
HHAG60KVR999	60	1.5
HHAG150KVR999	150	3.8
HHAG350KVR999	350	8.8
HHAG450KVR999	450	11.3
HHAG650KVR999	650	16.3
HHAG800KVR999	800	20
HHAG1000KVR999	1000	25
HHAG2000KVR999	2000	50

Ag/Ni (Silver/Nickel)

Part Number	Nominal Thicknesses	
	μin	μm
HHAG40NI999	40	1
HHAG160NI999	160	4

Au/Ag (Gold/Silver)

Part Number	Nominal Thicknesses	
	μin	μm
HHAU10AG999	10	0.25
HHAU20AG999	20	0.5
HHAU60AG999	60	1.5
HHAU200AG999	200	5

Au/Al (Gold/Aluminum)

Part Number	Nominal Thicknesses	
	μin	μm
HHAU10AL999	10	0.25
HHAU20AL999	20	0.5
HHAU80AL999	80	2
HHAU200AL999	200	5

Au/Kovar (Gold/Kovar)

Part Number	Nominal Thicknesses	
	μin	μm
HHAU10KVR999	10	0.25
HHAU20KVR999	20	0.5
HHAU50KVR999	50	1.3
HHAU90KVR999	90	2.3
HHAU200KVR999	200	5
HHAU300KVR999	300	7.5

Au/Ni (Gold/Nickel)

Part Number	Nominal Thicknesses	
	μin	μm
HHAU4NI999	4	0.1
HHAU10NI999	10	0.25
HHAU20NI999	20	0.5
HHAU30NI999	30	0.8
HHAU40NI999	40	1
HHAU50NI999	50	1.3
HHAU60NI999	60	1.5
HHAU90NI999	90	2.3
HHAU100NI999	100	2.5
HHAU120NI999	120	3
HHAU200NI999	200	5
HHAU300NI999	300	7.5

Cd/Al (Cadmium/Aluminum)

Part Number	Nominal Thicknesses	
	μin	μm
HHCD250AL999	250	6.3
HHCD350AL999	350	8.8
HHCD900AL999	900	22.5
HHCD1200AL999	1200	30

Cd/Cu (Cadmium/Copper)

Part Number	Nominal Thicknesses	
	μin	μm
HHCD40CU999	40	1
HHCD100CU999	100	2.5
HHCD200CU999	200	5
HHCD300CU999	300	7.5
HHCD600CU999	600	15
HHCD800CU999	800	20
HHCD1000CU999	1000	25

Cd/Fe (Cadmium/Iron or Steel)

Part Number	Nominal Thicknesses	
	μin	μm
HHCD50FE999	50	1.3
HHCD150FE999	150	3.8
HHCD250FE999	250	6.3
HHCD400FE999	400	10
HHCD500FE999	500	12.5
HHCD800FE999	800	20
HHCD1000FE999	1000	25
HHCD1500FE999	1500	37.5
HHCD2000FE999	2000	50

Cr/Cu (Chromium/Copper)

Part Number	Nominal Thicknesses	
	μin	μm
HHCR60CU999	60	1.5
HHCR80CU999	80	2
HHCR200CU999	200	5
HHCR400CU999	400	10
HHCR600CU999	600	15
HHCR1000CU999	1000	25

Cr/Fe (Chromium/Iron or Steel)

Part Number	Nominal Thicknesses	
	μin	μm
HHCR80FE999	80	2
HHCR150FE999	150	3.8
HHCR500FE999	500	12.5
HHCR600FE999	600	15
HHCR800FE999	800	20

Cu/Al (Copper/Aluminum)

Part Number	Nominal Thicknesses	
	μin	μm
HHCU50AL999	50	1.3
HHCU100AL999	100	2.5
HHCU170AL999	170	4.3
HHCU400AL999	400	10
HHCU1000AL999	1000	25

Cu/Epoxy (Copper/Epoxy)

Part Number	Nominal Thicknesses	
	μin	μm
HHCU60EPOXY999	60	1.5
HHCU100EPOXY999	100	2.5
HHCU150EPOXY999	150	3.8
HHCU250EPOXY999	250	6.3
HHCU350EPOXY999	350	8.8
HHCU500EPOXY999	500	13
HHCU650EPOXY999	650	16.3
HHCU1000EPOXY999	1000	25

Cu/Fe (Copper/Iron or Steel)

Part Number	Nominal Thicknesses	
	μin	μm
HHCU30FE999	30	0.8
HHCU80FE999	80	2
HHCU100FE999	100	2.5
HHCU200FE999	200	5
HHCU400FE999	400	10
HHCU600FE999	600	15
HHCU800FE999	800	20
HHCU1000FE999	1000	25

Cu/Kovar (Copper/Kovar)

Part Number	Nominal Thicknesses	
	μin	μm
HHCU100KVR999	100	2.5
HHCU350KVR999	350	8.8

Ni/Al (Nickel/Aluminum)

Part Number	Nominal Thicknesses	
	μin	μm
HHNI20AL999	20	0.5
HHNI60AL999	60	1.5
HHNI100AL999	100	2.5
HHNI150AL999	150	3.8
HHNI250AL999	250	6.3
HHNI750AL999	750	18.8
HHNI900AL999	900	22.5

Ni/Cu (Nickel/Copper)

Part Number	Nominal Thicknesses	
	μin	μm
HHNI10CU999	10	0.25
HHNI20CU999	20	0.5
HHNI40CU999	40	1
HHNI50CU999	50	1.3
HHNI60CU999	60	1.5
HHNI80CU999	80	2

HHNI100CU999	100	2.5
HHNI120CU999	120	3
HHNI200CU999	200	5
HHNI300CU999	300	7.5
HHNI400CU999	400	10
HHNI600CU99	600	15
HHNI800CU999	800	20

Ni/Fe (Nickel/Iron or Steel)

Part Number	Nominal Thicknesses	
	μin	μm
HHNI70FE999	70	1.8
HHNI100FE999	100	2.5
HHNI150FE999	150	3.8
HHNI200FE999	200	5
HHNI400FE999	400	10
HHNI700FE99	700	17.5
HHNI900FE999	900	22.5
HHNI1000FE999	1000	25

Ni/Kovar (Nickel/Kovar)

Part Number	Nominal Thicknesses	
	μin	μm
HHNI25KVR999	25	0.6
HHNI50KVR999	50	1.3
HHNI100KVR999	100	2.5
HHNI200KVR999	200	5
HHNI400KVR999	400	10
HHNI700KVR99	700	17.5

Ni-P/Al (Electroless Nickel/Aluminum) Non-Certified Phosphorus

Part Number	Thicknesses		Composition	
	μin	μm	%P	%Ni
HHNIP70-94AL999	70	1.8	6	94
HHNIP140-94AL999	140	3.5	6	94
HHNIP125-92AL999	125	3.1	8	92
HHNIP150-92AL999	150	3.8	8	92
HHNIP175-92AL999	175	4.4	8	92
HHNIP200-92AL999	200	5	8	92
HHNIP250-92AL999	250	6.3	8	92
HHNIP375-92AL999	375	9.4	8	92
HHNIP450-92AL999	450	11.3	8	92
HHNIP500-92AL999	500	12.5	8	92
HHNIP650-92AL999	650	16.3	8	92
HHNIP750-92AL999	750	18.8	8	92
HHNIP120-90AL999	120	3	10	90
HHNIP200-90AL999	200	5	10	90
HHNIP250-90AL999	250	6.3	10	90
HHNIP400-90AL999	400	10	10	90
HHNIP575-90AL999	575	14.4	10	90

Ni-P/Cu (Electroless Nickel/Copper) Non-Certified Phosphorus

Part Number	Nominal Thicknesses		Nominal Composition	
	μin	μm	%P	%Ni
HHNIP150-92CU999	150	3.8	8	92
HHNIP300-92CU999	300	7.5	8	92
HHNIP400-92CU999	400	10	8	92
HHNIP500-92CU999	500	12.5	8	92
HHNIP700-92CU999	700	17.5	8	92
HHNIP1000-92CU999	1000	25	8	92
HHNIP60-90CU999	60	1.5	10	90
HHNIP80-90CU999	80	2	10	90
HHNIP100-90CU999	100	2.5	10	90
HHNIP140-90CU999	140	3.5	10	90
HHNIP130-88CU999	130	3.3	12	88
HHNIP230-88CU999	230	5.8	12	88
HHNIP350-88CU999	350	8.8	12	88
HHNIP450-88CU999	450	11.3	12	88

Ni-P/Fe (Electroless Nickel/Iron or Steel) Non-Certified Phosphorus

Part Number	Nominal Thicknesses		Nominal Composition	
	µin	µm	%P	%Ni
HHNIP80-96FE999	80	2	4	96
HHNIP125-96FE999	125	3.1	4	96
HHNIP150-96FE999	150	3.8	4	96
HHNIP200-96FE999	200	5	4	96
HHNIP240-96FE999	240	6	4	96
HHNIP350-96FE999	350	8.8	4	96
HHNIP450-96FE999	450	11.3	4	96
HHNIP550-96FE999	550	13.8	4	96
HHNIP80-94FE999	80	2	6	94
HHNIP100-94FE999	100	2.5	6	94
HHNIP120-94FE999	120	3	6	94
HHNIP150-94FE999	150	3.8	6	94
HHNIP220-94FE999	220	5.5	6	94
HHNIP360-94FE999	360	9	6	94
HHNIP400-94FE999	400	10	6	94
HHNIP500-94FE999	500	12.5	6	94
HHNIP600-94FE999	600	15	6	94
HHNIP750-94FE999	750	18.8	6	94
HHNIP100-92FE999	100	2.5	8	92
HHNIP150-92FE999	150	3.8	8	92
HHNIP200-92FE999	200	5	8	92
HHNIP250-92FE999	250	6.3	8	92
HHNIP300-92FE999	300	7.5	8	92
HHNIP350-92FE999	350	8.8	8	92
HHNIP400-92FE999	400	10	8	92
HHNIP450-92FE999	450	11.3	8	92
HHNIP500-92FE999	500	12.5	8	92
HHNIP600-92FE999	600	16	8	92
HHNIP800-92FE999	800	20	8	92
HHNIP100-90FE999	100	2.5	10	90
HHNIP120-90FE999	120	3	10	90
HHNIP160-90FE999	160	4	10	90
HHNIP200-90FE999	200	5	10	90
HHNIP250-90FE999	250	6.3	10	90
HHNIP350-90FE999	350	8.8	10	90
HHNIP400-90FE999	400	10	10	90
HHNIP450-90FE999	450	11.3	10	90
HHNIP500-90FE999	500	12.5	10	90
HHNIP700-90FE999	700	17.5	10	90
HHNIP800-90FE999	800	20	10	90

Pd/Cu (Palladium/Copper)

Part Number	Nominal Thicknesses	
	µin	µm
HHPD4CU999	4	0.1
HHPD10CU999	10	0.25
HHPD20CU999	20	0.5
HHPD40CU999	40	1
HHPD60CU999	60	1.5

Pd/Ni (Palladium/Nickel)

Part Number	Nominal Thicknesses	
	µin	µm
HHPD20NI999	20	0.5
HHPD40NI999	40	1
HHPD80NI999	80	2
HHPD120NI999	120	3
HHPD200NI999	200	5

Rh/Ni (Rhodium/Nickel)

Part Number	Nominal Thicknesses	
	µin	µm
HHRH20NI999	20	0.5
HHRH40NI999	40	1
HHRH80NI999	80	2
HHRH100NI999	100	2.5

Sn/Al (Tin/Aluminum)

Part Number	Nominal Thicknesses	
	µin	µm
HHSN2AL999	2	0.05
HHSN4AL999	4	0.1
HHSN10AL999	10	0.25
HHSN20AL999	20	0.5
HHSN40AL999	40	1
HHSN80AL999	80	2
HHSN120AL999	120	3
HHSN200AL999	200	5
HHSN450AL999	450	11.3
HHSN600AL999	600	15
HHSN800AL999	800	20

Sn/Cu (Tin/Copper)

Part Number	Nominal Thicknesses	
	µin	µm
HHSN4CU999	4	0.1
HHSN10CU999	10	0.25
HHSN20CU999	20	0.5
HHSN40CU999	40	1
HHSN80CU999	80	2
HHSN150CU999	150	3.8
HHSN200CU999	200	5
HHSN300CU999	300	7.5
HHSN400CU999	400	10
HHSN500CU999	500	12.5
HHSN600CU999	600	15
HHSN800CU999	800	20
HHSN1000CU999	1000	25
HHSN1200CU999	1200	30
HHSN2000CU999	2000	50

Sn/Fe (Tin/Iron or Steel)

Part Number	Nominal Thicknesses	
	µin	µm
HHSN40FE999	40	1
HHSN200FE999	200	5
HHSN450FE999	450	11.3
HHSN650FE999	650	16.3
HHSN800FE999	800	20
HHSN1400FE999	1400	35
HHSN1800FE999	1800	45

Sn/Kovar (Tin/Kovar)

Part Number	Nominal Thicknesses	
	µin	µm
HHSN30KVR999	30	0.8
HHSN60KVR999	60	1.5
HHSN100KVR999	100	2.5
HHSN120KVR999	120	3
HHSN200KVR999	200	5
HHSN600KVR999	600	15
HHSN1000KVR999	1000	25
HHSN1800KVR999	1800	45

Zn/Fe (Zinc on Iron or Steel)

Part Number	Nominal Thicknesses	
	µin	µm
HHZN100FE999	100	2.5
HHZN200FE999	200	5
HHZN320FE999	320	8
HHZN400FE999	400	10
HHZN500FE999	500	12.5
HHZN600FE999	600	15
HHZN800FE999	800	20
HHZN1000FE999	1000	25
HHZN1200FE999	1200	30

Alloy Layers**Ni-P/Al (Electroless Nickel/Aluminum) Certified Phosphorus**

Part Number	Nominal Thicknesses		Nominal Composition		
	μin	μm	%P	%Ni	
HHNIP70-94AL999C	70	1.8	6	94	
HHNIP140-94AL999C	140	3.5	6	94	
HHNIP125-92AL999C	125	3.1	8	92	
HHNIP150-92AL999C	150	3.8	8	92	
HHNIP175-92AL999C	175	4.4	8	92	
HHNIP200-92AL999C	200	5	8	92	
HHNIP250-92AL999C	250	6.3	8	92	
HHNIP375-92AL999C	375	9.4	8	92	
HHNIP450-92AL999C	450	11.3	8	92	
HHNIP500-92AL999C	500	12.5	8	92	
HHNIP650-92AL999C	650	16.3	8	92	
HHNIP750-92AL999C	750	18.8	8	92	
HHNIP120-90AL999C	120	3	10	90	
HHNIP200-90AL999C	200	5	10	90	
HHNIP250-90AL999C	250	6.3	10	90	
HHNIP400-90AL999C	400	10	10	90	
HHNIP575-90AL999C	575	14.4	10	90	

Ni-P/Cu (Electroless Nickel/Copper) Certified Phosphorus

Part Number	Nominal Thicknesses		Nominal Composition		
	μin	μm	%P	%Ni	
HHNIP150-92CU999C	150	3.8	8	92	
HHNIP300-92CU999C	300	7.5	8	92	
HHNIP400-92CU999C	400	10	8	92	
HHNIP500-92CU999C	500	12.5	8	92	
HHNIP700-92CU999C	700	17.5	8	92	
HHNIP1000-92CU999C	1000	25	8	92	
HHNIP60-90CU999C	60	1.5	10	90	
HHNIP80-90CU999C	80	2	10	90	
HHNIP100-90CU999C	100	2.5	10	90	
HHNIP140-90CU999C	140	3.5	10	90	
HHNIP130-88CU999C	130	3.3	12	88	
HHNIP230-88CU999C	230	5.8	12	88	
HHNIP350-88CU999C	350	8.8	12	88	
HHNIP450-88CU999C	450	11.3	12	88	
HHNIP1200-88CU999C	1200	30	12	88	

Ni-P/Fe (Electroless Nickel/Iron or Steel) Certified Phosphorus

Part Number	Nominal Thicknesses		Nominal Composition		
	μin	μm	%P	%Ni	
HHNIP80-96FE999C	80	2	4	96	
HHNIP125-96FE999C	125	3.1	4	96	
HHNIP150-96FE999C	150	3.8	4	96	
HHNIP200-96FE999C	200	5	4	96	
HHNIP240-96FE999C	240	6	4	96	
HHNIP350-96FE999C	350	8.8	4	96	
HHNIP450-96FE999C	450	11.3	4	96	
HHNIP550-96FE999C	550	13.8	4	96	
HHNIP80-94FE999C	80	2	6	94	
HHNIP100-94FE999C	100	2.5	6	94	
HHNIP120-94FE999C	120	3	6	94	
HHNIP150-94FE999C	150	3.8	6	94	
HHNIP220-94FE999C	220	5.5	6	94	
HHNIP360-94FE999C	360	9	6	94	
HHNIP400-94FE999C	400	10	6	94	
HHNIP500-94FE999C	500	12.5	6	94	
HHNIP600-94FE999C	600	15	6	94	
HHNIP750-94FE999C	750	18.8	6	94	
HHNIP100-92FE999C	100	2.5	8	92	
HHNIP150-92FE999C	150	3.8	8	92	
HHNIP200-92FE999C	200	5	8	92	
HHNIP250-92FE999C	250	6.3	8	92	
HHNIP300-92FE999C	300	7.5	8	92	

HHNIP350-92FE999C	350	8.8	8	92
HHNIP400-92FE999C	400	10	8	92
HHNIP450-92FE999C	450	11.3	8	92
HHNIP500-92FE999C	500	12.5	8	92
HHNIP600-92FE999C	600	16	8	92
HHNIP800-92FE999C	800	20	8	92
HHNIP100-90FE999C	100	2.5	10	90
HHNIP120-90FE999C	120	3	10	90
HHNIP160-90FE999C	160	4	10	90
HHNIP200-90FE999C	200	5	10	90
HHNIP250-90FE999C	250	6.3	10	90
HHNIP350-90FE999C	350	8.8	10	90
HHNIP400-90FE999C	400	10	10	90
HHNIP450-90FE999C	450	11.3	10	90
HHNIP500-90FE999C	500	12.5	10	90
HHNIP700-90FE999C	700	17.5	10	90
HHNIP800-90FE999C	800	20	10	90

Pd-Ni/Cu (Palladium-Nickel/Copper)

Part Number	Nominal Thicknesses		Nominal Composition		
	μin	μm	%Pd	%Ni	
HHPDNI40-80CU999	40	1	80	20	
HHPDNI60-80CU999	60	1.5	80	20	
HHPDNI80-80CU999	80	2	80	20	
HHPDNI100-80CU999	100	2.5	80	20	
HHPDNI120-80CU999	120	3	80	20	
HHPDNI200-80CU999	200	5	80	20	
HHPDNI275-80CU999	275	6.9	80	20	
HHPDNI350-80CU999	350	8.8	80	20	
HHPDNI450-80CU999	450	11.3	80	20	

Sn-Ni/Cu (Tin-Nickel/Copper)

Part Number	Nominal Thicknesses		Nominal Composition		
	μin	μm	%Sn	%Ni	
HHSNNI375-62CU999	375	9.4	62	38	
HHSNNI520-62CU999	520	13	62	38	
HHSNNI100-65CU999	100	2.5	65	35	
HHSNNI240-65CU999	240	6	65	35	
HHSNNI200-70CU999	200	5	70	30	
HHSNNI300-70CU999	300	7.5	70	30	
HHSNNI450-70CU999	450	11.3	70	30	
HHSNNI800-70CU999	800	20	70	30	

Sn-Pb/Cu (Tin-Lead/Copper)

Part Number	Nominal Thicknesses		Nominal Composition		
	μin	μm	%Sn	%Pb	
HHSNPB40-60CU999	40	1	60	40	
HHSNPB80-60CU999	80	2	60	40	
HHSNPB100-60CU999	100	2.5	60	40	
HHSNPB120-60CU999	120	3	60	40	
HHSNPB150-60CU999	150	3.8	60	40	
HHSNPB200-60CU999	200	4	60	40	
HHSNPB300-60CU999	300	7.5	60	40	
HHSNPB350-60CU999	350	8.8	60	40	
HHSNPB400-60CU999	400	10	60	40	
HHSNPB500-60CU999	500	12.5	60	40	
HHSNPB600-60CU999	600	15	60	40	
HHSNPB800-60CU999	800	20	60	40	
HHSNPB900-60CU999	900	22.5	60	40	
HHSNPB1000-60CU999	1000	25	60	40	
HHSNPB40-90CU999	40	1	90	10	
HHSNPB60-90CU999	60	1.5	90	10	
HHSNPB80-90CU999	80	2	90	10	
HHSNPB100-90CU999	100	2.5	90	10	
HHSNPB150-90CU999	150	3.8	90	10	
HHSNPB200-90CU999	200	5	90	10	
HHSNPB250-90CU999	250	6.3	90	10	
HHSNPB300-90CU999	300	7.5	90	10	

HHSNPB350-90CU999	350	8.8	90	10
HHSNPB400-90CU999	400	10	90	10
HHSNPB450-90CU999	450	11.3	90	10
HHSNPB600-90CU999	600	15	90	10
HHSNPB700-90CU999	700	17.5	90	10
HHSNPB800-90CU999	800	20	90	10
HHSNPB1000-90CU999	1000	25	90	10

Zn-Ni/Fe (Zinc-Nickel/Iron)

Part Number	Nominal Thicknesses		Nominal Composition	
	μin	μm	%Zn	%Ni
HHZNNI100-85FE999	100	2.5	85	15
HHZNNI200-85FE999	200	5	85	15
HHZNNI400-85FE999	400	10	85	15
HHZNNI600-85FE999	600	15	85	15
HHZNNI800-85FE999	800	20	85	15

Certified Bulk Alloy Composition Standards

Au-Ag (Gold-Silver)

Part Number	Nominal Composition	
	%Au	%Ag
HHAUAG999-40	40	60
HHAUAG999-60	60	40

Au-Cu (Gold-Copper)

Part Number	Nominal Composition	
	%Au	%Cu
HHAUCU999-40	40	60
HHAUCU999-60	60	40
HHAUCU999-80	80	20

Au-Sn (Gold-Tin)

Part Number	Nominal Composition	
	%Au	%Sn
HHAUSN999-70	70	30
HHAUSN999-80	80	20
HHAUSN999-90	90	10

Cu-Sn (Copper-Tin)

Part Number	Nominal Composition	
	%Cu	%Sn
HHCUSN999-94	94	6

Cu-Zn (Copper-Zinc)

Part Number	Nominal Composition	
	%Cu	%Zn
HHCUZN999-63	63	37

Ni-Cr (Nickel-Chromium)

Part Number	Nominal Composition	
	%Ni	%Cr
HHNICR999-80	80	20

Ni-Co (Nickel-Cobalt)

Part Number	Nominal Composition	
	%Ni	%Co
HHNICO999-50	50	50
HHNICO999-65	65	35
HHNICO999-85	85	15

Ni-Fe (Nickel-Iron)

Part Number	Nominal Composition	
	%Ni	%Fe
HHNIFE999-50	50	50
HHNIFE999-80	80	20

Ni-P (Nickel-Phosphorus) Certified Phosphorous

Part Number	Nominal Composition	
	%Ni	%P
HHNIP999-94C	94	6
HHNIP999-92C	92	8
HHNIP999-88C	88	12

Pd-Co (Palladium-Cobalt)

Part Number	Nominal Composition	
	%Pd	%Co
HHPDCO999-70	70	30
HHPDCO999-75	75	25

Pd-Ni (Palladium-Nickel)

Part Number	Nominal Composition	
	%Pd	%Ni
HHPDNI999-80	80	20

Sn-Ag (Tin-Silver)

Part Number	Nominal Composition	
	%Sn	%Ag
HHSNAG999-95	95	5
HHSNAG999-96.3	96.3	3.7
HHSNAG999-97	97	3
HHSSNAG999-98.2	98.2	1.8

Sn-Ag-Cu (Tin-Silver-Copper) (SAC)

Part Number	Nominal Composition		
	%Sn	%Ag	%Cu
HHSNAGCU999-95.5	95.5	4	0.5
HHSNAGCU999-96.5	96.5	3	0.5
HHSNAGCU999-97	97	2.5	0.5
HHSNAGCU999-98.5	98.5	1	0.5

Sn-Ag-Cu-Bi (Tin-Silver-Copper-Bismuth)

Part Number	Nominal Composition			
	%Sn	%Ag	%Cu	%Bi
HHSNAGCUBI999-92.3	92.3	3.4	1	3.3

Sn-Ag-Cu-In (Tin-Silver-Copper-Indium)

Part Number	Nominal Composition			
	%Sn	%Ag	%Cu	%In
HHSNAGCUIN999-93.5	93.5	1	0.5	5

Sn-Bi (Tin-Bismuth)

Part Number	Nominal Composition	
	%Sn	%Bi
HHSNBI999-40	40	60
HHSNBI999-60	60	40
HHSNBI999-90	90	10
HHSNBI999-95	95	5
HHSNBI999-97	97	3
HHSNBI999-99	99	1

Sn-Pb (Tin-Lead)

Part Number	Nominal Composition	
	%Sn	%Pb
HHSNPB999-2.5	2.5	97.5
HHSNPB999-5	5	95
HHSNPB999-8	8	92
HHSNPB999-10	10	90
HHSNPB999-20	20	80
HHSNPB999-30	30	70
HHSNPB999-40	40	60
HHSNPB999-50	50	50
HHSNPB999-60	60	40
HHSNPB999-63	63	37
HHSNPB999-70	70	30
HHSNPB999-80	80	20
HHSNPB999-90	90	10
HHSNPB999-95	95	5
HHSNPB999-96	96	4
HHSNPB999-97	97	3
HHSNPB999-98	98	2
HHSNPB999-99	99	1

Sn-Zn (Tin-Zinc)

Part Number	Nominal Composition	
	%Sn	%Zn
HHSNZN999-70	70	30
HHSNZN999-92	92	8

Ti-W (Titanium-Tungsten)

Part Number	Nominal Composition	
	%Sn	%Zn
HHTIW999-10	10	90

Jewelry Alloys**Ag Alloys (Sterling Silver)**

Part Number	Nominal Composition	
	%Ag	%Cu
HHAGCU999-50	50	50
HHAGCU999-92.5	92.5	7.5

Au Alloys (Yellow Gold)

Part Number	Kt	Nominal Compositions			
		%Au	%Cu	%Zn	%Ag
60010-1	10	41.7	40.3	10	8
60010-2	14	58.3	24	4.7	13
60010-3	18	75	16	3	6

Au Alloys ((Ni) Yellow Gold)

Part #	Kt	Nominal Compositions					%Ni
		%Au	%Cu	%Zn	%Ag		
60020-1	14	58.3	28	4	7	2.7	
60020-2	18	75	10	2	11	2	
60020-3	22	92.2	3.5	1	2.3	1	

Au Alloys (White Gold)

Part #	Kt	Nominal Compositions					%Pd
		%Au	%Cu	%Zn	%Ni		
60030-1	14	58.3	23	7.5	8.2	3	
60030-2	18	75	14	3	6	2	
60030-3	22	92	2	1	1	4	

Infinite (∞) Element Standards

Part Number	Element
HHAG999	Ag (Silver)
HHAL999	Al (Aluminum)
HHAU999	Au (Gold)
HHBI999	Bi (Bismuth)
HHCD999	Cd (Cadmium)
HHCO999	Co (Cobalt)
HHCR999	Cr (Chromium)
HHCU999	Cu (Copper)
HHFE999	Fe (Iron or carbon steel)
HHIN999	In (Indium)
HHIR999	Ir (Iridium)
HHMG999	Mg (Magnesium)
HHMN999	Mn (Manganese)
HHMO999	Mo (Molybdenum)
HHNB999	Nb (Niobium)
HHNI999	Ni (Nickel)
HHPB999	Pb (Lead)
HHPD999	Pd (Palladium)
HHPT999	Pt (Platinum)
HHRH999	Rh (Rhodium)
HHSB999	Sb (Antimony)
HHSI999	Si (Silicon)
HHSN999	Sn (Tin)
HHTA999	Ta (Tantalum)
HHTI999	Ti (Titanium)
HHV999	V (Vanadium)
HHW999	W (Tungsten)
HHZN999	Zn (Zinc)
HHZR999	Zr (Zirconium)

Infinite (∞) Compound Standards

Part Number	Element
HHALOX999	Al ₂ O ₃ (Aluminum Oxide)
HHCUFR4999-0.5	Cu/Epoxy - ½ oz
HHCUFR4999-1.0	Cu/Epoxy - 1 oz
HHFR4999	FR-4 (Epoxy)
HHNIP999-96	Ni-P (Electroless Nickel -4% *
HHNIP999-92	Ni-P (Electroless Nickel -8% *
HHNIP999-88	Ni-P (Electroless Nickel -12% *

* - % P not certified

Copper Alloy Bases

Part Number	Element
HHC7025999	C7025 (Corson Copper)
HHCA194999	CA194 (Cu-Fe2)
HHCA230999	CA230 (Red Brass, Cu-Zn)
HHCDA260999	CDA260 (Brass, Cu-Zn)
HHCDA353999	CDA353 (Leaded Brass, Cu-Zn-Pb)
HHCDA510999	CDA510 (Phosphor Bronze, Cu-Sn-P) 5 %Sn
HHCDA521999	CDA521 (Phosphor Bronze, Cu-Sn-P) 8%Sn

Iron Alloy Bases

Part Number	Element
HHALLOY42999	Alloy 42
HHALLOY52999	Alloy 52
HHINVAR999	Invar
HHKOVAR999	Kovar
HHSS301999	301 SS (301 Stainless Steel)
HHSS304999	304 SS (304 Stainless Steel)
HHSS316999	316 SS (316 Stainless Steel)
HHSS430999	430 SS (430 Stainless Steel)

Nickel Alloy Bases

Part Number	Element
HHINCONEL999	Inconel 625
HHMONEL999	Monel

Example of a Hand Held XRF standard

