SURFACING ALLOYS

WALLEX® SELECTOR CHART

WALLCOLMONOY
SURFACING ALLOYS

WALLEX®
(cobalt-based)

ALLOY	NOMINAL COMPOSITION (%)									ROCKWELL HARDNESS (C-scale)	SUPPLIED AS	METHOD OF APPLICATION	DESCRIPTION AND GENERAL USES
	C	Cr	B	Si	Fe	Ni	Mo	W	Others				
Self-Fluxing													
42	0.9	18.5	1.7	3.0	2.5	13.5	-	8.0	Co: Bal Cu: 0.8	45-50	Atomised Powder	Spraywelder™ / HVOF**	A cobalt-nickel alloy powder that forms deposits similar to those of Wallex® 50, but softer. Finished with carbide tools and grinding. Developed as a lower temperature alternative for many cobalt-6 applications.
50	0.8	19.0	3.6	2.8	2.5	18.0	-	10.0	Co: Bal	56-61	Atomised Powder	Spraywelder™ / HVOF**	Good corrosion resistance and low coefficient-of-friction provides good metal-to-metal wear protection (not involving much impact). For bushings, knives, and cams. Finished by grinding.
5401	2.3	10.8	1.8	1.8	1.5	18.0	-	34.0	Co: Bal	57-62	Composite Powder	HVOF**	Cobalt matrix powder blended with 35% (by weight) agglomerated and sintered 88Wc-12Co specifically designed for use in the production of steel bodied plungers for the glass container industry.
Surfacing													
21	0.25	27.0	-	0.5	1.5	2.8	5.5	-	Co: Bal	28-35	Atomised Powder	PTA* / Laser Cladding*	A cobalt-chromium-molybdenum based alloy with excellent high temperature properties. Combined resistance to galling, cavitation, erosion and corrosion with toughness and work hardening properties.
6	1.2	29.0	-	1.2	1.5	-	-	4.5	Co: Bal	38-46	Atomised Powder	HVOF** / PTA* / Laser Cladding*	A cobalt-chromium based alloy powder providing resistance to impact, abrasion, erosion, corrosion and oxidation at high temperatures. Uses include valves and seats, edger rolls, hot shear knives and blades, hot trim dies and swaging mandrels.
F	1.8	26.0	-	1.3	1.5	22.0	-	12.0	Co: Bal	40-45	Atomised Powder	PTA* / Laser Cladding*	Designed specifically for the hardfacing of internal combustion engine valves to give enhanced resistance to corrosion and erosion. Slightly higher hardness and fluidity than Wallex® 6, offering good resistance to wear and oxidation.
12	1.5	29.0	-	1.5	1.5	-	-	8.5	Co: Bal	43-53	Atomised Powder	HVOF** / PTA* / Laser Cladding*	A cobalt-chromium-tungsten based alloy powder with high heat, abrasion, wear and corrosion resistance. It has a low coefficient of friction and is non-galling. For veneer pressure bars, bushings, control plates, knives and saw teeth.
1	2.5	30.0	-	1.5	1.5	-	-	12.0	Co: Bal	50-58	Atomised Powder	PTA* / Laser Cladding*	Good corrosion resistance and low coefficient of friction gives good metal on metal wear protection (low impact). Applications include bushings, knives, cams, seal-rings, wear pads.
20	2.5	32.5	-	0.5	1.5	-	-	17.0	Co: Bal	55-59	Atomised Powder	PTA* / Laser Cladding*	A cobalt-chromium-tungsten based alloy powder with high heat, abrasion, wear and corrosion resistance. It has a low coefficient of friction and is non-galling. For veneer pressure bars, bushings, control plates, knives and saw teeth.

**See WCL_TECH-PTA / LASER Selector Chart*

***See WCL_TECH-HVOF Selector Chart*