

# SURFACING ALLOYS TECH-HVOF SELECTOR CHART



## COLMONOY® (nickel-based)

ALLOY	NOMINAL COMPOSITION (%)									ROCKWELL HARDNESS (C-scale)	SUPPLIED AS*	DESCRIPTION AND GENERAL USES
	B	C	Cr	Fe	Mo	Si	W	Ni	Others			
<b>43<sub>HV</sub></b>	1.2	0.2	4.0	0.3	3.0	2.8		Bal	P: 2.2	35-40	Atomized Powder	Excellent crack resistance, lower hardness and slightly lower abrasion resistance and more corrosion resistance than 52DJ and 53HV. Finished by carbide tools or grinding.
<b>52<sub>DJ</sub></b>	2.4	0.5	13.5	4.0		3.7		Bal		45-50	Atomized Powder	Similar to Colmonoy 62DJ, but has better crack resistance with slightly lower abrasion resistance and similar corrosion resistance. Finer than standard HV particle size distribution. Finish by grinding.
<b>53<sub>HV</sub></b>	2.4	0.5	13.5	4.0		3.7		Bal		45-50	Atomized Powder	Similar to Colmonoy 63HV, but has better crack resistance with slightly lower abrasion resistance and similar corrosion resistance. Finished by grinding.
<b>62<sub>DJ</sub></b>	3.0	0.6	14.0	4.0		4.2		Bal		57-63	Atomized Powder	Hard nickel-chromium-boron alloy with excellent abrasion and corrosion resistance. Finer than standard HV particle size distribution. Finish by grinding.
<b>63<sub>HV</sub></b>	3.0	0.6	14.0	4.0		4.2		Bal		57-63	Atomized Powder	Hard nickel-chromium-boron alloy with excellent abrasion and corrosion resistance. Finished by grinding.
<b>69<sub>HV</sub></b>	3.5	0.5	16.5	3.0	3.0	5.1		Bal	Cu: 2.0	58-63	Atomized Powder	Abrasion resistant alloy enhanced with more chromium, molybdenum and copper for better corrosion resistance. Finished by grinding.
<b>88<sub>HV</sub></b>	3.0	0.6	15.0	3.5		4.0	15.5	Bal		58-63	Atomized Powder	A unique alloy contains chromium and tungsten borides and carbides for maximum abrasion and corrosion resistance. For high-temperature, highly abrasive applications. Finished by grinding or CBN tools.

## WALLEX™ (cobalt-based)

<b>40<sub>HV</sub></b>	2.0	0.6	16.2	2.0		1.9	7.6	23.5	Co: Bal	41-46	Atomized Powder	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.
<b>50<sub>HV</sub></b>	3.4	0.8	19.0	2.0		2.8	10.0	18.0	Co: Bal	56-61	Atomized Powder	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.

\*Powders supplied as HV or DJ particle size distributions:  
 HV 63 x 20 microns (230 mesh x 20 microns)  
 DJ 53 x 5 microns (270 mesh x 5 microns)

*The information provided herein is given as a guideline to follow. It is the responsibility of the end user to establish the process information most suitable for their specific application(s). Wall Colmonoy Corporation assumes no responsibility for failure due to misuse or improper application, or for any incidental damages arising out of the use of this material or process.*