



Material & Coating Process Compatibility Guide

Material Description	Designation	Typical Use	Typical Hardness	"Coat-ability"			
				PVD	CVD	TD	DCD
Air Hardened	A6	Form Tools, Stamping	58 - 60 Rc	Green	Red	Yellow	Green
Air Hardened	A2, A2S	Form Tools, Stamping	58 - 60 Rc	Green	Yellow	Green	Green
Oil/Water Hardened	O1, O6, W1	Draw & Press Tools	58 - 62 Rc	Green	Red	Yellow	Green
H-Series	H13, H21, H26	Hot Work	52 - 58 Rc	Green	Green	Green	Green
M-Series	M2, M4, M42	Cutting Tools	60 - 65 Rc	Green	Green	Green	Green
Specialty Steel	CPM 3V, 9V, 10V	Stamping & Forming	59 - 64 Rc	Green	Green	Green	Green
Specialty Steel	Vanadis 4, 10	Stamping & Forming	59 - 64 Rc	Green	Green	Green	Green
Specialty Steel	DC-53	Stamping & Forming	58 - 62 Rc	Green	Green	Green	Green
T-Series	T1, T15	Cutting Tools	60 - 66 Rc	Green	Green	Green	Green
P-Series	P20	Molds - General	25 - 30 Rc	Green	Yellow	Green	Green
S-Series	S2, S5, S7	Heading Tools	56 - 58 Rc	Green	Green	Green	Green
D-Series	D2, D3, D6	Press & Form Tools	58 - 62 Rc	Green	Green	Green	Green
Carbide	Tungsten Carbide	Inserts/Dies/Punches	72 - 82 Rc	Green	Green	Yellow	Green
400 Series SS	410, 416, 420, 440	Molds - General	40 - 60 Rc	Green	Green	Green	Green
300 Series SS	302, 303, 304, 316	Corrosion Protection	Various	Green	Red	Red	Green
Carbon Steel	4140	Molds - General	35 - 45 Rc	Green	Red	Yellow	Green
Medium Carbon Steel	NAK 55	Molds	35 - 40 Rc	Green	Red	Yellow	Green
Aluminum	6061	General Components	Various Tempers	Yellow	Red	Red	Green
Beryllium Copper	molMAX	Molds - General	35 - 45 Rc	Green	Red	Red	Green
Titanium	Ti-6AL-4V	Medical/General	xxx	Green	Red	Red	Green
Brass *	xxx	Decorative	xxx	Green	Red	Red	Green
Al/Zn/Mg Castings *	xxx	General Components	xxx	Green	Red	Red	Green
ABS Plastic*	xxx	Decorative	xxx	Green	Red	Red	Green

* - Can be coated only after parts have been chrome plated

	A very good material for the indicated coating process.
	A good material for the indicated coating process; however, there may be some minor process considerations.

	This material can be coated with the indicated process; however, possible material stability or composition issues may cause problems.
	This material is absolutely inappropriate for the indicated process: do not attempt.

Please Note the Following:

1. This is only a sample listing of materials and should not be considered definitive. Information has been generalized – please contact a Richter Precision Inc. representative regarding your specific application.
2. All parts, regardless of coating process, should be sent to us already heat treated to your required hardness. In the case of the CVD and TD processes, parts will be annealed during coating and then re-heat treated afterward. However, being hardened prior to coating will reduce stresses and distortion during coating.
3. When considering the PVD process, whenever appropriate for the material, we recommend that final draws be > 800° F: this will ensure that no annealing and/or distortion occur.