



supermagnetman.com

- * Refer to the table below for coating options for sintered neodymium iron boron magnet at SMM.
- * Other coatings may be possible, you are very welcomed to ask for different coating to meet the custom requirement.

Plating Name	Color	Typical Thickness	Min. time		Max. Working Temperature (°C)	Properties	Typical application examples
			PCT (120°C, RH 100%, 200KPa)	Salt Spray Test acc to ASTM-B117			
Zn	White-blue	4-10um	24hrs	24-48hrs	120	Standalone coating with only one layer	Motor magnets, automotive industries
	Color		48hrs		120		
	Black		12-24hrs		120		
Ni-Cu-Ni	Bright/Semi-bright	15-25um	48hrs	48-72hrs	200	Most common used coating, price beneficial, Excellent against humidity	Consumer goods, industries magnets, motors
	Black		200				
Ag	Silver	10-20um	48-72hrs	48-72hrs	200	High electric conductive	Electrical components
Au	Gold	10-15um			200	Excellent wear resistance, high hardness, corrosion resistance, high conductivity, the gold layer is very thin	Decorative
Cu	Copper	10-20um			200	Slightly weaker abrasion and corrosion resistance than Ni-Cu-Ni	
Cr	Bright	10-20um			200	Good abrasion & oxidation resistance, does not lose its shine in the atmosphere	
Everlube	Yellow	>=10um	72-120hrs	72hrs	160	Superior ability of humid heat	Speakers, Industrial magnets
Epoxy	Assorted Colors	15-30um	48hrs	96-108hrs	200	High-corrosion resistance and chemical resistance, not shock-resistant	Linear motors, automotive, generators
NiCuEpoxy	Assorted Colors	25-45um	16-30hrs	168-1000hrs	200		
Parylene	Clear	3-10um	N/A	24hrs	150	High reliability, light weight, low coefficient of friction, high tensile, bio-compatible	Military & aerospace, commercial
Passivation	Light Gray	1-2um	4-8hrs	4-8hrs	60	Temporary protection	normally used before over-molded or encased
Teflon (PTFE)	White	>=0.5mm	72-120hrs	120hrs	260	non-stick, low coefficient of friction, non-wetting, high electrical strength, chemical resistance, 100% waterproof	Medical, Food & Beverage
Rubber	Black	~0.5mm	N/A	96-108hrs	135	Excellent adhesion, abrasion and impact resistance	Holding magnets

- * Neodymium Iron Boron magnets require a protective coating /surface finish to prevent corrosion of the magnet.
- * It is not recommended to use uncoated (bare) magnet, only for prototypes and experiments as long as there is not an expectation that the material will remain rust free.