

Medthin™ Medical Coatings

Name	Material	Thickness range μm	Micro hardness HV 0.05	Friction vs. Steel	Service T °C	Depo T °C	Color	User benefit / features	Applications
Medthin™ 01	TiN	1.5 - 4	2900 +/- 200	0.4	500	150 - 500	gold	sliding wear resistance, fretting	implantable components, instruments, color coding
Medthin™ 16	TiAlN	1 - 4	2600 +/- 400	0.6	800	150 - 400	bronze	sliding wear resistance, fretting	implantable components, instruments, color coding
Medthin™ 20	AlTiN	2 - 6	3200 +/- 400	0.4	800	150 - 450	grey-black	hardness, temperature stability, low light reflection	implantable components, instruments, color coding, anti reflection
Medthin™ 30	CrN	2 - 4	2500 +/- 500	0.5	700	150 - 400	silver grey	sliding, galling and wear resistance, high impact resistance, oxidation	implantable components, instruments, color coding
Medthin™ 33	CrCN	1 - 4	1400 +/- 200	0.2 - 0.6	500	230	dark grey	low friction, high fracture hardness, allows high plastic deformation	moving mechanical components, color coding, anti reflection
Medthin™ 40	Cr + a-C:H:W	1 - 10	1000 - 1800	0.2	350	< 200	anthracite	anti-galling, high fracture toughness, anti-reflection	moving mechanical components, surgical instruments and tools
Medthin™ 41	Cr + a-C:H:W + a-C:H	1 - 4	2000 - 2800	0.1	300	< 250	black	low friction, non-stick coating	moving mechanical components, surgical instruments and tools, anti-reflection, color coding
Medthin™ 42	Cr + CrN + a-C:H	1 - 8	2000 - 2800	0.1	300	< 250	black	high scratch resistance, high fracture toughness low friction, non-stick coating	surgical instruments, tools and implants, anti-reflection
Medthin™ 43	a-C:H	0.5 - 5	3500 +/- 500	0.1	300	150 - 200	black	low friction, sliding and adhesive wear resistance	low load implants, instruments, color coding
Medthin™ 48	t-a:C	0.5 - 2.0	6000 +/-2000	0.1	450	150	black	ultra hard, low friction	cutting tools and instruments
Medthin™ 60	ZrN	1 - 4	2500 +/- 300	0.55	500	150 - 500	light gold	hardness, resistance to pick up and corrosion	color coding, implantable components
Medthin™ 62	MoS ₂	1 - 3	1750 +/- 250	0.03 - 0.06	200	150 - 200	grey	very low friction, wear resistance, resists galling and sticking	friction reduction between similar instrument materials
Medthin™ 65	Ti	2 - 20	n/a	n/a	200	150 - 180	titanium	bone cell attachment	metall and plastic implants and components, osseo integration
Medthin™ 67	Nb(X,O)	1 - 4	n/a	n/a	200	200	spectral colors	spectral colors	color coding instruments and components

Medthin™ are biocompatible PVD / PACVD coatings. Data shown is generic and subjects to modification based on application. Subject to change without notice. Availability varies between coating centers.

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