

PVD Coatings for Plastic Injection Molds



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Our PVD coatings are specially developed to protect plastic injection molds from abrasive wear, improve de-molding characteristics, give scratch protection on the mirror-polished surfaces, enhance corrosion resistance and increase the efficiency and reliability of the tools.

With over 30 years of experience in coating molds and dies, our R&D center is constantly developing high performance coatings dedicated to Plastic Injection.

Specifications and Applications for Plastic Injection Molds and Dies

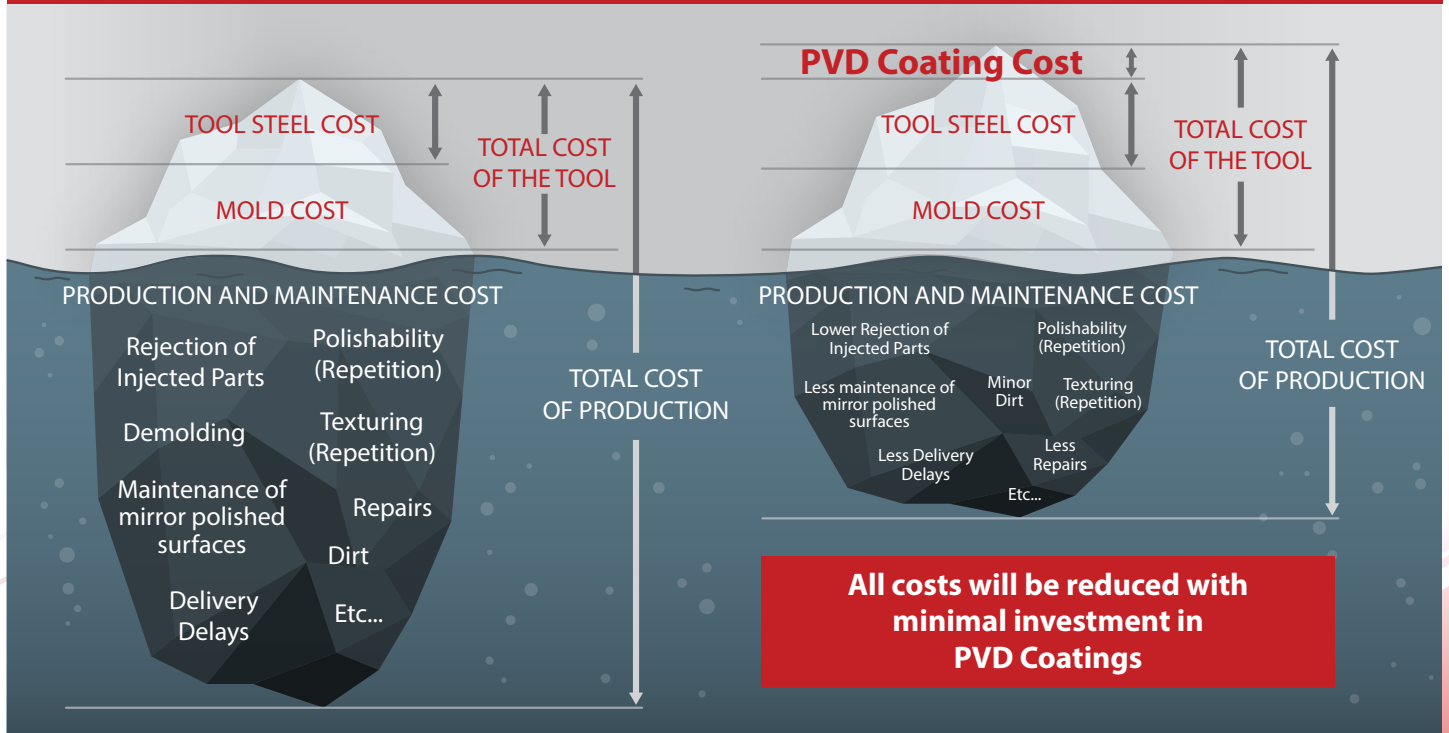
Coatings		TiN*	HP Form**	HP Dura**	HP Cera*	
		Features				
Characteristics	Composition	TiN	TiAlN Based	AlCr Based	Cr Based	
	Hardness (GPa)	30 GPa	37 GPa	38 GPa	30 GPa	
	Coefficient of Friction (dry against steel)	0.25	0.4	0.33	0.1	
	Coating Thickness (µm)	3.5 ~ 4.5 µm	4 ~ 6 µm	4 ~ 6 µm	1.5 ~ 2 µm	
	Maximum Oxidation Temperature (°C)	500°C	800°C	1,100°C	550°C	
	Coating Deposition Temperature (°C)	200° C 450° C	450° C	450° C	200 °C 450° C	
	Coating Color	Gold	Violet	Dark Grey	Dark Grey	
	Coating Structure	Monolayer	Multilayer	Multilayer	Multilayer	
	Recommended Applications	Thermoplastics	PE, PP, PB	⊙	-	○
PS, SB, SAN, ABS, ASA			⊙	○	○	⊙
PVC			-	-	⊙	⊙
PTFE, SPTFE, PVDF			⊙	-	⊙	⊙
POM			○	⊙	⊙	-
PA			○	⊙	○	⊙
PC, PBT (B), PET (P)			⊙	-	-	⊙
PPE, PEEK, PAEK / PPS, PSU, PES			○	⊙	-	-
PI			○	⊙	○	⊙
CA, CP, CAP			-	⊙	-	⊙
PMMA			-	⊙	-	⊙
TPU			-	⊙	○	⊙
Thermosets			PF	⊙	-	○
		EP	○	-	⊙	⊙
		UP	○	-	⊙	○
	MF, UF, MP	○	-	⊙	⊙	
Elastomers	PUR	⊙	-	○	-	
	NBR, EPDM, Si	⊙	-	○	-	
	Multipolymer TPE, FPM	⊙	-	○	-	

* Available in Low Temperature.

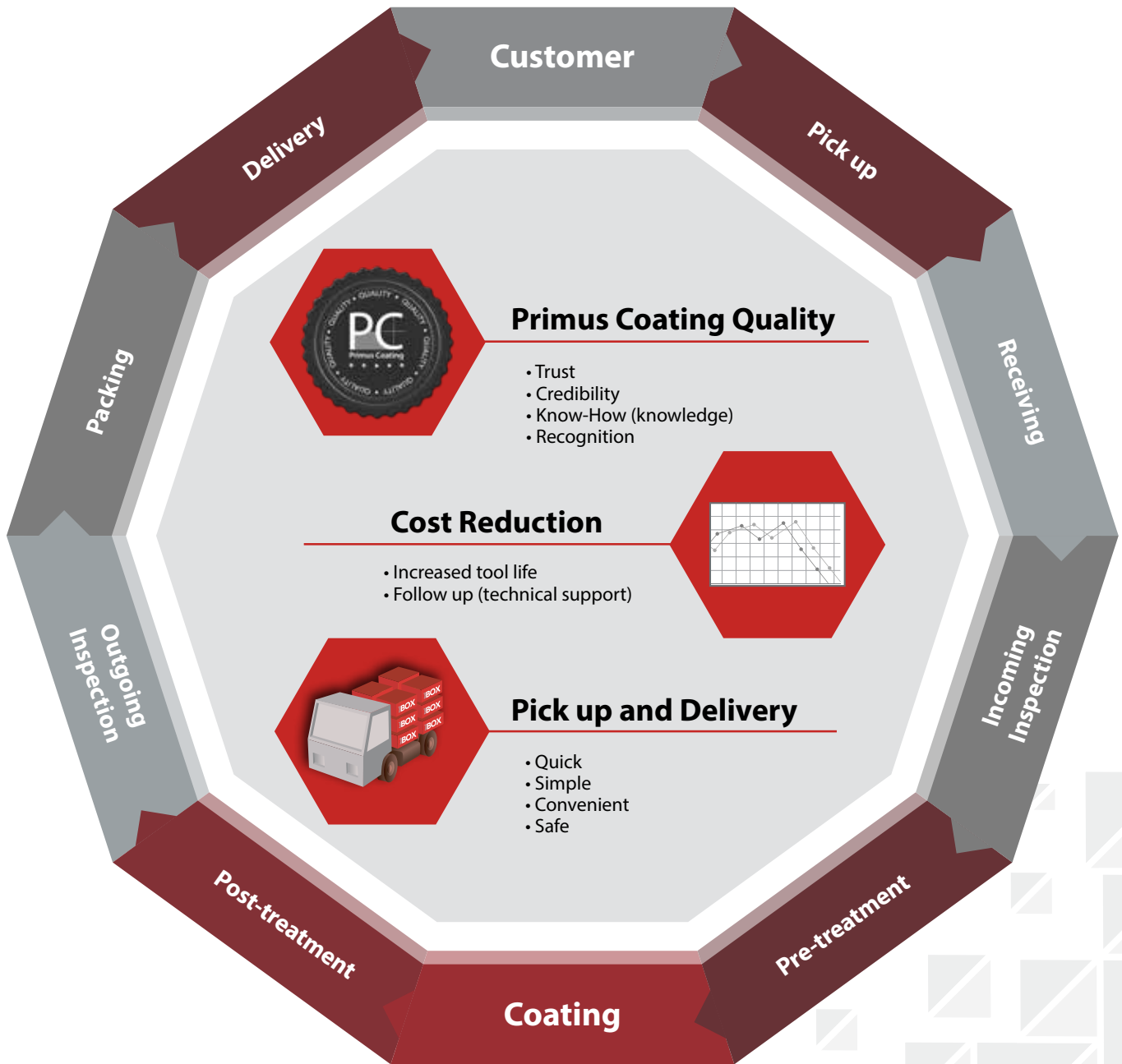
** Duplex coating available (Nitride + Coating). For more information, please contact our sales department or sales@primuscoating.com
The depth of nitriding will depend on the material of the mold.

⊙ Excellent ○ Good

Hidden Cost of Plastic Injection Process



■ Primus Coating's Business Excellence



PrimusCoating

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