

Proven solutions for Die Casting Tooling life

IBC Coatings Technologies offers lab tested, field proven solutions for extending the life of your Die Cast tooling. Our Ceratough® Coatings have demonstrated performance that meets or exceeds competitor's coatings.

DHIN- Ion plasma nitriding is the first line of defense. This process hardens the surface of tooling and mitigates sticking. It is used for die sections, die inserts, core pins, shot blocks, and distributors.

High wear die sections: Ceratough®-0501 provides protection to sections in close proximity to a gate.

Core pins: Ceratough®-0201.

Die inserts: Ceratough®-0401 or -0502.

Die inserts with extreme heat: Ceratough®-0102 provides greater thermal stability.

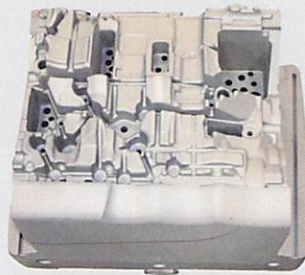
Shot/Machine sleeves: Duplex Ceratough®-0502/Ceratough®-0102 has a remarkable ability to mitigate washout at the bottom of the pour hole. **5X life** extension has been realized in application.

**Coatings work with additive manufacturing metal tooling!*

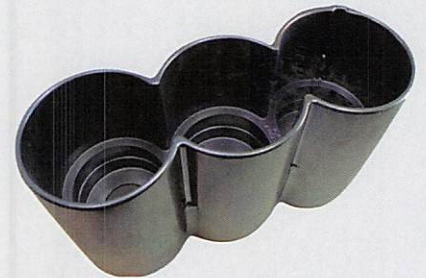
Name	Composition	Process Temperature (°C)	Thermal Stability (°C)	Thickness (microns)	Hardness (HV)	Friction Coefficient Dry (on Steel)
CeraTough®-0102	TiAlN	300-400	800	8	3000	0.5
CeraTough®-0201	AlCrN	300-400	1100	8	3300	0.5
CeraTough®-0401	VCN	300-400	500	7-8	2,400-2,600	0.5
CeraTough®-0501	CrCN	300-400	800	12	1900	0.4
CeraTough®-0502	CrN/CrC	300-400	800	10	1800	0.5
DHIN		400-500	400-500	25-300	500-1200	0.5



Core Pins



Aluminum Die Casting Mold



Aluminum Die Casting Inserts