

MOLDADUR®-P

Scratch protection for sensitive surfaces

The protective layer for polished and structured surfaces in plastic mould construction.

MOLDADUR®-P is a special plasma process of voestalpine eifeler Coating GmbH, which creates a protective layer on highly sensitive surfaces. The surface is thereby lastingly protected against wear or damage. Suitable for polished and structured surfaces on plastic moulds.

MOLDADUR®-P creates a scratch-resistant surface without altering the surface quality and while

preserving the visual appearance. MOLDADUR®-P, compared to conventional processes, is able to very uniformly copy the surface contours – even within depressions – while also creating a constant surface hardness on the entire tool. This is achieved primarily through the perfectly adapted process management in small systems (max. component size of Ø 850 x 800 mm).

APPLICATIONS

Treatable steels / surface hardness	All common tool steels with tempering temperatures ≥ 380 °C are treatable; the achievable surface hardness is dependent on the alloy composition of the steel. The properties of corrosion-resistant steels are preserved with MOLDADUR®-P.
Treatable steels	All metallicly bright steel surfaces are treatable with MOLDADUR®-P, for example dash-polished, structure-polished, or high-gloss polished tools. A high-gloss polished surface is a very good pre-condition in this case. After the surface treatment, a repolishing is possible.
Treatment temperature	The treatment temperature lies in the range of 380 °C to 470 °C, depending on the material.

PRODUCT FEATURES

- » Protection against scratches and wear
- » Uniform increases of surface hardness
- » Weldable
- » Coatable
- » No changes in dimensions



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EXAMPLE RESULTS OF TREATMENT WITH MOLDADUR®-P

Manufacturer	Material	Surface hardness according to MOLDADUR®-P [HV0.1]*	Initial hardness [HV0.1]*
General	1.2343 ESU	1200	550
	1.2316	1350	300
	1.2738	900	350
	1.2083	1400	600
	1.2379	1300	700
BÖHLER	W400	1100	500
	W300	1200	500
	M303	1350	300
	M333	1350	500
	M368	1400	550
	M268	900	350
	M261	950	350
Eschmann	ES Primus SL	1200	550
	ES Atlas 42	950	450
UDDEHOLM	Caldie	1150	650
	Stavax ESR	1400	550
	Elmax	1500	650
	QR090	1100	500
	Nimax	1000	400
	Unimax	1200	650
	Corrax	1350	550
	Van4E	1200	700

*general measurement tolerance ± 50 , in addition to the alloy composition of the steel the results achieved also depend on the individual process management.