

MOLDADUR®

For everything that shines – permanently



10/2024 – Specifications are subject to change without notice

THE PROTECTIVE LAYER FOR POLISHED AND STRUCTURED SURFACES IN PLASTIC INJECTION MOLDING

MOLDADUR® is a special diffusion process of voestalpine eifeler Coating GmbH, which creates a protective layer on highly sensitive surfaces in plastic injection molding.

MOLDADUR® increases the surface hardness of the tool and creates a scratch-resistant protective layer without any dimensional change, influence on surface quality, basic hardness or optical appearance.

All common tool steels with tempering temperatures above 450 °C can be treated with MOLDADUR®.

Applications of MOLDADUR® treatments are polished, textured and grained surfaces on plastic molds. It is also suitable for treating parts that easily warp.

Processes specially adapted to customer requirements (parts) are possible.

The high flexibility of MOLDADUR® treatment is achieved through a wide range of systems with optimized processes. Small series parts as well as large solid molds up to Ø 1,800 mm x 1,800 mm and 5,000 kg can be treated effectively.

APPLICATIONS

- » Plastic injection molding
- » Parts with risk of warping
- » Grained shapes
- » Polished and textured surfaces

1) For corrosion-resistant steels, we recommend the special MOLDADUR®-P-STAINLESS treatment.

ADVANTAGES

- » Protection against scratches and wear
- » Uniform increases of surface hardness
- » Repairable / Weldable
- » Polishable
- » Coatable (PVD)
- » Improved corrosion resistance¹
- » No changes in dimensions
- » High effectiveness and flexibility (up to Ø 1,800 x 1,800 mm; 5,000 kg)

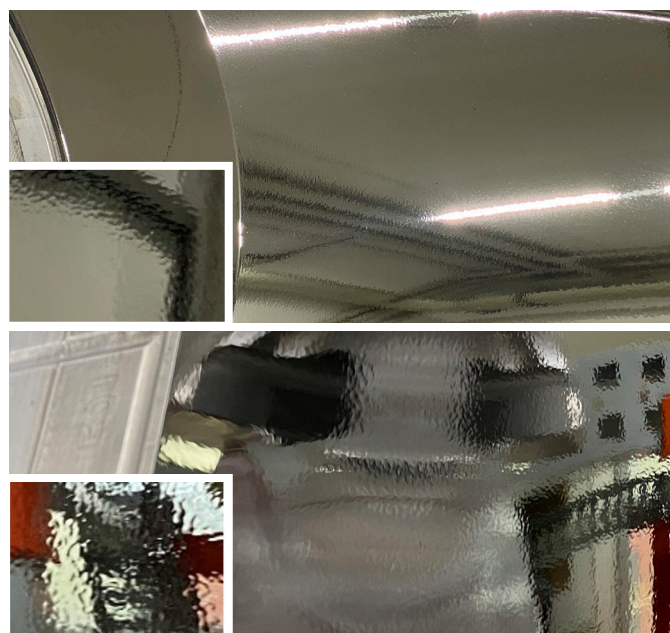


Fig. 1: MOLDADUR® treated plastic injection molds with orange peel scar

EXAMPLE RESULTS OF TREATMENT WITH MOLDADUR®

Manufacturer	Material	Surface hardness after MOLDADUR® [HV0.1] ²	Initial hardness [HV0.1]
General	1.2085	1300	350
	1.2316	1300	350
	1.2343 ESU	1200	550
	1.2379	1200	800
	1.2738	850	350
	1.4021	1100	550
	1.4923	1250	300
BÖHLER	M268	900	350
	M303	1300	300
	M333	1300	500
	W300	1100	550
	W400	1100	500
EschmannStahl	ES Aktuell 1200	900	450
	ES Atlas 42	900	400
	ES Primus SL	1100	450
Uddeholm	Caldie	1150	650
	Corrax	1400	550
	Elmax	1450	650
	Nimax	1050	450
	QRO90	1050	550
	Stavax	1250	600
	Unimax	1250	700
	Vanadis 4 Extra	1200	700

2) General measurement tolerance ± 100 HV; in addition to the alloy composition of the steel the results achieved also depend on the individual process management.