FreiLacke

FreiLacke In Mould Coating

IMCs for open processes

FreiLacke **Inmould Coating**
EFDEDUR-IN-MOULD-COAT.

More coating in a single step

The In Mould Coating (IMC) process is a specially developed process where plastic components are coated in the tool via so-called negative moulds during production.

The subsequent time-intensive, cost-intensive and often laborious coating of the manufactured components can be omitted with the aid of this process.

The EFDEDUR-IN-MOULD-COAT UR1455 is a very high-quality 2C coating system that has been developed for a wide range of indoor and outdoor areas.
UR1455 is especially distinguished by the fact that there is absolutely no need for an external separating agent in the manufacture of components. This means that problem-free repair coating is possible in the event of damage.

Processing variant
via 2C system

Processing variant
Via cup gun

IMC process

In the IMC process, a differentiation is basically made between the so-called „open“ and „closed“ processes.

Open process
The coating and the application of the reinforcing material in the open process takes place in a non-closed tool

Closed process
In the closed process, the tool is closed after applying the coating layer before the reinforcing material is then injected.

Production steps in the IMC process

Advantage: A significantly faster production process without additional coating of the parts.

General data	
Chemical base	Light-fast acrylic resin
Mixing ratio with HU0932 curing agent	3:1
Viscosity on delivery as per DIN 4 mm	40 - 50 seconds
Solids content	58 %
Mixed solids content (3:1 with HU0932)	54 %
Time until back injection moulding	2 - 3 minutes (depending on mould temperature)
Gloss level	Highly dependent on the mould, from matt to high gloss
Pot life undiluted (2C system)	approx. 20 minutes

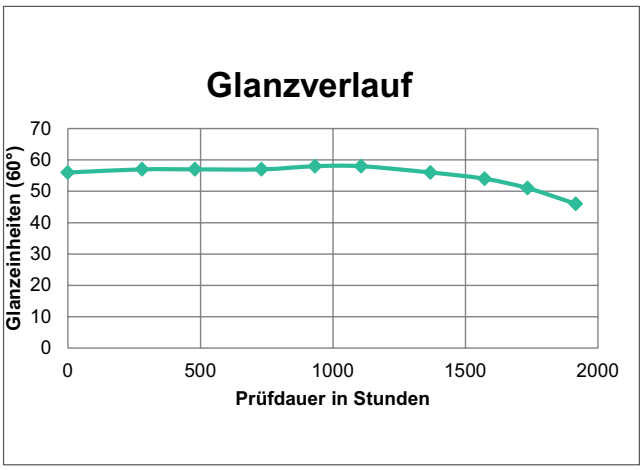
Through careful selection of the binder and other ingredients used, a high-strength coating film with excellent stability to UV radiation as well as numerous chemicals is obtained after cross-linking.
In contrast to conventional gel coats, UR1455 has a formulation that is free of styrene and therefore has excellent resistance to UV radiation.

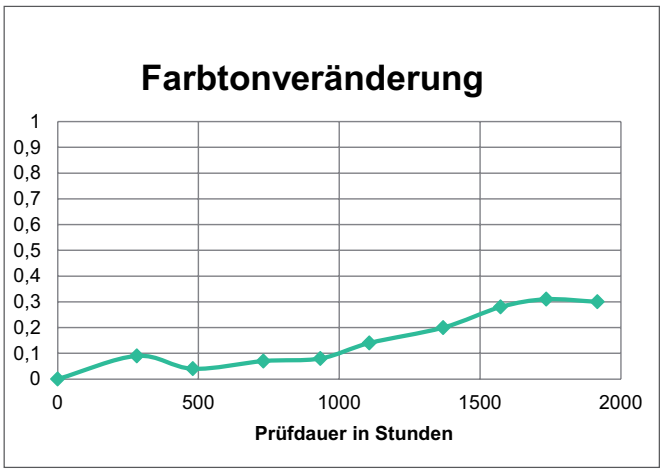
Even the mechanical properties of the manufactured coating films can be directly compared with those of conventional 2C systems for plastic coating.
This means that coating systems based on EFDEDUR-IN-MOULD-COAT UR1455 are particular suitable for long-term use in the outdoor area.

Excellent stability.

High-strength coating film.

WOM test as per DIN EN ISO 11341 Process 1A (light-fastness)





Chemical resistance in compliance with ISO 2812

+	keine Veränderung
1	sehr geringe Veränderung
2	geringe (wahrnehmbare) Veränderung
3	mittlere Veränderung
4	starke Veränderung
5	Lackschicht zerstört

Chemicals	IMC-coating UR1455	Solvent-containing standard coating UR1044
Petrol	+	3
Diesel	+	+
Gear oil	+	+
Break fluid	+	3
Hydraulic oil	+	+
Bio-oil	+	+
Cooling lubricant	+	+
Radiator antifreez	+	+
Detergent	+	+
Phosphoric acid	+	+
Caustic soda	+	1
Tree resin	+	+
Pancreatin	+	+

More durable in the outdoor area.

Numerous possibilities for use.

Test	Duration	Blisters	Cross-cut (2mm) with Tesa pull off
Hydration as per ISO 2812	480 h	0 (S0)	0
Condenced water test as per ISO 6270	480 h	0 (S0)	0
Test	**Performance**		**Result**
Multi-impact testing stone-chipresistance of coating as per DIN EN ISO 20567-1	1 x 500 g at a pressure of 2 bar		Characteristic value 0-1

Numerous possibilities for use. Diverse applications

In addition to numerous possibilities for use in diverse applications, IMC coatings are already used extensively in vehicle construction today.
Specific examples of production by means of IMC technology are high-quality components for vehicle interiors (dashboards, consoles, door linings, armrests) and mounted parts for the bodywork (bumpers, spoilers, engine bonnets, boot lids, rear hatches).

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