



PU3004K FREIOTHERM-Powder Coating

Product description

Product technology	Powder coating for use on industrial exteriors
Application area	e.g. in the mechanical engineering and plant construction sector
Surface finish	Metallic effect
Surface	smooth
Gloss value	glossy
Production process	bonded
Surface hardness	good
Mechanical resistance	good
Resistance to light and weather	good
Corrosion protection	very good

General product properties

Binder-Base	polyurethane (non-separating)
Gloss visually	glossy
Density	1,2-1,7 g/cm ³ depending on the shade theoretical
Resistance to storage	approx. 36 month in original packagings at an ambient temperature of 5 to 25 °C. Powder coatings must be stored in a cool and dry place. The minimum storage stability of each batch is stated on the product label. The material does not necessarily become unusable if stored for longer than this period. However, for quality assurance purposes, an inspection of these materials is essential to ensure that they are still suitable for the intended application.

Application and processing

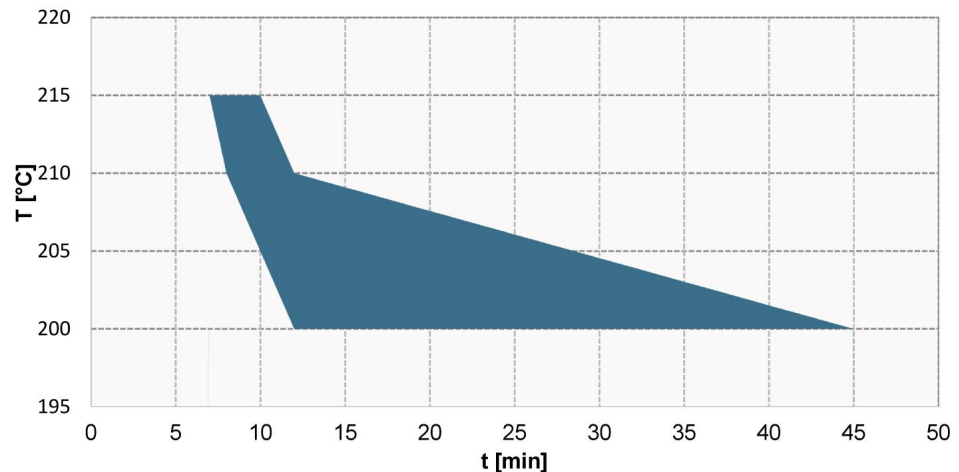
Pretreatment	The substrate must be free of adhesion-impairing substances such as oil, grease, rust, scale, mill scale, wax and release agent residues. We recommend the use of suitable mechanical pre-treatment processes (e.g. blasting, grinding) or chemical pre-treatment processes (e.g. phosphating) according to the requirements.
Recommended coating thickness	70-90 µm
Material usage	approx. 0,11 kg/m ² , layer thickness 80 µm theoretical
Processing	Corona



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Curing

Recommended object temperature 12 min/200 °C.
Baking window tested in colour shade G1937.



Objekt Temperatur in °C	200	210	215
Object Temperature in °C			
Haltezeit Minimum in Minuten	12	8	7
Holding time minimum in minutes			
Haltezeit Maximum in Minuten	45	12	10
Holding time maximum in minutes			

Note on curing

Coloured area = stoving conditions with good end properties

The displayed baking conditions are based on results from laboratory tests and therefore merely serve as a guideline when configuring the processing company's coating systems. The processing company is responsible for ensuring that the coating is fully cured. The complete curing of the coating must be checked by means of additional analytical and resistance tests using representative original parts under production conditions. Please do not hesitate to contact us if you require consultation.

Compatibility

Compatibility with other powder coatings must be checked.

Further processing of coated pieces

Touch-up coating

on request. For details see EFD Info No. 4..

Mechanical tests

Sample description

On steel plate
70-90 µm layer thickness
12 minutes 200°C object temperature
product PU3004KG1937

Cross-cut-test

Gt 0

DIN EN ISO 2409

Cupping test

>3 mm

DIN EN ISO 1520

Impact-test

>40 kg cm (front)

DIN EN ISO 6272-1



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Climatic tests

Sample description	On zinc-phosphated steel plate product PU3004KG1937		
Condensate constant climate	Load duration	1000 h	DIN EN ISO 6270-2 (CH)
	Detachment Cut	<1 mm	DIN EN ISO 4628-8
Neutral salt spray test	Load duration	500 h	DIN EN ISO 9227 (NSS)
	Detachment Cut	<1 mm	DIN EN ISO 4628-8

Chemical resistance

Influencing factors	The chemical resistance depends on the concentration, temperature, exposure time and test method. This has to be checked depending on the application.
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Comments

EFD info	Further technical information can be found in the EFD Info. No. 502.
Work-and Healthprotection	The standard personal safety precautions must be observed when handling painting materials. Detailed information about dangerous goods, safety data and recommendations concerning Health and Safety at Work and environmental protection can be found in the corresponding safety data sheet.
Test conditions	All information is based on a standard climate 23/50 DIN EN 23270. All information is based on our product knowledge an experience. We have no direct influence on the application itself. Please do not hesitate to contact us for further information. The information provided here contains reference values and does not constitute a specification.