FreiLacke

EFD-Info

FREIOTHERM-Electrocoating

KTL – automotive
High-filmthickness-system

General description: bath-material

1. General

- Name: FREIOTHERM-KTL-automotive
- Two component high-filmthickness cathodic electrocoating system
- For corrosion resistant primer or one coat systems
- Fulfills the usual specifications of the automobile -, commercial motor vehicle and supporting industry

2. Product-properties

- Resin-base: modified epoxyresin with blocked isocyanat
- Colour: black, dark grey and other colours
- Gloss: mat - semi mat
- Mixing ratio: Transparent paste (TRAPA) = 4 parts of weight to
  Pigment paste (PIPA) = 1 parts of weight
- Stoving-conditions: 150°C - 20 minutes to
  180°C - 10 minutes/ object-temperature
- Good throw
- Good mechanical properties

3. Application-properties

- KTL high-filmthckness material with variable adjustable layer thicknesses from 15 to 40 µm
- Substrates: Steel and suitable non-ferrous-metals
- Pre-treatment: The substrate must be free of materials which prevent adhesion, e.g. oil, grease, rust, scale, tolling skin, wax and parting of agent arrears and surfactant. According to the requirements we recommend to apply the suited chemical (e.g. phosphatizing, chromating) or / and mechanical (e.g. shot blasting) pretreatment.

4. Bath-parameters

Depended on the individual plant-conception

Examination:	value:			unit :	in accordance :
pH-value	5,8	to	6,2	--	DIN 19260
Conductivity	1200	to	1800	µs / cm	--
Solid	14	to	16	weight %	DIN EN ISO 3251
MEQ/ b-value	4,5	to	5,5	--	--
Temperature	31	to	33	°C	--
Organic solvent	2	to	3	weight %	--

DIN EN ISO 9001
VDA 6.1
EMAS II

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5. Coating-terms

Dependent on attitude and use-area.

Method:	value:			unit:
Coating-time	90	to	180	seconds
Voltage	150	to	360	Volt
Film thickness	15	to	40	µm

6. Physical-properties

All statements are based on norm-atmosphere 20 / 65 DIN 50014.

Mixing ratio: Transparent paste (TRAPA) = 4 parts of weight to
Pigment paste (PIPA) = 1 parts of weight

Method	value	uni:	in accordance
Gloss	20 bis 60	GE	DIN 67530
Adhesion / Crosscut	GT 0	--	DIN EN ISO 2409
Mandrel test	6: o.k.	mm	DIN EN ISO 1519
Hardness	111	--	DIN EN ISO 2815
Erichsen test	> 4,0	mm	DIN EN ISO 1520
Pencil hardness	4 H	--	Wolff-Wilborn
Stone chipping test	characteristic 1	--	VDA 621-427

7. Chemical-properties

Lacquer-film-data tested on zinc phosphated steel (laboratory sheet: Bonder 26S W42 OC)
Stoving conditions: 150°C - 20 minutes object-temperature
Film thickness: 22 µm + / - 2

Testing	Saltspray test 1008 h/ DIN 50021	Humidity test 1008 h/ DIN 50017	cycling corrosion test 10 cycles/ VDA 621-415	in accordance with
Degree of rusting	Ri 0	Ri 0	Ri 0	DIN 53210
Edge corrosion	KR 1	Kr 0	Kr	DIN 53230
Blistering	Edge: 2 (s2)	Edge: m0 / g0	Edge: 0 (S0)	DIN 53209
Infiltration	Wb < 1 mm	Wb < 0,5 mm	Wb < 1 mm	DIN 53167

8. Chemical resistance

Method	value	uni	in accordance
HD-oil	mark 0 to 1	--	VDA 621-412
Petrol non-leaded	mark 0 to 1	--	VDA 621-412
Cleaner solvent	mark 0 to 1	--	VDA 621-412
Brake fluid	mark 0 to 1	--	VDA 621-412

9. General hints

Fulfills the usual specification of e.g.:

BMW	60087.0 GS90011 LASW 3
DB	DBL 7391-04; 7390-50; 7392-10; 7392-50
Ford	S-M 2P 4537B, SM 2P 1015A, SLK 2P 9101, SSM-2P-9552-A, SSM 2P 9579, WSK-N2P137-A3, WSK M2P 153 A1-A6
Opel	GME 4201, GME 0007 A1-A3, GME 00201 A/B
VW	TL 227; TL 260; Ofl-x-630; Ofl-x 634; 13750 OFL x 630/634
MAN:	MAN M 3018 Class 1-4

The corrosion resistant is influenced strongly by the substrate and by the quality of the pretreatment.
The edge-corrosion is practice-part to assess separately for everyone, since according to " edge-sharpness " different results can result.
On original parts eg. with a higher surface roughness the filmthickness must be higher.
So the point corrosion don't appear and the paint surface have a higher resistance against an abrasive strain.
All values refer to electrical dipping varnishes without impairment of added ions or foreign matter.

10. Bath-stability

1 „turn-over" / year

Definition: 1 turn over = 1 throughput of the solid in the tank

More information contains our material safety - and technical data sheets.