

Stability Test Aluprotect 2K / Marinelack

NANO

The classification is recorded on a scale from 1 to 6 where by 1 is excellent and 6 is a very poor result.

Resistance to chemicals

Test Substance	Aluprotect / Marinelack 5 µm dry coating on Al	
	24 h	7 days
Natronlauge (50%ig)	2	3
Salzsäure (1 molar)	4	4
Schwefelsäure (1 molar)	2	4
Salpetersäure (1 molar)	2	3
Aceton	1	1
Methylethylketon (MEK)	1	1
Xylol	1	1
Butylacetat	2	2
Ethanol	1	1
Testbenzin	1	1

UV-Resistance

QUV-Weather resistance 5.000 h / UV-B Lamp Zyklen: 4h / 4h	Aluprotect / Marinelack 5 µm dry coating on Al
Gloss retention Startwert: 90 unitd	30 %
Chalking/Clouding	1

Resistance to Strong Acidic Cleaning Products

Test Material:

Nanoprotect-Aluprotect/Marinelack on Aluminium, hardened, over a period of 10 days, at room temperature.

Test Results:

(Strong acidic cleanser from the company KAW Kiel KG – having a pH value <1)

- 601 Fortes Plus
- 602 Fortes Pro
- Sanpurid

Test using the VDA (German Authority):

- The coating to be tested is treated with the solution and then covered with a glass plate.
- The coating to be tested is left for a period of 48 hours at room temperature. It is then subjected to an optical test.

Analysis:

After 48 hours at room temperature there is no resulting infringement/attack/or intrusion on the test coating – either in the form of “clouding”, expansion, or flaking-off of the coating. - Even when the test surface is rubbed over with a cloth saturated with the acidic solution used in this test.

Description of used technology Description of the dried layer

The liquid product is present in a sol state, which passes into the so-called gel status while drying / hardening. In this process inorganic oxidic polymers are formed which are, in chemical terms, similar to the structure of glass. In the solid state, this means that a high proportion of the network consists of SiO₂. Only a small amount of the cured coating consists of organic structures (between 5% - 30%). The inorganic, glass-like part of the coating shows characteristics that we know from glass materials. This includes a very high mechanical hardness and also very high thermal resistance. At higher thermal loads (eg above 350 - 400 ° C) burning of low organic content and the glass-like components can not be decomposed pyrolytic, but rather are compressed in a process that is similar to a sintering process.

Stand: 11.10.2011