

**THE MANUFACTURER AND INDEPENDENT TEST LABORATORY  
WITNESS THAT BLUGUARD ANTI CORROSION COATINGS  
HAVE PASSED THE ACCELARATES TESTS AS DECRIBED BELOW:**



MANUFACTURER: **DERCOM BV**, BEUNINGEN NETHERLANDS.

MANUFACTURING FACILITY CERTIFIED BY ISO 9001, certificate # QSC 296 AND ISO 14001, certificate # ESC 114, issued by BSI Quality Systems



By Fred Derks, Technical Director



INDEPENDENT TEST LABORATORY: **COT BV**, HAARLEM, NETHERLANDS.

LABORATORY CERTIFIED BY ISO 9001, certificate # NL10000931 issued by Bureau VERITAS and ISO 17025, ISO 17025 accreditation with number L535, valid up to 1 January 2016, see for the actual situation of the accreditation the website of the Raad voor Accreditatie [www.rva.nl](http://www.rva.nl) The accreditation concerns the tests summarized in the scope only.

BY Ben Alblas, COT LABORATORY MANAGER



**BluGuard COIL PROTECTION**

		Aluminum Coil 25-40 µm
1	ASTM B 117	5000 hours
2	ASTM G 85 annex 5	1000 hours
3	Kesternich SFW 2,0 S	20 cycles
4	Cycle exchange ISO 20340	1000 hours
5	Taber Abraser	1000 cycles
6	Flexibility ISO 1519	passed *

\* manufacturer specs

Sign and Stamp:



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CERTIFICATE OF COMPLIANCE

**BluGuard PANEL PROTECTION**

		Mastic 180-250 µm
		Multi 50-70 µm
1	ASTM B 117	3000 hours
2	ASTM G 85 annex 5	3000 hours
3	Kesternich SFW 2,0 S	40 cycles
4	Cycle exchange ISO 20340	1000 hours
5	Taber Abraser	1000 cycles
6	Flexibility ISO 1519	passed *

\* manufacturer specs

Sign and Stamp:



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**BluGuard PAN PROTECTION**

		Galvanised steel
		Pan 1000 µm
1	ASTM B 117	3000 hours
2	ASTM G 85 annex 5	3000 hours
3	Kesternich SFW 2,0 S	40 cycles
4	Cycle exchange ISO 20340	1000 hours
5	Taber Abraser	1000 cycles
6	Flexibility ISO 1519	passed *

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### 1. Neutral Salt spray test according ASTM B 117/ ISO 9227/ SS DIN 50021

The resistance against salt-water spray is determined by means of a neutral salt spray test according ASTM B 117/ ISO 9227/ SS DIN 50021. In this test the test samples are exposed to a spray of a 5% salt solution at a temperature of 35°C. The test samples are checked for blistering, detachment and any other defects. The neutral salt spray test is mostly for coatings on steel and galvanized steel. Normal duration of this test is 500 hours; this test is extended to 10.000 hours.

**Compared to real life** With proper maintenance it can be said that every 1000 hours of salt spray test a coil will protect against corrosion one extra year, in case Bluchem maintenance procedures are met.

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### 2. Acid Salt spray test according ASTM G-85/ ISO 9227/

The resistance against acid rain in combination with salt spray is determined by means of an acid salt spray test according to ASTM G-85/ 5. In this test the test samples are exposed to a spray of a 5% salt solution with a pH value of 5, at a temperature of 35°C. The pH is set with acetic acid. The acid salt spray test is mostly for coatings on aluminum. Normal duration 1000 hours, the Bluchem test on panel and pan is extended to 3.000 hours.

**Compared to real life** With proper Bluchem maintenance it can be said that every 1000 hours of acetic salt spray test a coil will protect against corrosion one extra year in industrial combustion environment. After three years a touch up could be required.

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### 3. Kesternich test according DIN 50018 – SFW 0,2 S

The Kesternich test is executed according to DIN 50018-KFW 2 S. This gives an accelerated picture of the behavior of the tested system in an industrial atmosphere, especially oil processing exhaust gasses that generally produce sulphuric acid gasses. Here the test samples are exposed to an atmosphere of 100% R.H. and SO<sub>2</sub>-gas at an increased temperature (40°C) for 8 hours.

**Compared to real life.** With proper maintenance it can be said that every 10 cycles of Kesternich extend the life-time of a coating system by 1 year in the described exposure, provided Bluchem Maintenance Requirements are executed. After three years a touch up could be required.

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### 4. Cycle Exchange test according ISO 20340

One Cycle consists out of:

72 hours Sun Test according ISO 11341

72 hours Salty Mist exposure according ISO 7253

24 hours exposure at 20 ± 2 °C.

Because of insufficient correlation between the results of salt spray tests and results in the field, exchange tests are more and more reliable and used. Especially exposure to UV radiation reflects the African conditions, that inhibit the corrosion speed.

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**Compared to real life**

The test is carried out for half a year and reflects 3 years of exposure to the sun and salty conditions like most of the African exposure conditions.

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**5. Abrasion Resistance test according ASTM D 4060**

The TABER ABRASER test sets standards for wear resistance. Coated surfaces are artificially exposed to wearing by wheels, CS 17 wheels, with sandpaper. After

1000 rotations, mass loss of the coating is determined.

**Compared to real life**

The devastating influence of sandstorms act like sandpaper, any African coating system should have good results in the Taber Abrasion test.

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**6. Flexibility test according NEN-ISO 1519**

Metals expand and contract by fluctuations in temperature. HVAC coating systems have to be flexible enough to withstand, heat exchange temperature fluctuations. Flexibility is measured by Erichsen tests (DIN 53156).

**Compared to real life**

Metal expand and contract due to temperature fluctuations. We have conducted this test according to the standard, but on fin material for Bluchem Coil Protection. Generally African exposures of coating systems must meet the cylindrical bow test.

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THIS CERTIFICATE OF COMPLIANCE INCLUDING COMMENTS HAS BEEN SET UP BY COT, DERCOM AND CORROTEC. COT AND DERCOM ITS RESPONSIBILITY IS LIMITED TO THE WITNESS OF THE TEST RESULTS WITHIN THEIR SCOPE. TECHNICAL INTERPRETATIONS BY CORROTEC ARE GENERAL INTERPRETATION OF EXPERIENCE. CORROTEC WAIVES ALL RESPONSIBILITY TO ANY CONTRADICTION IN THEORY OR PRACTICE, ALTHOUGH ALL PUBLISHED ESTIMATES HAVE BEEN CHECKED TO THEIR RELIABILITY. WE WILL MODIFY THE INTERPRETATION ON A REGULAR BASIS, IF OTHER RESULTS PROVE TO BE RELEVANT. ANY COMMENTS TO BE SENT TO [WS@CORROTEC.INFO](mailto:WS@CORROTEC.INFO)