

Contents

- 1: General
- 2: Warranty / paint systems to customers' specifications
- 3: Contact person at SCHORCH
- 4: Attached index
- 5: Site conditions of SCHORCH Paint System – standard
- 6: Components and film thickness
- 7: Description of the Paint System
- 8: Inspection of film thickness and adhesive power

1. General

The SCHORCH paint system was developed in co-operation with the paint manufacturer, Messrs. FEIDAL. It is a high-endurance corrosion protection, characterized by

- Enduring protection
- Application on any surface
- Offering a variety of surface effects
- Non-polluting
- Economy

The reliability of FEIDAL products in the field of corrosion protection has been certified in various expertises and test certificates of independent institutes. They have been officially approved by Deutsche Bahn AG, VEW, BASF, Hüls AG, Bayer AG, Ruhrkohle AG, Mannesmann, Thyssen Krupp AG, and other leading enterprises.

2. Warranty / paint systems to customers' specifications

We guarantee a corrosion protection of 2 years, provided site conditions are known.

Extended periods of warranty and/or the use of **paint systems to customers' specifications** are subject to approval by department P14. A relevant questionnaire is available, on request, from the same department.

In order to grant an extended period of warranty, site conditions such as location, application and particular requirements e.g. chemical stresses or unusual standards to be met, must be stated in the order, and Messrs. FEIDAL must have had the opportunity to test the respective paint system in our works.

3. Contact person at SCHORCH

For questions, concerning corrosion protection, contact our Mr. Franke under Telephone No. +49-(0)2166-925-210, or Fax No.+49-(0)2166-925-115).

Test-sheet metals with the corresponding paint-system are available, on request, from the same department

4. Attached index

Paint systems: **Standard: [G](#), [M](#), [W](#), [K1 \(ribbed\)](#), [K2 \(non ribbed\)](#), [S](#)** **Specific: [Z1](#), [Z2](#)**

Abt. / Dept.	Q1	Kundenkennung / Item no.:		
Datum / Date	01.05.08	Typ	SCHORCH Auftrags-Nr.	Werknorm
Rev. / Rev.	03	Product code	SCHORCH ref. no.	0160000
Name / Name	Hinrichs	Dok.-Nr. / Doc. no.	8992001021	Seite / Page 1 / 4

SCHORCH-Anstrichsystem

SCHORCH

(Ersteller: Hinrichs / Abt. Q1)

5. Site conditions

The SCHORCH Paint System has been subjected to long-time endurance tests and has been found suitable for the following site conditions:

Paint System	Installation		Site conditions	Remarks
	Indoor	outdoor		
"G" (primer)	X		resistant against oils and greases	----
"M" (moderate)	X		<ul style="list-style-type: none"> without chemical influences in normal industrial atmosphere 	Standard for IP 23 and IP55
"W" (world-wide)	X	X	<ul style="list-style-type: none"> with chemical influences corrosive atmosphere with <ul style="list-style-type: none"> – for short periods: up to 100% rel. humidity at temperatures up to 35°C – or continuously: up to 98% rel. humidity at temperatures up to 30°C 	Special for IP55
"S"	X	X	Chemical- and sea-atmosphere	not for ribbed frames
"K"	X	X	Well suitable against abrasion, corrosive chemical and sea-atmosphere and high relative humidity	not for IP23

6. Components and film thickness

1-C = one component 2-C = two components	Film thickness in µm					
	G	M (1)	W (2)	S	K1 ribbed	K2 non ribbed
Primer						
• FEIDOLUX-primer „AG30“ (1-C)						
• Epoxy zinc dust primer „MG45“ (2-C)						
Intermediate coat						
• Acrylic-PUR texture-finish „ZS10“ (2-C)						
• PUR high-filling paint „ZG14“ (2-C)						
Finishing coat						
• Acrylic-PUR finishing paint „RUCO“ (2-C)						
Total dry film thickness (arithmetic mean !)	60	80	110	260	160	310

- Remarks:
- (1) **not** varnished inside the fan cap and fan (standard RAL 7031 or RAL 7032; otherwise W-paint)
 - (2) varnished inside the fan cap and fan
 - (3) fine texture (RAL 7031)
 - (4) rough texture (RAL 7032)
 - (5) components which cannot be steel-blasted, use of special primer "ZG59" (2-C)

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					Seite / Page 2 / 4

7. Description of the Paint System

- **FEIDOLUX-primer**

Environmentally compatible, water-based, primer for indoor and outdoor application; short drying time.

- **FEIDAL epoxy resin rich primer (standard primer for paint system "K")**

First-class corrosion protection primer with excellent resistance against fresh and sea water, grease, oil, and other solvents. To be applied for highest corrosion protection requirements e.g. on tanks, vehicles, conveyor systems, steel constructions, in ship building and general engineering.

Primers with a different basis (e.g. zinc phosphates) offer a lower degree of corrosion protection.

- **Acrylic-resin coatings (AY)**

Chemically cross-linked coatings for high-quality, non-fading, weather-resistant coatings (2-component or stoved coatings).

For cross-linking, isocyanates (2-component polyurethane acrylic) can be used.

- **Polyurethan coatings (PUR)**

These are among the best coatings available. They are characterized by high mechanical and chemical durability, modification of properties due to the large number of components and their various combinations, and by the ability to harden at room temperature to coatings comparable to stoved coatings.

- **Without Silicone**

As a result of increasingly stringent environmental requirements, painting plants, e.g. in the car industry, are converted to or designed for water soluble paints (AY or PUR).

Investigations have revealed that anti-wetting substances such as silicone or polyurethane ethylene (Teflon) lead to the formation of craters in the wet paint. They are still effective in solutions up to 10^{-10} .

Manufacturers of painting plants (mainly for the car industry) demand, therefore, products which are free from silicone, Teflon or other anti-wetting substances.



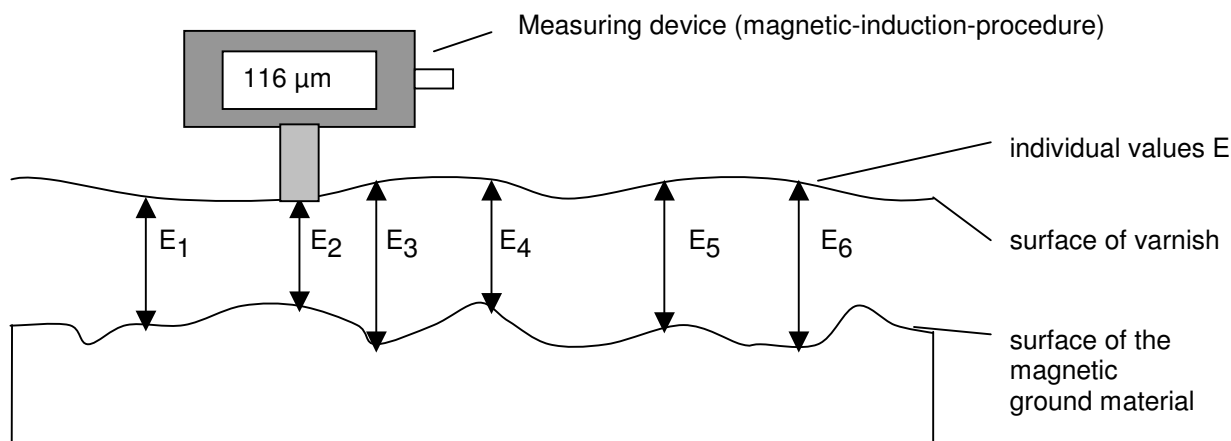
For further information on electrical machines which do not contain any silicone-bearing materials, refer to **Product information: 97/001** (Issue: 21.04.1997)

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Name / Name	Hinrichs	Dok.-Nr. / Doc. no.	8992001021	Seite / Page 3 / 4

8. Description of the Paint System

• Inspection of film thickness

- Definition of film thickness: film thickness is defined as the arithmetic mean of a minimum of 24 individual values of the film thickness
- Illustration of the inspection of the film thickness:



$E_1=133 \mu\text{m}; E_2=116 \mu\text{m}; E_3=144\mu\text{m}; E_4=125\mu\text{m}; E_5=144 \mu\text{m}; E_6=154 \mu\text{m}$

- specified mean film thickness: **110 µm**
- permissible range of arithmetical mean value: **-15 % / +85 % (94-204 µm)**
- actual mean film thickness: **136 µm**
- Effects causing the variance of measured values:
 - varnishing by hand
 - partially high surface roughness (25 - 50 µm of cast iron)
 - measured values are not reproducible

Conclusion: → It is not permissible to determine the film thickness by using individual values!

- customer requirements of film thickness, are to be documented in the production order
- inspection costs for the examination of the film thickness per motor have to be charged

• Inspection of adhesive power

If ordered, the inspection of the adhesive power by using test metal sheets is possible and test results are recorded. Customer requirements of inspection are to be documented in the production order clearly. An inspection of adhesive power on cast iron surfaces as well as of a film thickness larger than 300 µm is not possible.

Costs for the inspection of the adhesive power have to be charged per test metal sheet.

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Name / Name	Hinrichs	Dok.-Nr. / Doc. no.	8992001021	Seite / Page 4 / 4