



## Colouring of purchase parts and especially designed parts

**WN**  
**9 66 65 03**

Replacement for  
edition 2021-07

### 0 Modifications:

In comparison with WN 9 66 65-03:2017-05 the following has been modified:

- a) Added layer thicknesses for the individual coatings
- b) Source of supply for sample sheets added
- c) Chapter 4.2.1.2 Powder coating for special applications  
(degassing variant for cast aluminum, among others) added
- d) Reference to the standard DIN EN ISO 2178 "Measurement of coating thicknesses" added
- e) Pre-treatment information extended to include swarf and blasting material
- f) Delivery note added

### 0.1 Former editions:

WN 9 66 65-03: 2008-04, 2008-10, 2011-04, 2012-10, 2016-01, 2017-05, 2021-07

### 1 Range of application and purpose:

This standard applies to painting / powder coating of purchase parts and especially designed parts.

The purpose of this standard is the guarantee of uniform appearance and constant quality of surface coating of purchase parts and especially designed parts.

### 2 Provisions for colouring and surface quality:

- Colour shade according to order
- Standard structure: coarse structure <sup>1)</sup>
- Standard gloss grade: silk gloss <sup>2)</sup>
- Special designs according to order or drawing specifications are to be observed.
- Surfaces machined via metal-cutting procedure must not be primed, painted or coated.

Examples: milled or ground surfaces, fits, threads

<sup>1)</sup> The SW designation 'Fine structure' on drawings without reference to this standard complies with the structure of the reference product 'Cover layer' in chapter 4.2.1.

<sup>2)</sup> The SW designation 'Silk-mat' on drawings without reference to this standard complies with gloss grade 'Silk gloss' according to DIN EN ISO 2813.

Totalling 4 pages

### 3 Per-treatment and coating provisions:

#### 3.1. General guidelines for pretreatment:

The substrate must be free from adhesion impairing substances, e.g. oils, greases, rust, scale, mill scale, swarf, blasting material surfactants wax and release agent residues.

Suitable chemical (e.g. phosphating, chromating) and/or mechanical (e.g. phosphating, chromating) or mechanical pretreatment processes (e.g. (sand) blasting) must be used.

The parts must be clean when they are delivered to SW.

This means that the parts must be free of machining residues such as chips, blasting material, etc. and free of rust.

#### 3.2. Raw metal sheet and welded assemblies:

- Powder coated and burnt in
- For pre-treatment according to section 3.1

##### Drawing notes:

Standard note: 'Powder-coated according to works standard 9 66 65-03'

#### 3.2 Casting and welded assemblies machined in metal-cutting procedure

- Unmachined surfaces sandblasted, (primed) and painted
- Topcoat lacquers on 2-component epoxy basis with Primers are allowed (Primers see Section 4.1 reference products 'Priming')
- Topcoat lacquers without Primers are allowed in accordance with Section 4.2.3

##### Drawing notes:

Standard note: „ Painted according to works standard 9 66 65-03 “

### 4 Reference products:

#### 4.1 Priming:

- FREOPOX - primer light gray MA

Primer	ER1925MRU735
Hardener	HE0052
Mixing ratio:	MR 5:1

## 4.2 Cover layer:

### 4.2.1 Powder lacquer

Layer thickness: 70-120 µm

Testing gloss level and surface structure: Visually according to template

Approved sample sheets can be obtained from SW

#### 4.2.1.1 Powder lacquer Standard

- Feopox - powder lacquer PL1033A -Silk gloss, coarse structure  
10 min / 160 °C object temperature
  
- PL1033ARA735, light grey RAL 7035 SG
- PL1033ARA504, black-blue RAL 5004 SG
- Other shades possible as PL1033A

#### 4.2.1.2 Powder lacquer Special applications (cast aluminum, porous substrates...)

- Feopox - powder lacquer PL1033A -Silk gloss, coarse structure  
10 min / 160 °C object temperature
  
- PL1033ARA735, light grey RAL 7035 SG
- PL1033ARA504, black-blue RAL 5004 SG
- Other shades possible as PL1033A

#### 4.2.2 System lacquer (liquide lacquer, repair laquer)

- EFDEDUR System structure lacquer GS9141H  
Layer thickness: 60-100 µm
- GS9141HB2364, light gray eg. RAL 7035 SG  
MR 10:1 / Hardener HU0010
- GS9141HK2989, black-blue eg. RAL 5004 SG  
MR 10:1 / Hardener HU0010
- Other shades possible as GS9141H

#### 4.2.3 System lacquer (liquide lacquer, repair laquer) without Primers

- EFDEDUR System structure lacquer GS9180H  
Layer thickness: 60-100 µm
- GS9180HE1770, light gray eg. RAL 7035 SG  
MR 10:1 / Hardener HU0140
- GS1080HRA504, black-blue RAL 5004 SM  
MR 10:1 / Hardener HU0140
- Other shades possible as GS9180H

#### 4.3 Manufacturer of standard reference products:

Frei Lacke	
Emil Frei GmbH & Co.	Phone: 07707/151-0
Döggingen	Fax: 07707/151-238
Am Bahnhof 6	e-mail: info@freilacke.de
78199 Bräunlingen	web: www.freilacke.de

#### 5 Normative references:

DIN EN ISO 2813  
Paints and varnishes - Determination of gloss value at 20°, 60° and 85° (ISO 2813:2014);  
German version EN ISO 2813:2014

DIN EN ISO 2178  
Non-magnetic coatings on magnetic substrates - Measurement of coating thickness -  
Magnetic method (ISO 2178:2016)