

Parts Manufactured from Ferrous Materials with Inorganic Coatings and Black Surface Finish Assessment of Corrosion Onset

Foreword

Various supply specifications require corrosion-free black metal or inorganic surfaces after defined corrosion test periods. For example, one supply specification for special screws requires 240 h of corrosive exposure in a neutral salt spray test in accordance with DIN EN ISO 9227 NSS without zinc or coating corrosion. It is often difficult for the assessor in the test laboratory to make a statement with certainty. For this reason, assessments of different assessors exhibit fluctuations and are the cause of controversial discussions between orderers and customers. The assessment of corrosion onset is supported by example images.

Section 6 of this standard presents two groups of surfaces with example images that illustrate series production parts with black surfaces in new condition (KG 0, corrosion level 0) on the one hand and black surfaces with the onset of corrosion (KG 1, corrosion level 1) on the other. By referring to this standard in supply specifications related to black surfaces, the requirement for the absence of corrosion, e.g. corrosion level < 1, can be added.

Changes

First edition

NOTE: This translation is for information purposes only.
The German version shall prevail above all others

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1 Scope

This standard applies to galvanically/inorganically coated small parts made of ferrous materials with a black surface finish. This type of surface is described in DBLs 8451, 8440, 9400, 9441, and 9460.

2 Normative references

Not applicable

3 Terms and definitions

Not applicable

4 General requirements

For safety requirements, homologation (in particular, exhaust emissions) and quality, the existing statutory requirements and laws shall be complied with. In addition, the relevant requirements of the Daimler Group apply.

All materials, procedures, processes, components, and systems shall conform to the current statutory requirements regarding regulated substances and recyclability.

5 Abbreviated material designation for documentation

Not applicable

6 Illustration of surface appearance of black screws (example)

Figure 1 uses series production parts (screw heads) to show examples of two groups of surfaces:

- KG 0 (corrosion level 0) shows an example of the appearance of black surfaces in new condition.
- KG 1 (corrosion level 1) shows an example of the appearance of black surfaces with corrosion onset.

Fig. 1 Illustration of surface appearance of black parts (example)

