

# DELTA®-SEAL SCHWARZ

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DELTA®-SEAL SCHWARZ is a topcoat for a zinc flake basecoat or for other metallic substrates. In a system e.g. made of basecoat + topcoat, it is responsible for multifunctional characteristics such as a defined coefficient of friction window, resistance to media, colouring etc. Additionally, it can enhance the corrosion protection properties of the basecoat. The DELTA®-SEAL SCHWARZ is applied via a non-electrolytic application technique directly onto the substrate (part). The zinc flake technique is described in the standards DIN EN ISO 10683 and DIN EN ISO 13858. The application technology can vary according to the dimension and weight of the part; e.g. small parts are usually coated as dip-spin, bigger parts are usually spray coated. All Dörken MKS products have always been free of harmful heavy metals such as chromium VI. As there is no hydrogen involved during the application process, there is no danger of application-related hydrogen-induced stress corrosion cracking.

## **CATEGORY**



DS-Topcoat



# REQUIREMENTS

#### Corrosion resistance

- delays galvanic corrosion
- enhances the corrosion protection of the basecoat

### Special features

- organic
- solvent-based
- gaugeability
- compatible for patching
- over-paintable
- gluability

### Weathering resistance

• fulfils the requirements of natural outdoor exposure according to DIN EN ISO 12944-2

#### Media resistance

- fulfils chemical resistance against laboratory chemicals according to DIN EN ISO 2812
- fulfils chemical resistance against operating fluids according to DIN EN ISO 2812
- fulfils fertilizer resistance as per customer specification AMAZONE

#### Adhesion

- fulfils the requirements of the bend test (conical mendril) acc to DIN EN ISO 6860.
- fulfils the requirements of cupping test acc to DIN EN ISO 1520.

#### Resistance against

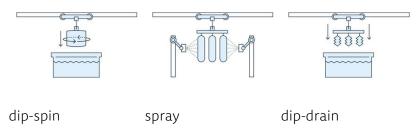
- Corrosion resistance
- Media resistance
- Weathering resistance
- Resistance against mechanical influence

#### Surface / Substrate



- zinc flake basecoat
- stainless steel
- zinc die cast
- aluminum die cast
- passivated zinc/zinc alloys
- Phosphat
- typical dry film thickness of 4-20 μm
- Even layer construction possible.
- The technical feasibility depends on pretreatment and individual characteristics of each material.

## Application technology



### Legal conditions

- meets the EU End-of-Life Vehicle Directive 2000/53/EC
- meets the RoHS 2 guidelines (also known as EU Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment 2002/95/EC)
- meets the REACh requirements

#### Contact Person

• Thorsten Speck

# SELECTION OF SUITABLE PARTS

# Advised parts





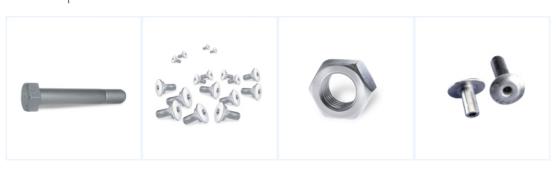
Stamped parts

Pipes and tubes

Brake parts

**Springs** 

# Suitable parts



Metrical threaded bolts > M16

Metrical threaded bolts M2-M16

Nuts

Rivets



## **SPECIFICATIONS**

AST - Gurtumlenker

Acciona Windpower - CSo129

Avdel - Fastriv® Self-piercing Rivets

BMW - GS 90010

Bosch - N67F 827 (closed for new parts)

Continental Teves - ATE N 106 61.00

Daimler - DBL 8440

Daimler - DBL 8451

FCA (Fiat Chrysler Automotive) - PS-10633

Ford Motor Company - WSD-M21P10 [S303]

Hendrickson Truck Suspension - HTES-1283

ISUZU - ISC-B22-003F

Jaguar Land Rover - STJLR.60.5020.X100

John Deere - JDM F13

Kenersys - KSY SPC bolt

Kion (Linde) - WN 10 615

Kässbohrer - KGN 202.20

MAN - 183-2

Mando - MES-M-06-006

PSA - Opel - GME00255

Porsche - VW96215 (PTL 7529)

Schneider Electric - ABDooo48

Siemens Mobility - Version D

ASTM - F3393

ArvinMeritor - AM P104

Avdel - Breakstem Systems

Bosch - F 01C 930 017

Brose - BN590295-109

Continental Teves - ATE N 106 36.31

Daimler - DBL 9441

Enercon - MKo6ooo-o

FCA (Fiat Chrysler Automotive) - PS-7626

General Motors - GMW14100

ISO - ISO/EN 10683

JCB - STD00017

John Deere - LaN 930-11.4

Kamax - KN-5506

Kiekert - WI-D-27-10-07-00

Knorr-Bremse - N12005, Po1

MAN - 183-3

Mahindra - Goo oo 56

Nissan - M 4601

Palfinger - 01.06.12

Renault Trucks - 01-71-4002 / I

Siemens Infrastructure & Cities - A6Z00033015319

Stihl - SWN 33011-01