

# HEUCOSIL™ CSA AND CSM

## A new generation of highly effective Anticorrosives for Coil and Thin-film applications

### PROPERTIES:

- After the successful story of HEUCOSIL™ CTF we now present our new silica ion-exchange pigments HEUCOSIL™ CSA and HEUCOSIL™ CSM.
- HEUCOSIL™ CSA is an aluminum modified and HEUCOSIL™ CSM is a magnesium modified silica gel with an outstanding corrosion protection performance meeting the specific requirements for thin-film applications.
- Key benefits are a low oil absorption, reduced blistering, and pH-stabilizing effects due to the basic components. Compared to phosphate-based pigments they exhibit different chemical and physical behavior.

| Technical Data                              | Unit                 | HEUCOSIL™ CTF | HEUCOSIL™ CSA | HEUCOSIL™ CSM | Test Method        |
|---|----------------------|---------------|---------------|---------------|--------------------|
| Calcium as CaO [%]                          | [%]                  | 3.0 - 5.0     |               |               | ICP-OES            |
| Aluminium as Al <sub>2</sub> O <sub>3</sub> | [%]                  |               | 15.0 - 21.0   |               | ICP-OES            |
| Magnesium as MgO                            | [%]                  |               |               | 5.0 - 7.0     | ICP-OES            |
| Water-soluble chloride                      | [%]                  | max. 0.025    | max. 0.025    | max. 0.025    | acc. to ISO 787-13 |
| Water-soluble sulphate                      | [%]                  | max. 0.05     | max. 0.05     | max. 0.05     | acc. to ISO 787-13 |
| Lead as Pb                                  | [ppm]                | max. 10       | max. 10       | max. 10       | ICP-OES            |
| Cadmium as Cd                               | [ppm]                | max. 10       | max. 10       | max. 10       | ICP-OES            |
| Loss on ignition 1000 °C                    | [%]                  | 5.0 - 8.0     | 10.0 - 13.0   | 11.0 - 14.0   | acc. to ISO 3262-1 |
| Conductivity                                | [μS/cm]              | max. 500      | max. 600      | max. 1100     | acc. to ISO 787-14 |
| pH value                                    |                      | 6.5 - 8.5     | 6.0 - 8.0     | 6.0 - 8.0     | acc. to ISO 787-9  |
| Density                                     | [g/cm <sup>3</sup> ] | typ. 2.2      | typ. 2.4      | typ. 2.2      | acc. to ISO 787-10 |
| Bulk density                                | [g/cm <sup>3</sup> ] | typ. 0.2      | typ. 0.2      | typ. 0.2      |                    |
| Tamped density                              | [g/cm <sup>3</sup> ] | typ. 0.3      | typ. 0.3      | typ. 0.4      | acc. to ISO 787-11 |
| Oil absorption                              | [g/100g]             | 120           | typ. 80       | typ. 100      | acc. to ISO 787-5  |
| Sieve residue 32 μm                         | [%]                  | max. 0.01     | max. 0.01     | max. 0.01     | acc. to ISO 787-7  |
| Average particle size                       | [μm]                 | 2.0 - 4.0     | 2.0 - 4.0     | 2.0 - 4.0     | acc. to ISO 13319  |

### 1008 h Salt Spray (ASTM B117-19) DIN EN ISO 9227:2023

- High molecular polyester, high gloss topcoat HMMM cured
- DFT: Primer 6-8 microns / topcoat 20-24 microns
- Substrate: hot-dip galvanized steel pre-treated



Control

Strontium Chromate

Competitor



HEUCOSIL™ CTF

HEUCOSIL™ CSA

HEUCOSIL™ CSM

### Application guide:

| SOLVENT BASED COATINGS         | HEUCOSIL™ CTF, CSA, CSM |
|--------------------------------|-------------------------|
| Short and medium oil alkyds    |                         |
| Long oil alkyds                |                         |
| High solid alkyds              |                         |
| 2K Epoxies                     | ++                      |
| Epoxy esters                   |                         |
| High solid epoxies             | ++                      |
| 2K Polyurethanes               | ++                      |
| High solid polyurethanes       | ++                      |
| Moisture cured polyurethanes   |                         |
| Silicone resins                |                         |
| WATER BASED COATINGS           | HEUCOSIL™ CTF, CSA, CSM |
| Alkyd emulsions                |                         |
| 2K Epoxies                     |                         |
| 1K Polyurethanes               |                         |
| 2K Polyurethanes               | ++                      |
| Silicone resins                |                         |
| Acrylics and modified acrylics |                         |
| Butadienes                     |                         |
| SPECIALTY COATINGS             | HEUCOSIL™ CTF, CSA, CSM |
| Coil coatings                  | +++                     |
| Aircraft primers               | +                       |
| Wash and shop primers          |                         |
| Direct to metal                |                         |
| UV cured systems               | ++                      |
| Powder coatings                | ++                      |

+++ Excellent choice ++ good choice + possible choice

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