

# Product Information

## Scratch Resistance

### AlSi Coat 4003

-Technical Application-

#### Product Description:

AlSi Coat 4003 is a single component coating material (varnish) for steel coil coating. AlSi Coat 4003 inhibits scale formation during hot forming processes of 22MnB5 heat treatable steel up to temperatures of 950-1000°C.

#### Characterisation\*:

|                        |   |
|------------------------|---|
| Active agent:          | Aluminium in an inorganic-organic network with siloxane and epoxy functional groups   |
| Colour:                | Silvery after stirring  |
| Viscosity:             | ~ 80-100s (ISO 2413/ DIN 53211, 3 mm flow cup)  |
| Dry coating thickness: | 2 – 6µm   |
| Stability:             | In tightly closed original containers 4 weeks (not yet fully tested), have to be stored at 5°C to 25 °C (protect from direct sunlight). Opened container should be processed quickly. The expiration date of each batch is shown on the product label. Storage beyond the specified period also does not necessarily mean that the product is unusable. A check-up of the necessary properties for the specific application is essential in this case for reasons of quality assurance. |
| Handling:              | Refer to safety data sheet. During processing appropriate personal protective equipment must be ensured.  |



## Application:

For safety assurance, we recommend that smock, goggles and gloves must be worn. Splashes on skin have to be rinsed with water and soap thoroughly. The product contains alcohol, therefore the compatibility with sensitive surfaces has to be checked. Ensure that the work place is well ventilated.

The processing is accomplished in three steps: 1. Cleaning, 2. Stirring up, 3. Application and 4. Curing.

### 1. *Cleaning:*

Surfaces have to be cleaned thoroughly from dust, dirt, oil and grease. We recommend using an abrasive cleaner, an alkaline or an acidic cleaner (compatibility has to be tested). Please use only cleaner without drying agents! Please rinse surfaces after cleaning with demineralized water in order to remove surfactant residues. An indicator for a proper cleaned surface is an even laminar wetting with the clear rinse water. If the surface is still showing hydrophobic properties, please repeat the cleaning step. After rinsing, the surface has to be dried, e.g. with compressed air. Please make sure that the compressed air is oil-free!

### 2. *Stirring up:*

ALSi Coat 4003 forms sedimentations. Stir up periodically and before every use thoroughly with an agitator so that no more sedimentation is left!

### 3. *Application:*

The coating is applied at room temperature and humidity by roller application or by spraying. During application, a slight continuous stirring of the liquid coating material is recommended in order to avoid re-sedimentation of the pigments.

### 4. *Curing:*

#### Roller application:

For the thermal curing heating of the surface to 200-270°C (PMT) during 50 s is necessary.

#### Spaying:

The material has to be dried for 10 to 30 minutes at 180 to 250°C.



**Concluding remarks:**

The above-mentioned details reflect the criteria regarding our quality inspections. They do not constitute any legal assurance of particular product features or of the suitability for a specific application. All of the values are applicable at the time when the product leaves the supplier's factory. The values stated are reference points, they are subject to being continually updated within the scope of product maintenance. A written sales agreement shall be required for the information concerning product specifications to have a binding character. Please refer to our warning notices, our product information sheets and safety data sheet.

Should you require further information and technical advice, our Applications Engineering Department and the relevant R&D Department are at your disposal.

Our product information and (applications) engineering consultancy services, whether communicated orally, in writing or by means of tests, are in accordance with the current status of the knowledge and experience gained by us.

We reserve the right to modify and update our products within the scope of technical progress and further developments within the company. This information is provided without engagement. The sole purpose of such information is to provide details on the properties of our products and their potential applications. It does not constitute any guarantee and is not intended to be an assurance of any particular properties or suitability for a specific application. The client or user is thereby not exempt from carrying out his/her own testing to determine the suitability for the intended processes, purposes and applications by members of staff with the appropriate qualifications. This also applies with regard to the protection of proprietary rights of third parties. Brand or trade names of other companies are mentioned merely by way of example and do not constitute any endorsement, the use of other products of the same nature is not excluded.

\*No concluding knowledge is yet available regarding trial products still in the testing stage. Their specifications have not yet been conclusively determined and may change at any time during the testing stage. Therefore, it is not possible to make conclusive statements with regard to characteristics including, but not limited to their processability as well as the parameters for production and applications engineering. Subject to technical modifications and amendments.

