PRODUCT DATA SHEET

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StrataPrime AC

Polyurethane zinc rich anti-corrosion primer

Product overview

StrataPrime AC is a highly efficient single-component polyurethane anti-corrosive solvent-based moisture-cured primer. Its unique composition of zinc and micaceous iron oxide (MIO) yield a reliable, long-term coating with corrosion protection and barrier properties.

StrataPrime AC is ideal for use on blast cleaned steel surfaces or other metal surfaces prior to the application of protective or waterproofing membranes. The primer can be applied at high relative humidity, sub-zero temperatures and without restriction on dew point. There is also no restriction on the maximum overcoating time and surfaces primed with StrataPrime AC have a high coefficient of friction (0.47 at +20°C), allowing the product to be effectively applied onto poorly prepared steel substrates.

Features & benefits

- Ideal for use on poorly prepared metal surfaces
- Easy to install
- Moisture-cured technology

Technical characteristics: pre-application

Properties	Unit / Description
Chemical description	Moisture-cured single-component polyurethane resin, in organic solvent
Physical state	Liquid
Packaging	Metal container: 22.7 kg
Non-volatile content	67%
Flash point (ASTM D 93)	>21°C
Colour	Dark grey
Density (25°C)	2.3 g/cm^3
VOC content	<260 g/L / 32% by weight
VOC class as per 2004/42/EC	Product subclass: h 2 Consolidating primers, solvent based – Phase II limit from 01/01/2010: 500 g/L
Pot life (1 kg, 20°C, 60% hr)	1 hour
Storage	Keep at a temperatures between 5°C and 30°C, away from heat, ignition sources & moisture
Use before	Up to 12 months after date of manufacture (in original sealed containers)

Technical characteristics: final product

Properties	Unit / Description
Final state	Solid film
Colour	Dark grey
Adhesion strength ASTM D4541	Metal: >4 MPa
Thermal resistance	Stable up to 145°C

Chemical resistance

Chemical (24 hour surface contact)	Result (0=worst, 5=best)
Water	5
Solvents	4

Substrate and environmental conditions

In order to achieve a good penetration and bond, the supporting substrate must be clean and dry, free from dust, loose particles, oils, organic residues and laitance. All abrasive particles and dust must be removed by compressed air or must be vacuum cleaned.

The surface must be prepared in accordance with ISO 8504. StrataPrime AC can be applied onto steel surfaces with different preparation grades, although it is recommended for use onto surface blasted steel to a grade of at least Sa 2.5, according to ISO 8501-1 or similar. In general, the surface profile should correspond to Fine or Medium according to ISO 8503-1 (30-75 µm Ry5). The steel surface must be overcoated within 4 hours after cleaning procedures in order to avoid the appearance of rust.

Where blast cleaning is not possible, the surface can be mechanically prepared mechanically to provide a corresponding profile. High pressure water jetting can also be used for surface preparation. Where the prepared surface is visually dry, without condensation or ice, StrataPrime AC can be applied without any limitations on dew point and relative air humidity at substrate / ambient air temperatures ranging from -18°C to 40°C. However, when relative humidity is below 40%, please consult Strata Technical Services for further advice.

StrataPrime AC should not be applied in rain or snow, or if the applied material does not have enough time to become touch dry before it is subjected to rain or snow.

Mixing & application guidelines

StrataPrime AC is a single component material which must be thoroughly stirred to achieve completely homogeneous material. Before opening and stirring, the temperature of material must be at least 3°C above dew point.

Before application the material must be thoroughly stirred using a mechanical stirrer. Constant stirring is not required. Once stirred, the surface of the material in the bucket must be covered with approximately 100-200ml of solvent in order to avoid humidity penetration, and the bucket must then be resealed (in case of slow speed of spraying or bad weather condition). For more details please contact Strata Technical Services.

Please note that the viscosity of the primer will increase at lower temperatures. In order to maintain a suitable application viscosity and prevent excessive thinning of the primer, the temperature of primer should be maintained no lower than +15°C during application.

Spray application: The main application method is airless spray, although air spray techniques are also acceptable.

Pressure at nozzle: 17-20 MPa

Nozzle tip: 0.0153-0.023”

Spray angle: 40-80°

Filter: To provide filter cleanliness, the filter size should be 60 mesh (250 µm)

The addition of thinner is usually not necessary for airless spray applications. If necessary, a recommended solvent can be added up to 10% to the volume – please consult Strata Technical Services for further guidance as certain solvents (e.g. those reactive with isocyanate) are not suitable.

Brush application: This method is recommended for stripe coating and smaller areas of repairs. The resulting wet and dry film thickness must be watched carefully.

Curing time & reapplication

Curing time will be dependent on environmental conditions. The higher the temperature and humidity are, the faster StrataPrime AC will cure. The following table gives approximate values at 60% RH.

It is also possible to apply a second coat or to resume the job with the following coating according to the table below:

Temperature	Dry to touch	Reapplication interval
-18°C	20 hours	48 hours
-10°C	16 hours	20 hours
0°C	8 hours	12 hours
10°C	30 minutes	5 hours
23°C	10 minutes	2 hours
40°C	10 minutes	30 minutes

Film thickness & coverage rate

Measure	Recommended value
Dry film thickness	80 – 150 µm
Wet film thickness	119 – 224 µm
Theoretical consumption rate	0.1 - 0.2 kg/m^2

Tool cleaning

Tools can be cleaned with a recommended solvent cleaner - e.g. MEK, xylene, 1:1 solution of xylene and MEK.. Please contact Strata Technical Services for further guidance.

Health and safety

StrataPrime AC contains isocyanates and flammable solvents. Always follow the instructions provided in the material safety data sheet and take the precautions described there. As a general rule, suitable ventilation must be ensured and any skin contact avoided. This product is intended to be used only in the way described on this data sheet. Sprayed application methods are not recommended due to health & safety reasons. This product is intended for professional use only and should only be used in the way described on this datasheet.

Environmental considerations

Empty containers must be handled taking the same precautions as if they were full. Containers must be considered as hazardous waste, to be transferred to an authorized waste manager. If any residual product remains in the containers, do not mix it with other substances without checking for possible dangerous reactions.

Further information

The information contained in this datasheet, along with any advice provided (either written or verbal) through testing are based on our experience and do not constitute any product guarantee for the installer.

We recommend that all of the information provided is carefully studied before proceeding with application, and strongly advise that suitable tests are carried out onsite before application in order to determine the suitability and compatibility for the specific project.

The application, use and processing of our products are beyond our control, and therefore under the exclusive responsibility of the installer. As a result, the installer will be solely responsible for any damage derived from the partial or complete disregard of our guidance or the general mis-use of any of our materials.

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