



HEGGEL® Coat 141

Epoxy Coating with Bionic Corrosion Inhibitor

You Build, We Protect!

Description:

HEGGEL Coat 141 is a two-component epoxy coating with bionic corrosion inhibitor. **HEGGEL Coat 141** is designed for use as high-performance chemical and abrasion resistant coating and offers excellent anticorrosion properties combined with good resistance to aggressive, flammable and non-flammable liquids and chemicals. Its free of benzyl alcohol and nonylphenol and VOC<2%. **HEGGEL Coat 141** must be applied by using airless spray equipment with a flow heater.

Characteristics:

- Electrically conductive
- Excellent corrosion protection
- Airless sprayable
- Thixotropic
- Inert and harmless once cured
- High chemical resistance
- Good thermal resistance
- Very good adhesion strength
- Suitable for single layer application

Applications:

It is suitable as an electrically conductive lining of steel tanks, containers and pipes at the chemical industry.

Application Data:

Mixing Ratio (Parts by Weight)	A : B = 100 : 12.5 (8 : 1)		
Colour	Anthracite grey (Other colours are available on request)		
Theoretical Consumption	Approx. 1.1 kg/m ² (at 750 microns DFT)		
Practical Consumption	Approx. 1.5 kg/m ² (at 750 microns DFT)		
Substrate Temperature	Minimum 10°C up to maximum 40°C		
Material Temperature (Flow heater)	25°C - 40°C		
Maximum Relative Humidity of Air	85%		
Dew Point - Substrate Temperature	Minimum +3°C above dew point		
Layer Thickness	Approx. 750 microns DFT; maximum layer thickness approx. 1000 microns – minimum 500 microns volume resistance ≤ 10 ⁸ Ω		
Duration to Overcoat with Itself (In case of longer duration time the surface must be prepared by blasting)	23°C: max. 8 hrs		
@Temperature	10°C	23°C	30°C
Pot Life	30 min	20 min	15 min
Curing Time (Foot Traffic)	24 hrs	12 hrs	6 hrs
Curing Time (Mechanical Load)	72 hrs	48 hrs	24 hrs
Curing Time (Chemical Load)	7 days	5 days	3 days

Note 1: All above values are approximate and may be used as a guideline for specifications.
Note 2: The information relating to practical consumption / coverage is calculated to include 30 % loss.
Note 3: The practical consumption / coverage depends on the conditions of the substrate. We recommend to apply a test area.
Note 4: Due to raw material variations and manufacturing techniques, a slight colour / batch difference may occur

Technical Data:

Title	Value	Unit
Mixed Density (23°C)	Approx. 1.50	g/cm ³
Volume Solids	Approx. 100	%
Mixed Viscosity (23°C)	Approx. 2700 ± 500	mPas
Electrical Resistance	Max. 1 x 10 ⁸	Ω

Packaging:

16 kg - kits (14.2 kg component A + 1.8 kg component B), other pails are available on request

Storage:

12 months, unopened in original drums under dry conditions and a temperature of 15 - 25°C. At temperatures < 10°C crystallisation is possible. Please consult us

1. Surface Preparation

The steel surface that is to be coated must be dry and free of mill scale, debris, grease, fat, oil, dust, areas of corrosion / rust as well as other contaminants which may impair the adhesion (see DIN report 28 "corrosion protection for steel constructions by using coating systems – testing the surface regarding to invisible contaminants before application"). Welding beads must be removed, welding seams and welding overlaps must be smooth in accordance with DIN EN 14879-1. Surface preparation by blast cleaning (with tough grit) in accordance with DIN EN 12944-4 (ISO 8501-1/-2), preparation grade Sa 2½. Use only approved blasting abrasives with angular grain. Average roughness R_{VS} (R_z) ≥ 50 microns respectively "middle (G)" in accordance with DIN EN ISO 8503-2 (ISO 8503-2). Prior to, during and after surface preparation, application and curing the substrate temperature must be minimum +3°C above the dew point (see dew point table). In case of doubt, the surface cleanliness must be measured regarding soluble contaminants in accordance with EN ISO 8502-6 (Bresle method) and EN ISO 8502-9 prior to coating.

2. Preparation of Material

Airless spray resp. brush / roller

The temperature of the components must be at least 25°C. Stir the components thoroughly and mix in the correct ratio using a suitable low speed electric mixer (300 - 400 rpm) for at least 3 minutes or until a completely homogeneous mixture has been achieved. Put the mixed material into a clean container and mix again for at least 1 minute more.

3. Application Method

(Use without thinner!)

Airless spray

Efficient airless spray equipment

Pressure ratio: minimum 1: 68

Spray hose: approx. 20m ¾" + 2 m ¼"

Inlet pressure: 6 - 8 bar

Nozzle size: 0.43 - 0.48 mm

Spraying angle: 40 - 70°

Flow heater: 20 - 40°C

We recommend to remove the high-pressure filters and to pump the material directly without a siphon tube.

N/B: To facilitate spray application it is necessary to use insulated hoses and a flow heater (particularly at low temperatures).

Brush / roller

Recommended for small areas, repairs or to precoat edges, only. Minor defects and faults can be repaired by hand using the same material. Prior to application the surface must be prepared by grinding or blasting PSa 2 ½ and cleaning. For minor repairs, use a brush and apply **HEGGEL Coat 141**.

The a. m. information are recommendations only and may be adjusted depending on the conditions of the object.

4. Resistance

Mechanical

- Impact resistant
- High abrasion resistant

Thermal

- Dry heat max. +150°C
- Wet heat max. +90°C

Chemical

Mineral oil, solvents

- Crude oil, diesel / biodiesel, petrol / premium gasoline
- White spirit, toluene, xylene, ethylene glycol

- Crude oil, mineral oil
- Water, seawater, brackish water, waste water
- Oil, fat, lubricants and fuels
- Non-oxidising, diluted acids
- Alkalis, lyes

Salt solutions

- CaCl₂ (saturated), NaCl (saturated)
- KCl (saturated), FeCl₃ (42 %)

Due to the fact that the resistance of the coating can be affected by various factors (medium, temperature, concentration, layer thickness, etc.) we recommend to consult us prior to application.

5. Clean up Machine

To clean and flush the spray equipment / machine we recommend using HEGGEL Coat 141 SOL - cleaner with a temperature of approx. 30 - 40°C.

6. Safety Measures

While **HEGGEL Coat 141** is a (nearly) solvent free coating, it is common practice when used as a tank lining or in enclosed areas to circulate the air during and after the application until the coating is cured. The ventilation system should be capable of preventing any solvent vapour concentration from reaching the lower explosion limit for any solvents that may be present. Avoid inhalation of the vapours. Wear suitable protective clothing, gloves, eye / face protection and suitable respiratory equipment. Adequate ventilation of the working areas is recommended. After contact with skin, wash immediately with plenty of water and soap. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. When using do not eat, drink, smoke and keep away from sources of ignition. For additional references to safety-hazard warnings, regulations regarding the transport and waste management please refer to the relevant Safety Data Sheet.

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All information contained herein is based on the current state of our knowledge and practical experience at the time of release. Therefore, please make sure that this is the latest edition of the Technical Data Sheet. All data are only intended as a guideline for informational purposes and do not constitute a legally-binding warranty of the suitability for a certain purpose of use, due to its dependence on site conditions and possible processing, use and applications. All information contained in this technical datasheet is subject to change without notice.

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