

Stelpant-PU-Mica HS

Product description

Stelpant-PU-Mica HS is a highly-pigmented micaceous iron oxide mid-coat with a high volume of solids, based on one component moisture-curing polyurethane, for intermediate coats. Due to its unique binder system this product can be applied at temperatures ranging from -5°C to 50°C and a relative humidity level as high as 98%.

Recommended use

Stelpant-PU-Mica HS is an intermediate coat between our primers Stelpant-PU-Zinc, Stelpant-PU-Oxide or Stelpant-PU-Aluprimer and one of our topcoats. The films obtained with the complete coating system are extremely corrosion resistant and suitable for the protection of all types of hydraulic steel structures, industrial plants, offshore, shipbuilding and for machinery. Due to the wide application parameters Stelpant-PU-Mica HS truly is an all seasons intermediate coat. Stelpant-PU-Mica HS can also be used as a holding primer on old hot dip galvanized steel surfaces which are rust free.

Technical data*

Product:	Stelpant-PU-Mica HS DB 704 silver grey
Colours:	MIO colours according to DB standard, special colours (RAL, NCS) on request
Gloss:	semi-gloss (gloss units cannot be measured according to DIN EN ISO 2813:2015-02 due to the roughness of the surface)
Density:	approx. (1.62 +/- 0.05) g/cm ³
Volume solids:	approx. (67 +/- 2) %
Theoretical coverage:	approx. 8.4 m ² /l or 5.2 m ² /kg at 80 microns DFT
Recommended DFT:	80 microns
VOC:	ca. 280 g/l
Thinner:	Stelpant-PU-Thinner (also to be used for cleaning)
Temperature resistance:	max. 140°C (dry heat) or 60°C (wet heat)
Storage:	12 month in unopened original packing and stored at a temperature between 5°C and 30°C and protected from direct sunlight

* Data below refers to color DB 704. Values are calculated. Other colors may vary.

Drying

Drying stages acc. to DIN EN ISO 9117-5:2012-11	20°C	10°C
TG 1	2.0 h	2.5 h
TG 3	6.5 h	7.0 h
TG 6	20.0 h	22.5 h

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The above mentioned drying times have been determined under laboratory conditions. They are related to the temperatures indicated, at a relative humidity of 60% and a dry film thickness of 60 microns. Lower temperatures will increase, higher temperatures will shorten the drying process. As this is a moisture-curing coating a humidity of 30% or higher will speed-up the drying process.

In practice drying starts at a relative humidity of 5%, at this level however drying times will increase considerably. Higher dry film thicknesses also increase the drying time of the coating. At a temperature around or below 0°C drying times will also increase considerably. Should you wish to force-cure our coatings at elevated temperatures, a sufficient level of humidity is necessary to enable curing.

Overcoating: min. possible after approx. 8h
Depending on the condition of the coating it may be necessary to prepare the surface accordingly. If the recoat interval exceeds 6 months please consult our technical department prior to application.

Application conditions

Substrate temperature: from -5°C to +50°C; substrates must be ice free
Relative humidity: between 30% and 98% relative humidity

Stelpant-products are highly tolerant towards humidity and can be used on slightly damp surfaces, however drops of water must not be visible on the surface. Surfaces have to be clean and free of salts or substances that could interfere with adhesion, e.g. oils and greases.

Material preparation

The material is delivered ready for use. It has to be stirred thoroughly with an electrical or air-driven agitator (at least 3 minutes).

Please check the condition of the cans before opening. They may be under pressure. In this case puncture the lid in order to reduce the pressure.

Open paint cans should be used within a few days. Protect the product from water (e.g. moisture in brushes or residual humidity in spraying devices).

Application methods

	Viscosity	Nozzle (recommended)	Pressure (recommended)
Airless spray:	undiluted	0,30 - 0,48 mm 0,012 - 0,019 inch	250 - 340 bar 3625 - 4930 psi
Brush / Roller:	undiluted		

High pressure air spray is also possible, depending on the viscosity it may be necessary to dilute the material before application.

Processing instructions

Coatings containing micaceous iron ore are best applied by spray to obtain a uniform colour. Touch ups of sprayed surfaces by means of brush or roller can lead to differences in shade.

Only use Stelpant-PU-Thinner to dilute Stelpant products or for cleaning purposes. The use of other thinners is not allowed and can lead to negative properties of the dry film and/or thickening of the coating material.

Stelpant-PU-Mica HS

Our one component moisture-curing coatings are specialty products and can only partially be compared with conventional systems. This is why some standard values, for example the tolerances regarding nominal dry film thickness as determined in DIN EN ISO 12944-5:2018-06, are not always applicable.

Coatings systems

For structural steel under C5 conditions acc. to DIN EN ISO 12944-6:2018-06

Durability: high

1 x 80	microns	STELPANT-PU-ZINC
1 x 80	microns	STELPANT-PU-MICA HS
1 x 80	microns	STELPANT-PU-MICA UV

Suitable acc. to Network Rail Specification NR/L3/CIV/039 XM92-MCU

1 x 80	microns	STELPANT-PU-ZINC
1 x 100	microns	STELPANT-PU-MICA HS
1 x 60	microns	STELPANT-PU-COVER UV
1 x 80	microns	STELPANT-PU-ZINC
1 x 80	microns	STELPANT-PU-MICA HS
1 x 80	microns	STELPANT-PU-MICA UV

Suitable for hot dip galvanized steel

1 x 60	microns	STELPANT-PU-MICA HS
1 x 70	microns	STELPANT-PU-MICA UV

Above systems are to be considered as examples. Other systems are possible depending on the intended use and the required lifecycle.

Important notes

Issue date of Data Sheet:

08/2019. This data sheet supersedes those previously issued.

Safety precautions:

For professional use only.

For all relevant physical, safety, toxicological and environmental data please refer to the Material Safety Data Sheet, which can be provided on request.

Please observe all relevant regulations regarding storage, transport and application as well as the safety precautions printed on the labels on the can.

Disposal:

All empty cans should be disposed of in accordance with local legislation.

Disclaimer:

All products supplied are subject to our General Sales Conditions.

The information given in this Technical Data Sheet is non-binding and merely indicative, as the products can be used under conditions beyond our control. Above data regarding use, application and consumption are to be considered as guidelines only. The corresponding practical data can only be defined per project.

The information in this Technical Data Sheet is based on laboratory testing and given to the best of our knowledge, according to the results of our research activities and our practical experience. However as the products can be used on different materials, substrates and under different working conditions, it is impossible for us to mention all possible details and therefore we cannot accept liability for any damage, unless willfully intended or caused by gross negligence from our side.

The suitability of this product is depending on the substrate, application conditions and intended use. The user must check whether the products are suitable for the intended use.