

Stelcaterc-L-TC

Product description

Stelcaterc-L-TC is a single-pack moisture-curing paint based on isocyanate-free polyurethane. The product is used as a UV- resistant and weatherproof top-coat for heavy-duty corrosion protection and has a very low solvent content of approx. 75 g/l. Stelcaterc-L-TC has a very low hazardous substance labeling and is free of isocyanate. In addition to its fast curing properties even at higher dry film thickness, the single layers of the Stelcaterc-L-range products can be applied in very fast succession. Stelcaterc-L-TC can be applied under normally unfavourable weather conditions (same as the widely-known Stelpant-product-range) at temperatures ranging from -5°C up to +50°C and a relative humidity level as high as 98%.

Recommended use

Stelcaterc-L-TC is a top-coat for a coating system in combination with a suitable primer (Stelcaterc-L-PR) and mid-coat (Stelcaterc-L-NT) for objects exposed to corrosivity category C5 acc. to DIN EN ISO 12944-2:2018-04. The Stelcaterc-product-range is used whenever a combination of long-term corrosion protection of steel structures and the use of environment-friendly products is preferred. Due to its wide processing window, year-round application is possible. The Stelcaterc-system can be applied at increased dry film thickness and provides the means for a time optimised application process due to the reduced minimum overcoating period.

Technical data*

Product:	Stelcaterc-L-TC RAL 9003
Colours:	MIO colours acc. to DB standard, RAL, NCS, special colours on request
Gloss:	semi-gloss, glossy colours on request
Density:	approx. (1.57 +/- 0.05) g/cm ³
Volume solids:	approx. (76.6 +/- 2) %
Theoretical coverage:	approx. 9.6 m ² /l or 6.1 m ² /kg at 80 microns DFT
Recommended DFT:	70 - 250 microns
VOC:	approx. 74 g/l
Thinner:	Stelcaterc-Thinner (also to be used for cleaning)
Temperature resistance:	max. 120°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 RAL 9003. Values are calculated. Other colors may vary.

Drying

Drying stage acc. to DIN EN ISO 9117-5:2012-11	20°C	10°C
TG 1	45 min	60 min
TG 3	60 min	80 min
TG 6	75 min	130 min

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The above mentioned drying times have been determined under laboratory conditions for colour RAL 9003. They are related to the temperatures indicated, at a relative humidity of 60% and a dry film thickness of 80 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: Brush/roller application: Depending on relative humidity and applied film thickness normally possible after 45 min at 20°C.

Airless spray application: Stelcaterc-L can be applied wet in wet within 15min for each layer, at temperatures between -5°C and +50°C and a relative humidity up to 98%.

After 6 months it may be necessary to thoroughly abrade or sweepblast the surface to create a surface profile.

Note: at the time of overcoating the substrate shall always be free of oil, grease, fat, dust or any other form of contamination.

For details, please contact our technical department.

Application conditions

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

Stelcaterc-L-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	0.38 - 0.48 mm	180 - 440 bar
		0.015 - 0.019 inch	2610 - 6380 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.

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Processing instructions

Only use Stelcaterc-Thinner to dilute Stelcaterc-L-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.

When using airless application with a low material throughput it is recommended to add 40-50ml Stelcaterc-Thinner on top of the already thoroughly stirred material in the 10l can after the suction hose of the airless unit has been submerged. The resulting thin layer of Stelcaterc-Thinner on the surface limits the contact with ambient humidity and prevents skin formation.

Coating systems

For structural steel under C5-M conditions acc. to DIN EN ISO 12944-6:1998-07

1 x 100 microns	STELCATEC-L-PR
1 x 80 microns	STELCATEC-L-NT
1 x 80 microns	STELCATEC-L-TC

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

Durability: low

1 x 100 microns	STELCATEC-L-PR
1 x 80 microns	STELCATEC-L-TC

Durability: medium

1 x 140 microns	STELCATEC-L-PR
1 x 100 microns	STELCATEC-L-TC

Durability: high

1 x 100 microns	STELCATEC-L-PR
1 x 120 microns	STELCATEC-L-NT
1 x 80 microns	STELCATEC-L-TC

Suitable for hot dip galvanized steel

1 x 100 microns	STELCATEC-L-PR
1 x 80 microns	STELCATEC-L-TC

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.