# Hempadur Avantguard 750 TL100

## Product characteristics

**Description**
Hempadur Avantguard 750 TL100 is an activated zinc-rich epoxy primer in compliance with the requirements of Level 2, type II in SSPC Paint-20, 2019 and ISO 12944 Part 5, 2018. The product is in full compliance with ASTM D520 type II and EU Directive 2004/42/EC, the Paints Directive on the limitation of volatile organic compounds: subcategory j.

**Recommended use**
Hempadur Avantguard 750 TL100 is recommended as a primer for steel constructions and bridges.

**Service temperature:**
- Maximum, dry exposure only: 160°C [320°F].
- Minimum, recommended by Hempel for dry exposure: -50°C [-58°F].

**Certificates / Approvals**
- Approved by the German Federal Highway Research Institute (BAST), TL/TP-KOR-Stahlbauten. Blatt 100, Material No.100.1.1.

**Features**
- Reduces the effect of corrosion and provides excellent galvanic protection.
- Fast drying primer with short minimum overcoating intervals.
- Excellent mechanical strength, also in cyclic temperatures, with improved tolerance to high film thickness through high flexibility and self-healing effect.
- Superior tolerance to high relative humidity during application.
- Cures down to -10°C [14°F].

## Product safety

**Flash point** 27°C [81°F]

**VOC content mixed product**

| Legislation | Value |
|---|---|
| EU | 240 g/L [2.00 lb/US gal] |
| US (coatings) | 240 g/L [2.00 lb/US gal] |
| US (regulatory) | 240 g/L [2.00 lb/US gal] |
| China | 240 g/L [2.00 lb/US gal] |

VOC values may vary with shade, please consult the Safety Data Sheet, section 9. According to specific legislation, see details in the Explanatory Notes available at Hempel website, hempel.com or at your local Hempel website. [a]EU Directive 2004/42/CE.

**Handling**
Handle with care. Before and during use, observe safety labels on packaging and paint containers and follow all local and national safety regulations. Always consult Hempel's Safety Data Sheet for this product along with the Product Data Sheet.

For professional use only.

## Product data

**Product code:** 17361

**Product components:** Base 17365 | Curing Agent 98371

**Standard shade / code:** Dark grey 10420

**Gloss:** Flat

**Volume solids:** 76 ± 2%

**Specific gravity:** 2.4 kg/L [20 lb/US gal]

**Reference dry film thickness:** 80 micron [3.2 mils]

## Surface preparation

**Cleanliness**
- Remove oil, grease and other contaminants by suitable detergent cleaning.
- Remove salts, detergents and other contaminants by high pressure fresh water cleaning.

New build:
- Abrasive blasting to min. Sa 2½ (ISO 8501-1) / SP 10 (SSPC) / NACE No.2.
- Remove dust, blast media and loose materials.

**Roughness**
- Surface profile Medium (G) (ISO 8503-2).

Consult Hempel's separate Surface Preparation Guidelines for more details.

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## Application

**Mixing ratio**
Base 17365 : Curing Agent 98371
(89 : 11 by volume)

Stir well before use. It is recommended to use fixed volumes/can size for multi-component products.

**Thinner**
Hempel's Thinner 08450

**Cleaner**
Hempel's Tool Cleaner 99610

**Pot life**

| Product temperature | 20°C [68°F] | 40°C [104°F] |
|---|---|---|
| Pot life | 2 hours | ¾ hours |

**Application method**

| Tool | Thinning max vol. | Application parameters |
|---|---|---|
| Airless spray | 10% | Nozzle pressure: 220 bar [3200 psi]<br>Nozzle orifice: 0.017-0.021" |
| Air spray | 10% | - |
| Brush/Roller | 10% | - |

If brush or roller application is used, more coats will be necessary to achieve the specified dry film thickness. Spray data are indicative and subject to adjustment. Pressure is for a material temperature of 20°C [68°F].

**Film thickness**

| Specification range | Low | High | Recommended |
|---|---|---|---|
| Dry film thickness | 50 micron [2.0 mils] | 100 micron [4.0 mils] | 80 micron [3.2 mils] |
| Wet film thickness | 66 micron [2.6 mils] | 132 micron [5.3 mils] | 105 micron [4.2 mils] |
| Theoretical spreading rate | 15 m²/L [611 sq ft/US gal] | 7.6 m²/L [310 sq ft/US gal] | 9.5 m²/L [387 sq ft/US gal] |

Overthickness must be closely controlled and never locally exceed 200 micron [8.0 mils] DFT. On irregular surfaces it is recommended to employ special care in avoiding over application.

**Application conditions**
- Temperature of product must be above 15°C [59°F] during application.
- To avoid condensation, apply on a clean and dry surface with a temperature that is at least 3°C [5°F] above the dew point.
- Surface temperature must be above -10°C [14°F] during application and curing.
- Minimum surface temperature: 5°C/41°F in case of ZTV ING regulated project.
- Beware of ice on the surface at low temperatures.

**Relative Humidity:**
- Relative humidity must be below 95% during application.
- Relative humidity must be below 95% during curing.

## Drying and overcoating

**Product compatibility**
- Previous coat: According to Hempel's Specification.
- Subsequent coat: According to Hempel's Specification.

**Drying time**

| Surface temperature | | 5°C [41°F] | 15°C [59°F] | 30°C [86°F] |
|---|---|---|---|---|
| Touch dry | hours | 3 | ¾ | ½ |
| Hard dry | hours | 16 | 3 | 2 |
| Fully cured | days | - | - | 7 |

Determined for dry film thickness 80 micron [3.2 mils] at standard conditions, see Hempel's Explanatory Notes for details.

**Drying conditions**
- To obtain the drying time stated, it is important to maintain sufficient ventilation during application, drying and curing.
- Condensation on the freshly applied coating should be avoided.

**Overcoating details**
- If the maximum overcoating interval is exceeded, roughening of the surface is necessary to ensure intercoat adhesion.
- Remove zinc salts or other contamination before overcoating.
- The surface must be dry and clean prior to application.

**Other remarks**
- Hempel's Specification supersedes any recommendations given in the Product Data Sheets.

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## Storage

**Storage conditions**

- The product must be stored in accordance with Safety Data Sheet, label and local regulations. Keep the containers in a dry, shaded, cool, well-ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

## Carbon Footprint

| Dry film thickness | 1 µm | 1 mil |
|---|---|---|
| GWP (Global Warming Potential) | 10.8 g $CO_2e/m^2$ | 0.056 lb $CO_2e/ft^2$ |

The carbon footprint is for 1 square meter / square foot of surface area with a dry film thickness of 1 micron / mil.

The scope includes raw materials, in-bound transport to the Hempel factory, Hempel manufacturing processes, and any Volatile Organic Compounds emitted during and after the application of the product.

It is calculated based on the standard shade defined in this PDS. Values may vary with shade.

## Additional documents

Additional information is available at the Knowledge Center: https://www.hempel.com/knowledge-center . The documents below can be found in the Technical Guidelines section: https://www.hempel.com/knowledge-center/technical-guidelines or at the Hempel website.

- Explanatory Notes for Product Data Sheet.
- Application methods.
- Substrates.
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- Surface Preparation.
- Application Instruction for this product.
- Repair & maintenance.
- Inspection & quality control.

This Product Data Sheet ("**PDS**") relates to the supplied product ("**Product**") and is subject to updating from time-to-time. Accordingly, the buyer/applicator should have regard to the PDS supplied together with the relevant batch of the Product (and not an earlier version). In addition to the PDS, the buyer/applicator may receive some or all of the following specifications, statements and/or guidelines as listed below or as are available from the Hempel website under 'Products' at www.hempel.com (the "**Additional documents**"):

| No. | Document description | Location/comments |
|---|---|---|
| 1. | Technical Statement | One-off specific advice provided on request for specific projects |
| 2. | Specification | Only issued for specific projects |
| 3. | PDS | This document |
| 4. | Explanatory Notes to the PDS | Available at www.hempel.com and contain relevant information about the Product testing parameters |
| 5. | Application Instruction | Where available, at www.hempel.com |
| 6. | Generic technical guidelines (e.g. on application and surface preparation) | Where available, at www.hempel.com |

In the event of a conflict of information between the PDS and the Additional documents, the order of priority of information shall be in the order as set out above. In such event you should also contact your representative at Hempel for clarification. Furthermore, the buyer/applicator must have full regard to the relevant Safety Data Sheet provided with each Product and which can also be downloaded from www.hempel.com.

Hempel shall not be liable for defects where the application of the Product has not been made fully in accordance with the recommendations and requirements set out in the relevant PDS and the Additional Documents. The information and terms of this disclaimer apply to this PDS, the Additional documents and any other documents supplied by Hempel in respect of the Product. In addition, the Product is supplied and all technical assistance is given subject to Hempel's General Conditions of Sale, Delivery and Service, unless otherwise expressly agreed in writing.