



Product Data

VERSILINE TL-91 S

VERSILINE TL-91 S: BASE 423V5 : CURING AGENT 927VC

Description:	VERSILINE TL-91 S is a two-component, high performance flake-filled Novolac epoxy for steel and concrete tank lining applications. VERSILINE TL-91 S is well suited for coating structural steel in harsh fume or vapour service and offers excellent resistance to splash and spills of many corrosive chemicals.
Recommended use:	Suited for linings and coating applications including chemical processing tanks, storage of mineral acids, caustics, fuel and a great variety of salts and their vapours.
Service temperatures:	Dry service temperature up to 135°C/275°F. In crude oil up to 120°C/248°F. For other liquids, contact HEMPEL.
Availability:	Part of Group Assortment. Local availability subject to confirmation.

PHYSICAL CONSTANTS:

Shade nos./ Colours:	16500* / Grey
Finish:	Semi-gloss
Volume solids, %:	100% reactive
Theoretical spreading rate:	1.33 m ² /litre [53.5 ft ² /US gallon] – 750 microns [30 mils]
Flash point:	>100°C [212°F]
Specific gravity:	1.29 kg/litre [10.7 lbs/US gallon]
Dry to touch:	5 hour(s) 25°C/77°F. See REMARKS overleaf.
Fully cured:	36 hour(s) 25°C/77°F. See REMARKS overleaf.
VOC content:	55 g/litre [0.46 lbs/US gallon]
Shelf life:	Base: 1 year (25°C/77°F) from time of production. After 1 year subject to inspection. Shelf life is considerably longer in unopened cans. Check material for curing properties if the product is older than 12 months from shipping date. According to specification. Curing agent: 1 year (25°C/77°F) from time of production. * Other shades according to specification.

The physical constants stated are nominal data according to the HEMPEL Group's approved formulas.

APPLICATION DETAILS:

Version, mixed product:	VERSILINE TL-91 S
Mixing ratio:	BASE 423V5 : CURING AGENT 927VC 4 : 1 by volume
Application method:	Spray (plural component). Brush or roller for touch-up only.
Thinner (max.vol.):	According to specification.
Pot life:	20-25 minute(s) 25°C/77°F. According to specification.
Nozzle orifice:	0.021".
Nozzle pressure:	Minimum 193 bar [2800 psi]. (Airless spray data are indicative and subject to adjustment)
Cleaning of tools:	According to specification.
Indicated film thickness, dry:	300-750 microns per coat [12-30 mils per coat]. See REMARKS overleaf.
Indicated film thickness, wet:	300-750 microns per coat [12-30 mils per coat]. See REMARKS overleaf.
Overcoat interval, min:	6 hour(s) at 25°C/77°F. See REMARKS overleaf.
Overcoat interval, max:	24 hour(s) at 25°C/77°F. See REMARKS overleaf.
Safety:	Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations.



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SURFACE PREPARATION: **Steel:** Remove oil and grease etc. thoroughly with suitable detergent. Remove salts and other contaminants by high pressure fresh water cleaning. For tank linings abrasive blast to a White Metal Finish Sa 3 (ISO 8501-1:2007) or NACE No. 1, SSPC-SP5 with a 50-100 micron [2-4mil] dense sharp anchor profile corresponding to Rugotest No. 3, BN10a or ISO Comparator Medium (G) - or as per specification for the subsequent coat(s). For exterior coatings, the steel must be blasted to a Near-White Metal Finish Sa 2½ (ISO 8501-1:2007) or NACE No. 2, SSPC-SP10 with a 50-75 micron [2-3mil] dense sharp anchor profile corresponding to Rugotest No. 3, BN10b, or ISO Comparator Medium (G) - or as per specification for the subsequent coat(s). All pitting, scratches, gouges, and other defects must be repaired either by welding or by filling with VERSILINE EPOXY CP-83 M that are compatible with TL-91 and suitable for the intended service conditions.
Concrete: According to specification

APPLICATION CONDITIONS: Apply only on a dry and clean surface with a temperature above the dew point to avoid condensation. 24 hours prior to application store the components (base and curing agent) at 25°C-30°C/75°F-85°F to facilitate handling. Use only where application and curing can proceed at temperatures above 13°C/50°F. Maximum relative humidity: 80%. In-can temperature of the paint should preferably be below 50°C/122°F and above 13°C/50°F. In confined spaces, provide adequate ventilation during application and drying. According to specification

PRECEDING COAT: None or VERSILINE EPOXY CP-83 M.

SUBSEQUENT COAT: None or VERSILINE TL-91 S.

REMARKS:

Film thicknesses/thinning: May be specified in another film thickness than indicated depending on purpose and area of use. This will alter spreading rate and may influence drying time and recoating interval. Horizontal surfaces: the entire desired thickness may be applied in a single coat. Vertical surfaces: minimum 300 microns [12 mils] and maximum 750 microns [30 mils].

Overcoat intervals: Prepare surfaces to maximize inter-coat adhesion as follows:
a. Allow VERSILINE TL-91 S to cure until firm before applying subsequent coats.
b. After the surface cures firm to the touch, but less than 24 hours, it must be washed with soap and water, rinsed, dried before overcoating.
c. Surfaces that cured beyond 24-hours must be washed with soap and water, rinsed, dried and lightly sanded or abrasive blasted to remove gloss.

Dry to touch:

Surface temperature	2°C (35°F)	10°C (50°F)	25°C (77°F)	35°C (95°F)
Time	8h	7h	5h	2h

NR = Not Recommended, Ext. = Extended, m = minute(s), h = hour(s), d = day(s)

Fully cured:

Surface temperature	2°C (35°F)	10°C (50°F)	25°C (77°F)	35°C (95°F)
Time	72h	48h	36h	18h

NR = Not Recommended, Ext. = Extended, m = minute(s), h = hour(s), d = day(s)

Note:

VERSILINE TL-91 S For professional use only.

ISSUED BY:

HEMPEL A/S

This Product Data Sheet supersedes those previously issued.
For explanations, definitions and scope, see "Explanatory Notes" available on www.hempel.com. Data, specifications, directions and recommendations given in this data sheet represent only test results or experience obtained under controlled or specially defined circumstances. Their accuracy, completeness or appropriateness under the actual conditions of any intended use of the Products herein must be determined exclusively by the Buyer and/or User.
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