Hempaline Defend 630 Cure 72

Product characteristics

Description
Hempaline Defend 630 is a high-performance epoxy novolac lining. It is 100% volume solids and can be applied thick film to offer high temperature and chemical resistance in long-term immersion.

Can resist crude oil / water mixtures with CO2 and H2S up to 120°C [250°F] and 70bar (1,000psi).

Can be applied by a single leg airless pump in one coat and can be returned to service in less than 72 hours. It is also possible to create a glass fibre reinforced linings system.

Recommended use
As an interior lining for storage tanks, process vessels and pipes in new build or maintenance situations.

Resistant to a wide range of chemicals, including (but not limited to): sour crude oils, refined hydrocarbons, aviation fuel, gasoline (petrol)/ethanol blends, biofuels (and their feedstocks), MTBE, produced water, alcohols, aliphatic and aromatic solvents, select caustic and acidic and aqueous solutions.

Recommended for a variety of markets including (but not limited to) oil & gas (on- and offshore), chemical processing, power generation, mining, pulp & paper and water/wastewater.

Shades 36641 (light blue) and 10000 (white) are available for potable water service.

Service temperature:
- Maximum, dry exposure only: 150°C [302°F].
- Please contact Hempel for more information.
- Please consult the Chemical protection guide at hempel.com.

Product safety

Flash point 73°C [164°F]

VOC content mixed product

Legislation	Value
EU	21 g/L [0.18 lb/US gal]
US (coatings)	21 g/L [0.18 lb/US gal]
US (regulatory)	21 g/L [0.18 lb/US gal]
China	21 g/L [0.18 lb/US gal]

According to specific legislation, see details in the Explanatory Notes available at Hempel website, hempel.com or at your local Hempel website.

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
37820

Product components
Base 37829
Curing Agent 9782S

Standard shade / code
Light blue 36641 *

Gloss
Semi-gloss

Volume solids
100%

Specific gravity
1.4 kg/L [12 lb/US gal]

Reference dry film thickness
500 micron [20 mils]

* Slight discolouration may occur. This does not affect the performance of the coating.

Hempaline Defend 630 Cure 72

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.
- Concrete: According to Hempel's Specification.

New build:
- Abrasive blasting to min. Sa 2½ (ISO 8501-1) / SP 10 (SSPC).
- Remove dust, blast media and loose materials.

Maintenance and Repair
- According to Hempel's Specification.

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

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

Application

Mixing ratio
Base 37829 : Curing Agent 9782S
(4 : 1 by volume)

Stir well before use. Thinning is not allowed.

Thinner
No thinning

Cleaner
Hempel's Tool Cleaner 99610

Pot life

Product temperature	20°C [68°F]	10°C [50°F]	30°C [86°F]
Pot life	50 min	80 min	20 min

Application method

Tool	Thinning max vol.	Application parameters
Airless spray	No thinning	Nozzle pressure: 200 bar [2900 psi] Nozzle orifice: 0.021-0.029"
Brush/Roller	No thinning	Not Applicable.

If brush or roller application is used, more coats will be necessary to achieve the specified dry film thickness. As tank lining, brush and roller application must only be limited to stripe coating and touch up areas or minor repairs. 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	300 micron [12 mils]	750 micron [30 mils]	500 micron [20 mils]
Wet film thickness	300 micron [12 mils]	751 micron [30 mils]	501 micron [20 mils]
Theoretical spreading rate	3.3 m²/L [134 sq ft/US gal]	1.3 m²/L [53 sq ft/US gal]	2 m²/L [81 sq ft/US gal]

Product may be specified in another film thickness than indicated depending on purpose and area of use. This will alter spreading rate, drying and curing time and overcoating interval. For best performance, avoid excessive film thickness.

Application conditions
- Optimal paint temperature for proper mixing, pumping and spraying is: 20-25 °C [68-77°F].
- 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 [50°F] during application and curing.

Relative Humidity:
- Relative humidity must be below 80% during curing.

Hempaline Defend 630 Cure 72

Drying and overcoating

Product compatibility

- Previous coat: None or according to Hempel's specification. Recommended product is: Hempaline Prepare 130, Hempaline Prepare 110.
- Subsequent coat: None or according to Hempel's specification. Recommended product is: Hempaline Defend 630

Drying time

Surface temperature		10°C [50°F]	20°C [68°F]	30°C [86°F]	40°C [104°F]
Touch dry	hours	8	4	2	1
Hard dry	hours	24	12	5	2½
Fully cured	days	7	3	2	1

Determined for dry film thickness 500 micron [20 mils] at standard conditions, see Hempel's Explanatory Notes for details.

Overcoating

Hempel's specification supersedes any guidelines indicated in the overcoating table

Quality name	10°C [50°F]	20°C [68°F]	30°C [86°F]	40°C [104°F]
		Immersion		
Hempaline Defend 630 Cure 72	8 h 30 d	4 h 30 d	2 h 21 d	60 min 14 d

Overcoating times are indicative for products of the same generic chemistry. Consult Hempel's specification for more information.

Drying conditions

- To obtain the drying time stated, it is important to maintain sufficient ventilation during application, drying and curing.

Overcoating details

- If the maximum overcoating interval is exceeded, roughening of the surface is necessary to ensure intercoat adhesion.
- The surface must be dry and clean prior to application.
- As tank lining, if the maximum overcoating interval is exceeded, roughening of the surface by sweep abrasive blasting is necessary to ensure intercoat adhesion".

Other remarks

- Epoxy coats have an inherent tendency of chalking in outdoor exposure. This does not affect the performance of the coating.
- Hempel's Specification supersedes any recommendations given in the Product Data Sheets.
- Epoxy coatings have an inherent tendency of chalking, fading and discolouring. This does not affect the performance of the coating

Storage

Shelf life

Ambient temperature	25°C [77°F]
Base	12 months
Curing Agent	18 months

Shelf life from date of production, when stored in original, unopened containers. Thereafter, the product quality must be re-inspected. Storage at elevated temperatures may reduce shelf life. For advice, please consult Hempel.

Storage conditions

- Temperature must not go below 5°C [41°F] during transport and storage.
- 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)	6.5 g CO_2e/m^2	0.034 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.

Hempaline Defend 630 Cure 72

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 Hempel website https://www.hempel.com/service-and-support/technical-guidelines or at your local Hempel website:

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