# Hempel's Nexus II US

## Product characteristics

**Description**
Hempel's Nexus II US 27440 is a tie-coat for silicone systems with anticorrosive properties.

**Recommended use**
Hempel's Nexus II US 27440 is used as a sealer/tie-coat for the Hempaguard®/Hempasil systems.

Maintenance, Antifouling systems: The product is designed for the purpose of recoating old antifouling systems with a Hempaguard®/Hempasil topcoat, creating a link between the existing antifouling system and the Hempaguard®/Hempasil topcoat. This is feasible provided the general condition of the old antifouling system is good.

Maintenance/New Build, Full system: The product is designed to be used as a bridging tie-coat between approved anticorrosive primers and Hempaguard®/Hempasil topcoat. Used in combination with Hempasil Nexus X-Tend 27500 for full coat applications of the Hempaguard®/Hempasil topcoats. Minimum curing temperature for this system is 0°C [32°F].

## Product safety

**Flash point** 54°F [12°C]

**VOC content mixed product**

| Legislation | Value |
|---|---|
| US (regulatory) | 2.69 lb/US gal [322 g/L] |
| US (coatings) | 2.43 lb/US gal [291 g/L] |
| Canada | 2.70 lb/US gal [323 g/L] |

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**
27440

**Product components**
Base 27449
Curing agent 98160
Additive 99710

**Standard shade / code**
Light grey 11070
Light grey 11070

**Gloss**
Semi-flat

**Volume solids**
55 ± 2%

**Specific gravity**
11 lb/US gal [1.4 kg/L]

**Reference dry film thickness**
4.0 mils [100 micron]

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## Surface preparation

New build:
- According to Hempel’s Specification.

Maintenance and Repair
- According to Hempel’s Specification.

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

## Application

**Mixing ratio**
Base 27449 : Curing agent 98160 : Additive 99710
(13.9 : 3.6 : 2.5 by volume)

**Thinner**
No thinning

**Cleaner**
Hempel's Thinner 08450
Hempel's Tool Cleaner 99610

**Pot life**

| Product temperature | 68°F [20°C] | 32°F [0°C] | 104°F [40°C] |
|---|---|---|---|
| Pot life | 60 min | 60 min | 60 min |

**Application method**

| Tool | Thinning max vol. | Application parameters |
|---|---|---|
| Airless spray | No thinning | 2200 psi [Nozzle pressure: 150 bar]<br>Nozzle orifice: 0.019-0.021" |
| Brush/Roller | No thinning | Not Applicable. |

After cleaning, prior to application, flush the pump and hose with Hempel's Thinner 08080. Spray data are indicative and subject to adjustment. Pressure is for a material temperature of 68°F [20°C].

**Film thickness**

| | Recommended |
|---|---|
| Dry film thickness | 4.0 mils [100 micron] |
| Wet film thickness | 7.3 mils [183 micron] |
| Theoretical spreading rate | 224 sq ft/US gal [5.5 m²/L] |

Checking paint consumption per area can improve the control of film thickness.

**Application conditions**
- Temperature of product must be above 59°F [15°C] during application.
- Optimal paint temperature for proper mixing, pumping and spraying is: 68°F [20°C ].
- To avoid condensation, apply on a clean and dry surface with a temperature that is at least 5°F [3°C] above the dew point.
- According to Hempel’s Specification.

**Relative Humidity:**
- Relative humidity must be in the range 30-85% during application.
- Relative humidity must be in the range 30-85% during curing.

**Application remarks**
- The practical consumption factor may vary depending on application conditions, equipment and workmanship.
- Checking paint consumption per area can improve the control of film thickness.
- Consult Hempel's Guidelines for application of silicone systems.
- Do not open or mix the cans before the paint will be applied.

## Drying and overcoating

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

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### Drying time

| Surface temperature | | 50°F [10°C] | 68°F [20°C] | 86°F [30°C] |
|---|---|---|---|---|
| Hard dry | hours | 3 | 2 | 1¼ |
| Fully cured | days | 10 | 7 | 4 |

Determined for dry film thickness 4.0 mils [100 micron] at standard conditions, see Hempel's Explanatory Notes for details.

### Overcoating

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

| Quality name | | 32°F [0°C] | 50°F [10°C] | 68°F [20°C] | 86°F [30°C] |
|---|---|---|---|---|---|
| | | Immersion | | | |
| Hempasil Nexus X-Tend 27500 | Min | 6 h | 5 h | 4 h | 3 h |
| | Max | 60 h | 60 h | 60 h | 60 h |
| Hempaguard X7 89900 | Min | - | 12 h | 6 h | 4 h |
| | Max | - | 36 h | 36 h | 36 h |
| Hempablue 87750 | Min | - | 12 h | 6 h | 4 h |
| | Max | - | 36 h | 36 h | 36 h |

Consult Hempel's specification for more information.

### Drying conditions

- Condensation on the freshly applied coating should be avoided.

### Overcoating details

- In case the product has to be overcoated by itself, application must be wet in wet.

## Storage

### Shelf life

| Ambient temperature | 77°F [25°C] |
|---|---|
| Base | 18 months |
| Curing agent | 18 months |
| Additive | 12 months |

Shelf life from date of production, when stored in original, unopened containers. Thereafter, the product quality must be re-inspected. Always check the best before date or expiry date on the label.

### 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 mil | 1 µm |
|---|---|---|
| GWP (Global Warming Potential) | 0.043 lb $CO_2e/ft^2$ | 8.3 g $CO_2e/m^2$ |

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.

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## 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 explaining the fields in this Product Data Sheet.
- Surface Preparation Guidelines.
- Application Guidelines for different application methods.
- Surface Preparation.
- Application Instruction for this product.
- General guidelines for application of Hempaguard /Hempasil coating systems.

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.