

# Application Instructions

Hempafire Extreme 550

43500: Base 43509 with Curing agent : 93500



For product description refer to product data sheet Hempafire Extreme 550

## Scope:

This document gives detailed guidance on the use and application of Hempafire Extreme 550 two component epoxy based intumescent product and must be used in conjunction with the product's Product Data Sheets (PDS) and Material Safety Data Sheets (MSDS).

Hempafire Extreme 550 has been tested, assessed and certified for a range of approvals for the fire protection of structural steel. Please consult the Product Data Sheet for more information. For latest information about country specific approvals, please contact your local Hempel representative.

Reference throughout this document is made to industry best practice guidelines such as "European Industry Best Practice Guide on the application of intumescent coatings to constructional steel - CEPE/EAIPC/EAPFP 2015" and ASFP Technical Guidance Document TGD16 "Code of practice for Off-site Applied Thin Film intumescent coatings".

For the primers and topcoats used as part of the Hempafire Extreme 550 systems, data can be found in the Product Data Sheet and the Approved primer/topcoat list for Hempafire Extreme 550

## Storage conditions:

Hempafire Extreme 550 must be kept/stored in dry areas, always protected from direct sun light and frost, during storage and also during transport. During storage, containers must remain sealed. Recommended storage and transportation conditions are between 5°C and 40°C. The shelf life of the product may vary depending on the storage conditions. The shelf life of each product can be found in the product's Product Data Sheet (PDS).

Prior to coating application precondition both components in a heated area at 25-30°C. This will enable better flow of the components to load the material in the spray machine.

## Substrates and surface preparation & Primer selection:

Hempafire Extreme 550 is primarily used for the fire protection of structural carbon steel. For Hot dipped galvanised substrate, see below, other substrates please contact Hempel representative for specific information.

**Carbon steel - General:** In order to obtain best performance, abrasive blast cleaning is recommended.

**Abrasive blasting:** Before blasting any deposits of grease or oil must be removed from the steel surface with a suitable detergent followed by high pressure fresh water cleaning. Minor spots of oil/grease may be cleaned with thinner and clean rags - avoid smearing out the contamination. Possible alkali weld deposits, chemicals used for testing of welds, soap residues from the pressure testing must be removed by fresh water hosing. Abrasive blasting to Sa 2½ (ISO 8501-1:2007) with a sharp-edged surface profile corresponding to Rugotest No. 3, BN10a-b, Keane-Tator Comparator, 2.0 G/S, 2 S, or ISO Comparator, Medium (G).

Mechanical preparation to St 3 (ISO8501-1:2007) prior primer application is only recommended for small repair areas, and restricts the primer selection, a primer specifically approved for St 3 preparation must be used.

Hempafire Extreme 550 can be applied directly over blasted carbon steel, provided the blast quality is of good standard and substrate is clean and free from any contaminants.

In most cases, Hempafire Extreme 550 will be applied over an approved primer or primer system which has been confirmed by Hempel for compatibility and performance in fire scenarios. A primer underneath Hempafire Extreme 550 may be required depending on the maximum exposure conditions of the steelwork coated with Hempafire Extreme 550.

The list of approved primers and primer systems with recommended dry film thicknesses and overcoating intervals is available for Hempafire Extreme 550.

**Hot Dip Galvanised steel:** Hempafire Extreme 550 can be used on galvanised structural steel. Galvanised substrate shall be prepared by removal of zinc corrosion products, including white rust, zinc ash and flux. Removal of oil, grease and other general contamination, including dust must be carried out prior to preparation work. The galvanised steel shall be sweep blasted prior to primer application. It is contractors' responsibility to ensure the specification for galvanising has been met.

Please consult Hempel for the primer requirements for this substrate.

**Application conditions:** Hempafire Extreme 550 is designed for off-site (in shop) application conditions, along with on-site touch up application (if required). It is not recommended to apply the product for general on-site application without specific training or experience.

The product can be applied at substrate and ambient temperatures between +5°C and +50°C but for optimum results it is recommended in the range +15°C to +45°C.

The minimum surface temperature must be 3°C above dew point. For optimum application and drying, the substrate temperature should be greater than 10°C and relative humidity less than 80%. Application at substrate temperatures below 10°C will significantly retard curing.

For on-site application (small areas/touch up): Do not apply the coating if the weather is unfavourable (or expected to develop unfavourably) for application or drying. It is recommended that ambient conditions are monitored every 4 hours or less. Reference is made to the above section.

The area where the intumescent is applied must be well ventilated and proper air circulation shall be secured for optimum drying.

Hempafire Extreme 550 two component epoxy based intumescent product must be protected from condensation and water during application and drying.

After 24 hours drying at 20°C the product can withstand rainwater exposure. At lower temperatures longer drying may be required.

**Application equipment:** The recommended method of application is by plural component spray equipment with heaters. Recommended equipment type:

Graco XP-HF Plural Component Machine (with XL10000 air motor),  
Graco XM70 Plural Component Machine,  
Wiwa Duomix 333

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Note: Other manufacturers equipment similar to above may be acceptable, subject to trial application.

Mix Ratio Configuration: 2:1 mix ratio by volume

Nozzle size: typically, .023" - .025", this is dependent on material temperature and complexity of steelwork to be sprayed.

Recommended Material Temperature at nozzle: 35-40°C

Recommended fluid hose is 3/8" internal diameter, with minimum hose length required.

Whip hose should be 1/4" internal diameter, short length

Filter: All in-line filters and/or gun filters shall be removed when spraying Hempafire Extreme 550.

(Spray application data are indicative and subject to adjustment)

Single Leg Airless Application (for small areas/touch up)

Hempafire Extreme 550 is designed for plural component spray. It is however possible to apply the product application by single leg supported by Ram Feed. Not all product features may be obtained when the product is applied by single leg airless spray. For single leg Ram Feed application a dedicated instruction is available, your Hempel representative can provide further info.

Note, Application by single leg pump with suction hose is not recommended.

## Cleaner

After finishing the application, clean the equipment immediately with Hempel's tool cleaner 99610 or Hempel's thinner 08450

## Thinning:

Thinning is not required for plural component spray.

## Mixing

It is recommended both components of Hempafire Extreme 550 are heated to 25-30°C. Both components of Hempafire Extreme 550 should be separately thoroughly stirred to uniform consistency with a power mixer. The products are supplied ready for use and thinning is not recommended. Different temperature settings for spraying the product often overcomes the need for thinning, also when applied at low thickness.

When the product is applied by plural component spray equipment the components will be mixed automatically by the machine. Make a mixing ratio check regularly to ensure compliance with the mixing ratio.

For Hempafire Extreme 550 the mixing ratio is 2:1 by Volume. By weight it is 2.23:1.

## Pot Life:

Pot life once mixed: 60 - 75 minutes at 15 °C  
45 - 60 minutes at 20°C  
30 minutes at 40°C

The curing of the product is an exothermic reaction, which causes heat generation of the mixed product. The pot life will be affected by this temperature increase when the product is mixed and left in a can. Consult the separate guidance for single leg airless spray application.

An application technique that will ensure good film formation on all faces of the profiles must be adopted.

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## Spray application:

Once the film is fully dried, removal of dry spray and other painting irregularities will improve the finish appearance.

## Masking off of areas prior spray application

Prior to the application of the product, masking off areas may ease the further handling and/or installation, e.g. bolted connection areas. It is recommended to remove the masking tape (or other masking material) after the application and while the coating is partially dried, i.e. when there is still some flexibility in the coating. Ensure that no parts of the masking material remains on the steelwork. Late removal of the masking tape may significantly make it harder to remove the masking tape.

There may be areas where welding is required after coating installation. Those areas are recommended to be left uncoated. Masking off these areas is recommended prior coating application.

Also, bolt holes are recommended to be masked off. It is recommended to leave the area not coated with Hempafire Extreme 550 in order not to hinder the bolt connection. After steelwork erection, these area shall be prepared and coated with Hempafire Extreme 550.

## Brush application:

Application by brush for small areas and touch-up is possible but in this case only between 250 and 400 micron wet film thickness may be achieved per coat, thus additional coats may be necessary to obtain the total specified dry film thickness. Moreover, a less smooth finish may be obtained by brush, that is why it is generally only recommended for small areas, repairs and touch-up. Application by putty knife or trowel may in some cases be a good alternative for brush application.

## Wet/dry film thickness:

Hempafire Extreme 550 is 100% solids and therefore the wet film thickness is the same as the dry film thickness.

## Recommended DFT/coat:

The maximum dry film thickness that can be applied per coat is up to 3-5 mm [118-196 mils] dry film thickness per coat (depending on the equipment and material temperature settings).

## Film Thickness Acceptance:

When an aesthetic finish is important then it is recommended to apply also in coats of approximately 2-3 mm dry, it is recommended to determine case by case what is the ideal DFT for obtaining sufficient smoothness of the finish.

It is key that the total specified dry film thickness of the intumescent product is achieved to ensure proper fire protection. The maximum DFT shall not exceed the maximum certified DFT by more than 10% for the relevant shape and orientation.

Although in all cases the application of too high DFT is not a good painting practice, it may be considered fire safe when more DFT of intumescent product is applied than specified, provided that the applied DFT is less than the maximum assessed DFT for the relevant shape and orientation.

On request Hempel can provide further details.

For guidelines and acceptance criteria of dry film thickness measurements Hempel refers to industry best practice guidelines e.g. "European Industry Best Practice Guide on the application of intumescent coatings to constructional steel – CEPE/EAI/PC/EAPFP 2015" and ASFP Technical Guidance Document – TGD16 "Code of practice for Off-site Applied Thin Film intumescent coatings".

The following is copied from the CEPE/EAIPC/EAPFP 2015 document: “Dry Film Thickness and Measurement - Acceptance criteria The coating thickness acceptance criteria shall be as follows, assuming that the specified thickness is a nominal value:

- The average dry film thickness applied to each element shall be greater than or equal to the specified nominal value.
- The average measured dry film thickness on any face of any member shall not be less than 80% of the specified nominal value.
- Dry film thickness values less than 80% of the specified nominal value are acceptable, provided that such values are isolated and that no more than 10% of the readings on a member are less than 80% of the specified nominal value.

Where any single thickness reading is found to be less than 80% of the specified nominal value, a further two, or where possible three, readings shall be taken within 150 to 300 mm of the low reading. The initial reading may be considered isolated if all the additional readings are at least 80% of the specified nominal value. If one or more of the additional readings are less than 80% of the specified nominal value, further readings shall be made to determine the extent of the area of under thickness. In such cases, low thickness areas identified should be brought up to the required thickness before proceeding to the next application stage.

- All dry film thicknesses shall be at least 50% of the nominal value.
- The average measured dry film thickness of any face of any member should not exceed the manufacturer’s recommended maximum thickness for the particular member shape and orientation.

Data about drying times, recoating and overcoating intervals can be found in the Hempafire Extreme 550. Drying time and Overcoating Interval document, attached hereto. This data is based on results from internal laboratory tests performed under controlled conditions.

## **Drying and overcoating:**

Final aesthetics performance of Hempafire Extreme 550 product may vary depending on the method of application. Heated Plural Component spray application is recommended to achieve the best cosmetic finish. Higher spray temperatures typically gives a smoother appearance, but gives more tendency for sagging and thus the maximum DFT per coat will be affected.

## **Cosmetic finish:**

Before start of a project, it is recommended that a sample area is prepared, and the standard of cosmetic finish is agreed by all parties.

ASFP Technical Guidance Document 11 section 2.1.11 outlines three levels that could be achieved. The type of finish that can be obtained may be depending on the product, the application equipment and project conditions:

- 1. Basic Finish: the coating system achieves the required fire performance and corrosion protection performance but is not required to achieve any requirement for standard of finish.*
- 2. Decorative Finish: In addition to the requirements for (1) above, a good standard of cosmetic finish is generally required when viewed from a distance of 5 metres. Minor “orange peel” or other texture resulting from application or localised repair is acceptable.*
- 3. Bespoke Finish: In addition to the requirements for point (2) above, the coating finish is required to have a standard of evenness, smoothness and gloss*

*agreed between the Specifier and Contractor.*

Where dry film readings include a primer, then the thickness of the primer must be subtracted from the total reading for verification of the DFT of the intumescent coating.

**Weathering Exposure:** If insufficient dry film thickness is measured then an additional coat of the same product or touch-up must be applied as soon as possible and before delivery of steelwork.

It is important that no topcoat is applied before the required dry film thickness of intumescent has been achieved.

Hempafire Extreme 550 can be applied directly to blasted steel, reference is made to above section "Substrates and surface preparation & Primer selection". For Hempafire Extreme 550 applied on carbon steel without primer, the maximum supported environmental exposure condition is up to C3 (ISO12944). With an approved primer suitable for the condition Hempafire Extreme 550 can be supported up to C5 conditions (ISO12944).

Applied Hempafire Extreme 550 product must be protected from condensation and water during application and drying. It must always be protected from pooling, standing or running water, also when they are top coated. After 24 hours drying at 20°C the product can withstand humidity and/or rainwater exposure. At lower temperatures longer drying may be required.

Primer/Topcoat List'.

Depending on the primer selected the maximum exposure is C5-High Industrial according to ISO 12944. Hempafire Extreme 550 can be supported without topcoat up to C5H conditions, although in most situations it is preferred a topcoat is applied.

For sub-zero use (service temperatures) please contact your Hempel representative

**Topcoats:** A topcoat will be required when aesthetics are important with colour retention. Like for other epoxy coating, when the product is not topcoated Hempafire Extreme 550 will show chalking and discoloration.

Depending the environmental exposure, the selection of the topcoat can be made. The Approved Primer/Topcoat List' provides relevant topcoat information. Only Hempel approved topcoats can be used. Based on relevant project information, your Hempel representative can provide proper advice on topcoat selection.

It is key that the total specified dry film thickness of the Hempafire Extreme 550 layer is achieved prior to the start of the topcoat application. If a topcoat has been applied on an area with insufficient dry film thickness of the intumescent, then the topcoat must be removed, the intumescent be rectified such that the specified thickness is achieved and finally a new layer of topcoat re-applied.

## Handling of applied sections:

Special care should be taken when handling the coated steel sections, because this can likely prevent the extend of repair needed afterwards. Lifting devices should be of suitable material in order to limit the extent of film damage. It is advised to incorporate lifting eyes into the fabrication process to facilitate the lifting of large or complex configurations of steel sections, and/or installation of lifting straps on uncoated parts (if available).

The area of contact with supporting trestles should be limited to the minimum required, preferably “sharp” contact points to minimise the area of damages.

Ensure that all damaged or not properly coated areas are repaired/painted with the relevant coating system.

Hempafire Extreme 550 may be subject to mechanical damage and repair is necessary to ensure the expected fire protection. Repairs should be carried out at the earliest opportunity.

Normally the damage of the intumescent coating can be repaired using the same Hempafire product. The touch-up with freshly applied product can be done by airless spray, brush, spatula or putty knife. Prior to repair, make sure that the surface is clean and free of contamination. Conditions during a repair application shall fulfil the same requirements as during a normal application.

For the repair of small areas Hempel offers small pack size. Please reach out to your Hempel representative for availability. It is recommended to mix an entire kit

## Repair Procedure:

The repair method will depend upon the extent of the damage, with three distinct cases.

### **Damage down to steel**

Loose/soft paint must be removed at the damaged area. The damaged area must be cleaned mechanically to minimum St. 3 according to ISO 8501-1 and the edges to be taken back to a firm, well adhering intact paint film, followed by removal of dust. Apply the primer specified for the project (or another approved Hempel primer) in the specified dry film thickness. Respecting the over coating interval, relevant for the applied primer, Hempel’s intumescent coating can be applied in the dry film thickness specified for the steel section. Multiple coating applications may be needed. A top coat can be applied when the intumescent is dry, if originally specified.

In case the coating system was specified originally without any primer, then after St 3 cleaning you shall use primer Hempadur Mastic 45880 or Hempadur Mastic 45881

### **Damage down to intact primer**

Loose paint must be removed at the damaged area and the edges to be taken back to a firm, well adhering intact paint film. sharp coating edges at the damaged area are recommended to be chamfered by sanding, followed by removal of dust. Hempel’s intumescent coating can be applied in the dry film thickness specified for the steel section. Multiple coating applications may be needed. A top coat can be applied when the intumescent is dry, if originally specified.

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## **Damage only to the topcoat**

Remove loose or unsound coating to a firm edge and feather the edges.

Reinstate the topcoat following the original specification.

## **Maintenance:**

It is recommended to establish regular inspection intervals, e.g. annually, this is typically done as agreed between the building owner and the main contractor. The inspection shall check the condition of the fire proofing system. Any defect or damaged areas must be repaired the soonest according to the recommendations given above. Failure to carry out these repairs will have a detrimental effect on the fire performance of the system.

Repair maintenance of Hempafire intumescent coating system with incorrect product and/or preparations may affect the fire performance. It is therefore recommended to consult Hempel for approval of the intended maintenance.

Maintenance of Hempafire Extreme 550 system outside Hempel's instructions is subject to the conditions given in GENERAL CONDITIONS OF SALE OF HEMPEL PRODUCTS AND/OR SERVICES.

## **Safety:**

As with many solvent free epoxy coatings there is a likelihood overspray. Overspray will remain wet for a period of time. Wet coating may be causing slippery surfaces.

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.

## **Important Information:**

**It is the applicator's responsibility to ensure that all coatings of a Hempafire coating system are applied in accordance with these application instructions. It is furthermore the responsibility of the applicator to ensure that the specified dry film thickness is achieved. Technical assistance can be provided by Hempel to assist the applicator and is given subject to GENERAL CONDITIONS OF SALE OF HEMPEL PRODUCTS AND/OR SERVICES.**

Issued by:

Hempel A/S

These Application Instructions supersede those previously issued.

For explanations, definitions and scope see "Explanatory Notes" available on [www.hempel.com](http://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. The Products are supplied and all technical assistance is given subject to Hempel's general conditions of sales, delivery and service, unless otherwise expressly agreed in writing. The Manufacturer and Seller disclaim, and Buyer and/or User waive all claims involving, any liability, including but not limited to negligence, except as expressed in said general conditions for all results, injury or direct or consequential losses or damages arising from the use of the Products as recommended above, on the overleaf or otherwise. Product data are subject to change without notice and become void five years from the date of issue.



# Hempafire Extreme 550

This document is an appendix to the Product Data Sheet of Hempafire Extreme 550

## Introduction

Hempafire Extreme 550 shall be applied at the specified thickness. The specified thickness will be section-specific and depends on a number of parameters. Among others it is dependent on the fire performance, the relevant fire test standard, the required fire duration and the steel massivity of the to be protected steel element.

The drying time of Hempafire Extreme 550 depends on a number of parameters, such as the environmental conditions and the steel temperature.

But unlike for single pack intumescent coatings (such as Hempacore One or Hempafire Pro), the drying time of Hempafire Extreme 550 does not depend on the DFT of the coating. Note that thinning is not normally recommended for Hempafire Extreme 550, and the below tables are only applicable for unthinned spray applied Hempafire Extreme 550.

Data accuracy, completeness or appropriateness under operational conditions may be different. Therefore, drying and overcoating data should always be used as a guideline only for field applications. It is recommended to carry out a test under the relevant project-specific conditions to determine the actual drying state of the coating in order to know when to apply the next coat, when to apply the final topcoat and when the sections are dry to handle.

'Dry to handle' is the minimum time for a coating to achieve sufficient hardness so that it can be handled with care without causing significant damage.

Where for single pack PFP products the overcoating times are typically unlimited, there is often a maximum overcoating time specified for 2-pack PFP products. This is also applicable to Hempafire Extreme 550, the maximum overcoating times of table 4 apply.

## Product characteristics

Drying studies have been carried out at Hempel's laboratories under controlled conditions. These test results are the basis for the drying times mentioned in this document. Drying times of Hempafire Extreme 550 are dependent on temperature, ventilation, steel temperature, etc. Hence, the mentioned times are indicative and should be used as a guideline only for field applications.

Temperature	10 °C	20 °C	30 °C	40 °C
Hempafire Extreme 550	36 hours	20 hours	8 hours	4 hours

**Note:** 'Dry to handle' is the minimum time for a coating to achieve sufficient hardness so that it can be handled with care without causing significant damage. Special care shall be taken to handle elements coated with Hempafire Extreme 550.

Hempafire Extreme 550 can be overcoated with itself even sooner than after the times mentioned in table 2, but it is not recommended. With itself it could basically be applied wet on wet, but the risk for sagging or surface defects increases when the first coat is not sufficiently dried. It is therefore recommended to leave the coated surface until sufficiently dried for avoiding such defects before the next coating is applied. Small trial areas are good painting practice, to determine if issues are occurring. For overcoating with a topcoat the overcoating times in table 3 shall be interpret as a minimum.

Table 2: Recommended Minimum Overcoating times (overcoating with itself)				
Temperature	10 °C	20 °C	30 °C	40 °C
Hempafire Extreme 550	16 hours	10 hours	4 hours	2 hours

It is key that the intumescent coating's DFT has been confirmed prior topcoat application. A proper and reliable DFT measurement is typically only possible by means of electronic DFT gauge which should leave no mark or indentation, and such measurement can therefore only be performed once the product is dry to handle. It is therefore that the figures in this table align with table 1.

Table 3: Minimum Overcoating times (overcoating with an approved topcoat)				
Temperature	10 °C	20 °C	30 °C	40 °C
Hempafire Extreme 550	36 hours	20 hours	8 hours	4 hours

**Note:** The intumescent layer is recommended to be dry hard prior overcoating, which means no mark can be easily made in the paint by pressing firm with a thumb. The coating does not necessarily have to be so called "nail hard". For overcoating with a topcoat the overcoating times in the table shall be interpreted as a minimum.

Provided there is no contamination and the surface does not have any dry spray presence, Hempafire Extreme can be overcoated with itself without any surface preparation, up to the times mentioned in Table 4. If these times are exceeded, then the surface can be overcoated with itself after degreasing, removal of contamination and roughening by sanding. When this preparation including the sanding is done, the overcoating time is unlimited.

Table 4: Maximum overcoating with itself				
Temperature	10 °C	20 °C	30 °C	40 °C
Hempafire Extreme 550	6 months	6 months	6 months	6 months

Table 5: Maximum Overcoating times of Hempafire Extreme 550 (when overcoating with topcoat)				
Approved Topcoat	10 °C	20 °C	30 °C	40 °C
Solvent borne Polyurethane topcoat	2 weeks	2 weeks	2 weeks	2 weeks
Water borne Polyurethane topcoat	2 weeks	2 weeks	2 weeks	2 weeks
Water borne Acrylic topcoat	24 hours	24 hours	24 hours*	24 hours*
Solvent borne Acrylic topcoat	2 weeks	2 weeks	2 weeks	2 weeks
2K isocyanate-free topcoat Hempel's Pro Acrylic - 55883	2 weeks	2 weeks	2 weeks	2 weeks

**Note:** Approved topcoats are only those topcoats that are listed in the Approved primer & topcoat list for Hempafire Extreme 550, or in specific compatibility statement in writing by Hempel.

\*Some waterborne Acrylic topcoats may cause softening at higher temperatures.

Hempafire Extreme 550 may only be used in combination with approved primers and topcoats. The overcoating time of primers prior overcoating with Hempafire Extreme 550 is primer dependent. See separate Approved Primers/Topcoats list for Hempafire Extreme 550 for overcoating and other primer-specific details.

Document description	Location/comments
Technical Statement	One-off specific advice provided on request for specific projects
Specification	Only issued for specific projects
PDS	Available at <a href="http://www.hempel.com">www.hempel.com</a>
Explanatory Notes to the PDS	Available at <a href="http://www.hempel.com">www.hempel.com</a> and contain relevant information about the Product testing parameters
Application Instruction	Where available, at <a href="http://www.hempel.com">www.hempel.com</a>
Generic technical guidelines (e.g. on application and surface preparation)	Where available, at <a href="http://www.hempel.com">www.hempel.com</a>

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](http://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 document, the 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 the relevant and then-in-force General Conditions of Sale of Hempel Products and/or Services, unless otherwise expressly agreed in writing.

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