

Application Instructions

Hempadur Multi-Strength 35840

35840: BASE 35849 with CURING AGENT 95620

Hempadur Multi-Strength 35842

35842: BASE 35848 with CURING AGENT 95620



Scope: These Application Instructions cover surface preparation, application equipment and application details for Hempadur Multi-Strength 35840/35842.

Surface preparation: Oil and grease to be removed by suitable detergent, salts and other contaminants by high pressure fresh water hosing prior to blasting. Abrasive grit blasting to ISO 8501 : Sa 2½. Recommended surface profile is Rz 75-100 micron/3-4 mils, corresponding to Rugotest No. 3, BN 10 or ISO Comparator, Medium (G).

Application equipment: Hempadur Multi-Strength 35840/35842, being a high viscosity material, may require special measures to be taken at application.

Recommended airless spray equipment:

Pump ratio:	Min. 60:1
Pump output:	Minimum 12 litres per minute
Input pressure:	Min. Dependent upon pump size Max. 7 bar (101 psi)
Spray hoses:	Max. 100 metres/ 300 feet, 1/2" internal diameter Max. 30 metres/ 100 feet, 3/8" internal diameter Max. 6 metres/ 20 feet, 1/4" internal diameter
Filter:	30 mesh
Nozzle size:	0.019"-0.027"
Fan angle:	60°-80°
Heating (if no preheating)	Minimum length of 15 metres of trace heated line should be fitted. Any remaining lines should be heated or as a minimum insulated. Contact Hempel for further details. In-line heating <u>MAY</u> be used by experienced operatives.

Plural component airless spray equipment can also be used. Contact Hempel for further details.

Start-up procedure: If trace heating is to be used ensure that this is set at the correct temperature to provide a fluid temperature at the spray tip of 20-25°C/59-68°F.

Glass flake coatings can cause any residual dried paint within the lines to be removed potentially causing tip blockages. New or dedicated lines should be used and the whole equipment flushed thoroughly using **Hempel's Tool Cleaner 99610 or Hempel's Thinner 08450**.

Mix complete units of base and curing agents using an appropriate sized paddle mixer ensuring that no unmixed material remains in the base of the container.

Pour sufficient product for continuous spraying into a hopper, a suitable clean tray or use the container containing the mixed product directly. Due to the viscosity of the mixed material suction hoses should not be used.

Thinning: Do not dilute.

Plural component spray Before application, the mixing ratio should be checked. Close the valve to the re-circulation hoses. Measure the volumetric material flow of the two components separately at the outlets just after the dosing cylinders.

Spraying: If heating has been utilised material may cool down in the lines and a few seconds elapses before a suitable fan pattern is established. If any sign of the fan pattern narrowing during spraying adjust the pressure or material temperature to compensate. If this has no effect, inspect the tip orifice for signs of excessive wear and replace if necessary.

The target wet film thickness should be achieved using multiple passes wet-on-wet, taking care to monitor overlap areas for excessive film build.

Applied wet film thickness should be checked by using a wet film gauge (comb). It is recommended to coat flat steel panels and check the wet film thickness on these, prior to the starting of the coating of the object itself. Ensure that any wet film gauge marks are brushed out immediately to avoid defects.

Hempadur Multistrength 35840 is intended for application within the range of 300 -500 microns/ 12 -20 mils per coat and may be applied in multiple coats.

Hempadur Multistrength 35842 is intended for application within the range of 500-1000 microns/ 30-40 mils per coat and may be applied in multiple coats.

When coating long sections, the whole section planned for coating, should be coated without making breaks. Continue to mix full units of material. Ensure that all material is used within the pot life of the material and replace containers as required purging any air from the spray line upon changeover.

Control:

- a) To ensure continued good operation of the spray pump periodic "stall" tests may be carried out. Increase the pressure on the pump (within its safe maximum) and monitor the piston for movement. Movement in the piston may indicate seal wear, and possible need for replacement. The direction of movement will indicate the seal sets which require replacement. Excessive seal wear may limit the pressure at the spray tip resulting in poor atomisation.
- b) Upon commencing mixing of each container record the time and ensure that all material is used well within the pot life for the relevant application temperature.

Pot life/ mixing:

When measured under standard conditions the pot life is 60 minutes at 20°C/68°F. However, for a 20 litres/5 US gallons mix, the heat developed by the chemical reaction between BASE and CURING AGENT may make the corresponding practical pot life shorter.

- a. Pre-heat sufficient paint for the work to be completed to a minimum of 20°C/68°F unless spray equipment is fitted with suitable trace heating equipment. Inline heating, where the paint is passed through a heater shall only be used by experienced operatives.
- b. Mix the entire content of corresponding base and curing agent packaging. If it is necessary to mix smaller portions, this must be done properly by or weighing base and curing agent. The weight ratio for Hempadur Multi-Strength 35840/35842 is 4.0 parts by weight of base and 1.0 parts by weight of curing agent or by volume: 3.0 parts by volume base and 1.0 parts by volume curing agent.
- c. Stir the mixed paint thoroughly by means of a clean mechanical mixer until a homogeneous mixture is obtained. The paint itself needs to be min. 20°C/59°F for proper spraying.
- d. Use all mixed paint before the pot life is exceeded. The pot life depends on the temperature of the paint as shown in table below (valid for a 20 litres can):

Temperature of mixed paint	20°C/68°F	25°C/77°F	30°C/86°F ²⁾
Pot life	60 min	40 min	30 min

- 1) At 20°C/68°F and below, the viscosity will be too high for airless spray application
- 2) Temperature above 30°C/86°F should be avoided

Cleaning of equipment: Proper equipment cleaning is essential for a successful operation.

Because of the short pot life of the mixed product, immediately after finishing the application, the pump, hose and gun must be flushed with plenty of **Hempel's Tool Cleaner 99610 or Hempel's Thinner 08450**. Keep flushing until the cleaner looks clear and clean. After all the material has been removed from pump and hoses, the surge valve should be flushed and tested for operation.

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Physical data versus
temperature in-field
application: Hempadur Multi-Strength 35840/35842

Surface temperature	10°C/50°F	20°C/68°F	30°C/86°F	40°C/104°F ¹⁾
Minimum recoating interval related to later conditions of exposure:				
Interval for recoating with Hempadur and Hemplathane qualities				
Atmospheric, severe	20 hours	8 hours	4 hours	2,5 hours
Immersion*	20 hours	8 hours	4 hours	2,5 hours
Maximum recoating interval related to later conditions of exposure:				
Interval for recoating with Hempadur qualities				
Atmospheric, severe	75 days	30 days	15 days	9 days
Immersion*	75 days	30 days	15 days	9 days
Interval for recoating with Hemplathane qualities				
Atmospheric, severe	7.5 days	3 days	1½ days	1 day

*Not relevant for Hemplathane qualities.

1) Temperature above 30°C/86°F should be avoided

Damaged areas: Coating damaged during testing for continuity of paint film or damaged through handling may be ground down to bare steel and repaired with Hempadur Multi-Strength 35840/35842 or other repair product recommended by Hempel.

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. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

Issued by: HEMPEL A/S – 35840/35842

These Application Instructions supersede 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. 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.