



# Application Instructions

For product description refer to product data sheet  
HEMPATHANE PW 35660

## HEMPATHANE PW 35660

35660: BASE 35669: CURING AGENT 95580

- Scope:** These application instructions cover surface preparation, application equipment and application of HEMPATHANE PW 35660.
- Steel work:** Rough welds must be ground, weld spatters removed and any sharp edges rounded off.
- Surface preparation:** Remove oil and grease thoroughly with suitable detergent. Remove salts and other contaminants by pressure fresh water cleaning. Abrasive blasting to near white metal Sa 2½ (ISO 8501-1:2007). The recommended minimum surface profile is Ra 12.5 micron/0.5 mils (Rz 75 micron/3 mils), corresponding to Rugotest No. 3, BN 10a, Keane-Tator Comparator 3.0 G/S, or ISO Comparator *rough* Medium (G). After blasting, clean the surface carefully from abrasives and dust.
- Application equipment:** HEMPATHANE PW 35660, being a solvent-free, high viscosity material, requires special measures to be taken during application. Spray application can only be carried out with **dual feed hot airless spray equipment** with proportioning pump adjusted to mixing ration 3:1 (Base:Curing Agent).

- Pump ratio: Minimum ratio 45:1
- Heating: 3 2100-W in-line heaters:  
2 on BASE line and 1 on CURING AGENT line (normally not used)
- Static mixer: Preferably WIWA type: 0650990 10 (3-8 elements)
- Supply hoses: 3/8", preferably insulated or heated
- Spray hoses: 1/4", maximum 3 m/10 ft long
- Nozzle size: 0.031 – 0.035", reversible
- Equipment: GRACO (STREME model) or WIWA

**Note:** dual feed airless spray data are indicative and subject to adjustment.

- Procedure:** **Heating:** heating is required to reduce the viscosity of the paint. Normally, only heating of base 35669 will be necessary. It is recommended to store the base under heated conditions the day before the application, preferably at a temperature above 25 °C/77 °F – this will ease emptying the cans into the mixer tanks and avoid excessive heating at the moment of the application. Never heat curing agent 95580 excessively.

The recommended temperatures for the base and the curing agent are as follows:

- BASE 35669: 50 °C/122 °F  
CURING AGENT 95580: approx.. 23 °C/73 °F

Avoid very marked differences in temperature between the base and the curing agent.

**Flushing:** flush the system with HEMPEL'S THINNER 08460 or 08510. This is necessary to ensure complete cleanliness of the system as well as to check that the flush pump is in good working order. The output pressure of the flush pump should be around 120 bar/1740 psi.

**NEVER USE HEMPEL'S TOOL CLEANER 99610.** It will cause solidification of the curing agent.



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**Start-up:** transfer the two components, base 35669 and curing agent 95580, into two storage tanks.

Recirculate the materials until the output pressure of the two main dosing cylinders is identical. The recommended nozzle pressure is approximately 200 bar/2900 psi. When this has been achieved, the material is ready for spraying.

If the dosing cylinders show deviation in pressure and no leaks are evident, it may indicate that the viscosity of the base is still too high. In this case, further heating of the base will be necessary.

Note that the output pressure of the two supply pumps must always be lower than that of the main pump cylinders. The recommended output pressure of the supply pumps is 40 bar/580 psi.

Before application, the mixing ratio should be checked. Close the valve to the recirculation hoses. Measure the volumetric material flow of the two components separately at the outlets just after the dosing cylinders. The mixing ratio must be 3:1 (Base:Curing agent).

**Spraying:** during the first few seconds of spraying the paint will often “finger” due to the reaction of the material in the hose and gun.

If any breaks in the spraying process have occurred, start again by emptying the spray gun, hose and static mixer into an empty bucket or drum.

**Note:** due to the short pot life of this paint, the following precautions should be taken:

- a) In principle, spray continuously with as few stops as possible.
- b) Be sure that the flush pump is on stand-by under full pressure at all times.
- c) Have tools ready for immediate disconnection of spray hose from static mixer if spraying has been discontinued for more than one minute — this practice will normally save the static mixer.
- d) Whenever possible, avoid recirculating the curing agent — it should be protected from reacting with humidity.

The optimal distance between the gun and the steel surface is approximately 30 cm/1 ft. The distance may vary slightly depending on the environment and on the size and the shape of the object, but it should never be too long — maximum around 40 cm/1.6 ft.

Applied thickness can be inspected immediately after application with a wet film gauge (comb). It is recommended to coat flat steel panels (test panels) and check the wet film thickness on these, before starting coating the object itself.

**Control:**

As an additional check point for making sure that the mixing ratio is correct, evaluate the dry-to-touch time (see below) and the adhesion of the applied paints (test panels).

If the dry-to-touch time is longer than indicated below, this may indicate insufficient or incorrect mixing.

**Drying/Curing:**

Drying/Curing times can be adjusted according to specific needs. Short handling times can be obtained by applying HEMPATHANE PW 35660 to a heated pipe surface followed by water quenching, i.e., cooling the surface with fresh water to bring the surface temperature down to ambient temperature. **Water quenching must not take place before the coating is dry-to-touch.**

Steel temperature:	10 °C/50 °F	20 °C/68 °F	30 °C/86 °F	40 °C/105 °F
Dry to touch (approx.):	350 minutes	240 minutes	120 minutes	90 minutes



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- Pot life:** 8 minutes when mixing the base at 50°C/122°F with the curing agent at approximately 23°C/73°F.
- Pinhole testing:** HEMPATHANE PW 35660 may be pinhole-tested after 2 hours at 20°C/68°F with a high-voltage test equipment. The recommended voltage is 15kV per 1.5 mm/60 mils.
- Cleaning of equipment:** Because of the short pot life of the product, immediately after finishing the application, the pump, hose and gun must be flushed with plenty of HEMPEL'S THINNER 08460 or 08510, until the thinner itself is clear. **DO NOT USE HEMPEL'S TOOL CLEANER 99610. NEVER USE ALCOHOLS.**
- After all the material has been removed from the pump and hoses, the surge valve must be flushed and the suction pipes cleaned.
- Note:** as any remnants of curing agent 95580 will solidify by reacting with the humidity of the air, special care will be needed in the cleaning of the curing agent line. Furthermore, preventive cleaning in the form of disassembling all parts, especially cylinders, will be necessary.
- Stripe coating:** Edges, corners, welding seams and places difficult to spray properly, should be stripe coated either before or after the paint application.
- 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 national safety regulations.
- As a general rule, inhalation of possible solvent vapours or paint mist, and contact of liquid paint with skin and eyes, should be avoided. Forced ventilation should be provided when applying paint in confined spaces or stagnant air. Even when ventilation is provided, respiratory, skin and eye protection are always recommended when spraying paint. Necessary precautions against the risk of fire or explosions must be taken.

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.

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