

87831: BASE 87838 with CURING AGENT 95830

For product description refer to product data sheet 87831

Scope: These Application Instructions cover surface preparation, application equipment and application details for HEMPEL'S HS GAS PIPE COATING 87831.

Surface preparation: Remove oil and grease etc. thoroughly with suitable detergent. Remove salts and other contaminants by high pressure fresh water cleaning. Abrasive blasting to Sa 2½ (ISO 8501-1:2007) with a surface profile corresponding to Rugotest No. 3, BN9a, Keane-Tator Comparator, 2.0 G/S, 2S, or ISO Comparator, FINE (G).

Application equipment: **Recommended airless spray equipment:** Spray application must preferably be carried out using dual feed airless equipment with proportioning pump prepared for mixing ratio 4:1. With long and narrow hoses some pressure drop will occur in the hoses and a somewhat higher pumping pressure is recommended for optimum result. It is highly recommended to use a separate mixing station as close as possible to the spray nozzle.

Nozzle pressure:	min 150 bar/2175 psi preferably 200 bar/2900 psi or higher
Nozzle size:	0.017" – 0.027"
Fan angle:	50 - 110°

The spray equipment should have a solvent flushing pump. Feed tanks for the base should be equipped with agitator. The base should be thoroughly homogenised by agitation or similar action before transfer to the feed tank. Feed tanks for the curing agent should be closed to minimising contact between the curing agent and moisture & CO₂ from the air.

Spray application: The required film thickness is preferably achieved in a single pass application. With HEMPEL'S HS GAS PIPE COATING 87831 applied in one coat it is of special importance that a continuous, pinhole-free paint film is obtained. It is very important to use nozzles of the correct size, not too big, and to maintain a proper, uniform distance of the spray gun to the surface of 30-50 cm. To obtain good and steady atomizing, the viscosity of the paint must be suitable and the spray equipment must provide sufficient output pressure and capacity. Atomization and film formation may be improved by preheating the curing agent and the base in heating caps up to maximum 60°C/140°F. The optimum temperature will depend on the intended DFT, the nozzle size and the spraying pressure. E.g. at 23°C/73°F good film formation may be achieved with nozzle size 21 and 200 bar pressure without heating. If larger nozzle is required to increase spray rate it may be necessary to heat the paint. Note the short pot life at 60°C/140°F: approximately 9 minutes.

The paint layer must be applied homogeneously and as close to the specification as possible. The consumption of paint must be controlled to avoid exaggerated film thickness, e.g. by controlling paint consumption and/or measuring wet film thickness. Controlling of base and curing agent consumption is also recommended to keep track of the mixing ratio.

The finished coating must appear as a homogeneous film with a smooth, glossy surface.

After finishing the application, flush the mixing system immediately with HEMPEL'S THINNER 08450. During breaks in the application, it is recommended to flush, if the stop is longer than half the pot-life.

Application conditions: Use only where application and curing can proceed at temperatures above: 10°C/50°F. In order to prevent gloss reduction, initial curing must take place at temperatures above: 20°C/68°F. Apply only on a dry and clean surface with a temperature above the dew point to avoid condensation. Maximum relative humidity: 85%. In confined spaces provide adequate ventilation during application and drying. Avoid sudden drops in (substrate) temperatures during drying/initial curing.

Brush and roller application: Application with hand tools (brush or roller) may be used for small areas such as touch up where test panels were attached. The natural tendency to a more uneven paint film should be counteracted by applying more coats. If at all possible each coat is to be applied across the preceding one - in general follow good painting practise.

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Thinning: The product should not be thinned for normal spray application. For hand application up to 2% HEMPEL'S THINNER 08450 can be added. Thinning must be done with care as the anti-sagging properties are reduced.

Film thickness: HEMPEL'S HS GAS PIPE COATING 87831 is typically specified in 70-120 micron/2.8-4.8 mils dry film thickness. For special applications additional thickness can be specified upon consultations with Hempel.

Physical data versus temperature: Drying time and recoating interval vary with film thickness, temperature and later exposure conditions:

HEMPEL'S HS GAS PIPE COATING 87831 in a dry film thickness of 80 micron/3.2 mils:

Surface temperature:	10°C/50° F	20°C/68° F	30°C/86°F	40°C/104°F	50°C/122°F	60°C/140°F
Pot life (ISO 14)	90 min	60 min	30 min	20 min	15 min	9 min
Drying to touch (ASTM D 5895-3, BK III)	10 hours	4.5 hours	2 hours	1 hour	35 min	20 min
Dry to handle (ASTM D 5895-3, BK IV)	15 hours	7 hours	3 hours	1¼ hours	45 min	30 min
Fully cured	14 days	7 days	4 days	2 days	1 day	12 hours

Long spray hoses and the pressure induced heat can make the practical pot-life shorter.

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 - 87831

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.