

PRODUCT DESCRIPTION

Hi-Pon 600HT Top Coat is a one-pack, silicone coating which can withstand dry heat temperature up to 540 °C.

INTENDED USE

It is designed for use as a top coat for long-term corrosion protection of steel exposed to high temperature (below 540 °C). Suitable for use in exhaust manifolds, furnaces, boiler, chimneys and other installations exposed to high temperatures.

GENERAL PROPERTIES

Colour	: Aluminium (up to 540°C) Black (up to 400°C)
Gloss Level	: Semi-Gloss
Volume Solid	: 40 ± 2 %
Specific Gravity	: 1.15 ± 0.10 kg/l – depending on colours
Flash Point	: 7 °C
VOC	: 506 g/L (EPA Method 24)
Typical Thickness	: 20 – 30 µm dry film 50 – 75 µm wet film

SURFACE PREPARATION

All surfaces should be clean dry, and free from contamination. The surface should be assessed and treated in accordance with ISO 8504. Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning.

Damaged Area

Damage area should be prepared with abrasive blast cleaning to Sa 2½ (ISO 8501-1) or SSPC-SP10. When abrasive blasting is not possible, mechanical cleaning to St3 (ISO 8501-1) or SSPC-SP3 is acceptable. After the surface preparation, patch suitable primer prior to the application of Hi-Pon 600HT Top Coat.

Hi-Pon 600HT Top Coat would not normally be applied directly to steel surface and would only be considered where corrosion problems were insignificant but decoration important. For optimum anti corrosive performance, priming with Zinky-13 Inorganic Zinc Rich Primer 85 is recommended. It should be applied over a surface that is dry and free from dirt, grease, oil and other contaminants and must be applied within the overcoating intervals specified.

Other Surfaces

The coating may be used on other substrates. Please contact your local Nippon Paint office for more information.

**CONDITION DURING
APPLICATION**

Avoid paint application when the temperature is below 10 °C and relative humidity is above 85 %. The temperature of steel surface must be minimum 3 °C above dew point of surrounding air.

APPLICATION GUIDE

Mixing Ratio	: Product should be mixed thoroughly before use with a mechanical agitator
Theoretical Coverage	: 20.0 m ² /litre at 20 µm DFT 13.3 m ² /litre at 30 µm DFT
Thinner	: Hi-Pon HT Thinner
Cleaner	: Hi-Pon HT Thinner
Remarks	: For mist coat application, use 10 – 15 % thinner for dilution

APPLICATION METHOD

Conventional air and airless spray are recommended for application. Brush and roller are recommended for stripe coating and small areas. Care must be taken to achieve the specified dry film thickness.

APPLICATION DETAILS

Airless Spray	: Tip Size	: 0.013" – 0.017"	
	: Pressure at nozzle	: 120 – 170 bar	
Drying Time	: Substrate Temperature	<u>25 °C</u>	<u>40 °C</u>
	: Surface Dry	30 mins	15 mins
	: Through Dry	2 hrs	1 hr
	: Dry to Overcoat (min)	2 hrs	1 hr
	: Dry to Overcoat (max)	30 days	14 days

Remarks: Freshly applied Hi-Pon 600HT Top Coat may have slightly reduced mechanical properties. This effect can however be overcome by heating the paint system to 200 °C for 1 hour.

Due to differences in the thermal stability of pigments, slight colour changes can occur when the coating is heated but it will not affect the performance of the coating.

Maximum thickness per single coat without subsequent blistering on heating is 40 µm (1.6 mil). Up to 3 coats at a maximum of 25 µm (1 mil) per coat can be applied without the requirement of heating between coats. This provides maximum corrosion protection when it is not possible to use a zinc silicate priming system.

The given data must be considered as guidelines only. The actual drying

time/times before recoating may be shorter or longer, depending on film thickness, ventilation, humidity, underlying paint system, requirement for early handling and mechanical strength etc. A complete system can be described on a system sheet, where all parameters and special conditions could be included.

HEAT RESISTANCE**Dry, Atmospheric**

- Continuous : 540 °C - Depending on colours
- Minimum : - 20 °C
- Intermittent : N/A

Intermittent temperature duration – 1 hour maximum

The temperatures listed relate to retention of protective properties. Aesthetic properties may suffer at these temperatures. Heat resistance is influenced by the total coating system. If used as part of a system, ensure all coatings in the system have similar heat resistance.

**RECOMMENDED
COATING SYSTEM**

The following coating system is recommended for Hi-Pon 600HT Top Coat:

Primer:

- Zinky-12 Inorganic Zinc Rich Primer 77
- Zinky-13 Inorganic Zinc Rich Primer 85

Coating System 1

- Hi-Pon 600HT Top Coat - 3 coats x 25 µm DFT

Coating System 2

- Zinky-13 Inorganic Zinc Rich Primer 85 - 1 coat x 50 µm DFT
- Hi-Pon 600HT Top Coat - mist coat x 15 µm DFT
- Hi-Pon 600HT Top Coat - 1 coat x 30 µm DFT

Remarks: For maximum corrosion resistance, use a zinc silicate primer.

For the choice of coating system for different application, refer to the product brochure or contact Nippon Paint for professional recommendation.

PACKAGING

<u>Unit</u>	<u>Volume</u>	<u>Container Size</u>
4.8 L	4.8 L	5 L

STORAGE

Shelf Life : 12 months (25 °C)

Subject to re-inspection thereafter. Higher temperature during storage may reduce the shelf life and may lead to gelling in the tin. Frequent temperature

cycles may also shorten the shelf life.

Store in tightly closed container in a dry, cool and well-ventilated space, keep away from sources of heat and ignition.

SAFETY PRECAUTION

- This product is intended for use of professional applicators. Refer to the safety information display on the container and in the safety data sheet (SDS) before using the product.
 - Use this product in well-ventilated area, avoid skin contact, spillage on the skin should immediately be removed with suitable cleanser, soap and water.
 - Eye should be well flush with water and seek for medical attention immediately upon contact with this product.
 - During the application, naked flame, welding operation and smoking is not allowed. Adequate ventilation should be provided.
 - If you have any doubt regarding the suitability of use, refer to Nippon Paint for further advice.
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DISCLAIMER

The information in this data sheet is given to the best of Nippon Paint's knowledge and practical experience. Users may consult with Nippon Paint on the general suitability of the product for their needs and specific application practices though it remains each user's responsibility to determine the suitability of the product for the user's particular use. The condition of the substrate and application are not within Nippon Paint's control. Therefore, no implied conditions, warranties or other terms will apply to the Product. Nippon Paint does not and cannot warrant the results which the user may obtain by using the product. In no event will Nippon Paint be liable to the user for any kind of loss (whether direct or indirect) even if Nippon Paint was previously advised of it. In line with Nippon Paint's policy for continuous development, Nippon Paint reserves the right to modify the product and the information in this data sheet without prior notice. It is the user's responsibility to check with Nippon Paint for the latest version of this data sheet. This data sheet has been translated into various languages. In the event of any inconsistency, the English version shall prevail.