

# Marine Paint Manual

Issue Date : August 2012  
TDS Identification No. : 14-10SQ

## NOA 60 HS-LT

A superior grade pure epoxy with excellent abrasion resistant properties designed in full consideration of health & safety, and environmental issues. The coating is formulated with special phenol based resins to reinforce resistance to cracking especially on welds, improve its anticorrosive and adhesion properties, and provide excellent resistance to saltwater and cathodic disbonding. Suitable for multipurpose use, its enhanced resistance to freshwater and seawater make it ideal for marine ballast tanks, crude oil tanks, void spaces, etc., land based storage tanks, and industrial storage facilities. The coating is fully compliant with IMO Performance Standard for Protective Coatings. It is designed to provide excellent drying properties and workability under low temperature.

(1) Buff in color --- SI paint

The coating is distinguished by its unique and patented Self-indicating (SI) technology that enables the applicator to visually confirm that the correct film thickness has been applied by checking the color development from Lucent to Buff during the application process.

The full color is realized only when the correct dry film thickness has been applied, therefore any areas of low film thickness can easily be detected by visual inspection.

(2) Gray, Dark Gray, Red Oxide in color --- Non-SI paint

### 【 Product Data 】

Suitable Use	Anti-corrosive coating for water ballast tanks, crude oil tanks, void spaces etc.
Type	Pure Epoxy
Ref. No.	SQ
Color	[ SI ] Buff, Lucent (Lucent is a contrasting color.) [ Non-SI ] Gray, Dark Gray, Red oxide
Gloss	Flat
Volume Solids	77 ± 2% ( ISO3233:1998 )
Dry Film Thickness	320 μm by two (2) coats
Approx. Wet Film Thickness	416 μm
Theoretical Coverage	0.301 Kg / m <sup>2</sup> 0.208 L / m <sup>2</sup> ( 160 μm )
Specific Gravity	BASE : 1.53 ~ 1.63 HARDENER : 0.93 ~ 1.03 Mixed paint : 1.40 ~ 1.50
Drying Time	Surface Dry 4 hours (-5°C) 2 hours (5°C) 1 1/2 hours (10°C) 1/2 hour (25°C) Dry Hard 21 hours (-5°C) 13 hours (5°C) 9 hours (10°C) 3 1/2 hours (25°C)
Interval before Overcoating ( by self )	Min. 30 hours (-5°C) 13 hours (5°C) 9 hours (10°C) 3 1/2 hours (25°C) Max. 12 days (-5°C) 10 days (5°C) 7 days (10°C) 4 days (25°C)
Minimum Time before ballasting	14 days (-5°C) 10 days (5°C) 7 days (10°C) 4 days (25°C)
Min. DFT	80 μm Film thickness shall be controlled as close as NDFT which should be evaluated by the 90 / 10 rule in accordance with PSPC 2.8.
Max. DFT	1,800 μm Maximum dry film thickness is total thickness of coating systems.

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## IMO Resolution MSC.215(82) compliant ballast tank coating

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### 【 Surface Preparation 】

- Steel Preparation** Use in accordance with our standard painting manual. Where necessary, remove weld spatter, smooth weld seams and remove sharp edges by rounding to a minimum radius of 2mm or subjecting to three pass grinding technique or at least equivalent process.
- Surface Cleaning** All surfaces to be coated should be clean, dry and free from contamination. High pressure fresh water wash or fresh water wash, as appropriate, and remove all oil / grease, soluble contaminants and other foreign matters.
- Water soluble salts limit equivalent to NaCl :  $\leq 50$  mg / m<sup>2</sup> of sodium chloride.
- Dust quantity rating "1" for dust size class "3","4" or "5". Lower dust size classes to be removed if visible on the surface to be coated without magnification. (ISO8502-3:1993)
- Shop Primers** Approved shop primers, compatible with NOA60HS-LT, must be applied in accordance with PSPC MSC 215 (82) to a minimum standard of Sa 2 1/2 (ISO8501-1 :2007) and over blasting profile of 30 - 75  $\mu$ m (ISO8503-1/2:1988)
- The shop primer which has passed a prequalification test shall be cleaned by sweep blasting, high-pressure water washing or equivalent method.
- Welding part, corroded and damaged area to the shop primer must be cleaned by abrasive blasting to Sa 2 1/2 (ISO8501-1:2007)
- Non approved shop primers must be cleaned by abrasive blasting to Sa 2 (ISO8501-1 :2007) and at least 70% of the intact shop primer should be removed.
- Welding part, corroded and damaged area to the shop primer must be cleaned by abrasive blasting to Sa 2 1/2 (ISO8501-1:2007)
- The surface profile on any areas where abrasive blasting has been carried out must be in the range of 30 - 75  $\mu$ m (ISO8503-1/2:1988)
- Repair coating & touching-up** When exceeding the specified overcoating intervals, surface to be overcoated, should be roughened with power-tool before application.
- After Erection** Erection joint welds and adjacent areas must be abrasive blasted to Sa 2 1/2 (ISO8501-1 :2007) or power tool cleaned to St 3 (ISO8501-1 :2007).
- Small damages, up to 2% of total area, may be prepared with power tool to St 3 (ISO8501-1 : 2007).
- Damages over 25sqm or over 2% of the total tank surface area must be abrasive blasted to Sa 2 1/2 (ISO8501-1:2007).



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compliant ballast tank coating**

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## 【 Ambient Condition for Application 】

Ambient condition            Max relative humidity : 85%  
                                     Min. steel temperature above Dew point : 3 °C  
                                     Applicable ambient temperature : -5 ~ 25°C  
                                     Applicable surface temperature : 0 ~ 50°C

## 【 Unit Size 】

Japan            : 20kg ( BASE 17kg, HARDENER 3kg )  
Worldwide : 16L ( BASE 12.5L, HARDENER 3.5L )  
Package may vary from country to country.

## 【 Flash Point 】

24°C

## 【 Shelf Life 】

BASE            : 12 months under 25°C  
HARDENER    : 12 months under 25°C

## 【 ID Code 】

Buff BASE            : HFM358SQ  
Gray BASE            : HFV637  
Dark Gray BASE      : HFV641  
Red Oxide BASE      : HFV143  
HARDENER            : HFL404SQ

Buff BASE            : HGM358  
HARDENER            : HGM412

## 【 Safety 】

Take precautions to avoid skin and eye contact (i.e. gloves, goggles, face masks, barrier creams etc.)  
Proper ventilation and protective measures must be provided during applications and drying to keep solvent vapor concentrations within safe limits.  
Prior to use, obtain, consult and follow the MSDS for this product concerning health and safety information.

### <Note>

- 1) The information contained in this sheet is liable to modification from time to time in light of experience and our policy of continuous product development.
- 2) Store the paints in paint store.
- 3) Discoloration (blackening ) may occur on the surface due to sulphide in ballast water / sludge. Its anti-corrosive performance is not adversely affected by the discoloration.
- 4) Prior to use, obtain, consult and follow the MSDS of this product.