

Technical Data

Jotamastic 87 Aluminium



Product description

Jotamastic 87 Aluminium is a two-pack surface tolerant, abrasion resistant, high solids polyamine cured epoxy mastic coating which may be applied in high film thickness. Available with different hardeners for varying substrate temperatures, Standard (Std) and Wintergrade (WG). This product is a part of a complete system which is certified not to spread flames.

Recommended use

Steel where blast cleaning may not be possible, and on hydrojetted surfaces still being moist where gloss retention is of minor importance. Can be used alone or in combination with various systems of primers and topcoats. Gives excellent corrosion protection both in salt and fresh water. If exposed to sunlight chalking may occur.

For application in water ballast tanks at newbuilding stage in accordance with PSPC (IMO Res. MSC 82/W), see the "Application procedure for water ballast tanks - Jotamastic 87".

Film thickness and spreading rate

| Std Comp. B | Minimum | Maximum | Typical |
|--|----------------|----------------|----------------|
| Film thickness, dry (µm) | 150 | 300 | 200 |
| Film thickness, wet (µm) | 170 | 345 | 230 |
| Theoretical spreading rate (m ² /l) | 5,8 | 2,9 | 4,4 |

| WG Comp. B | Minimum | Maximum | Typical |
|--|----------------|----------------|----------------|
| Film thickness, dry (µm) | 150 | 250 | 200 |
| Film thickness, wet (µm) | 195 | 325 | 260 |
| Theoretical spreading rate (m ² /l) | 5,1 | 3,1 | 3,9 |

Approvals

APAS approved to specification 2973, 2973F and 2977.
B1 classification by Det Norske Veritas (DNV) for water ballast tanks.

Physical properties

| | |
|----------------------------|---|
| Colour | Aluminium, Aluminium Red toned |
| Solids (vol %)* | 87 ± 2 Std Comp. B 77 ± 2 WG Comp. B |
| Flash point | Std Comp. B: 40°C ± 2 (Setaflash) WG Comp. B: 31°C ± 2 (Setaflash) |
| VOC | Std Comp. B 2,09 lbs/gal (250 gms/ltr) USA-EPA Method 24 110 gms/ltr UK-PG6/23(97). Appendix 3 WG Comp. B 180 gms/ltr UK-PG6/23(97). Appendix 3 |
| Gloss | Semigloss |
| Gloss retention | Fair |
| Water resistance | Excellent |
| Abrasion resistance | Very good |
| Solvent resistance | Good |
| Chemical resistance | Good |
| Flexibility | Good |

*Measured according to ISO 3233:1998 (E)

Surface preparation

All surfaces should be clean and free from contamination. The surface should be assessed and treated in accordance with ISO 8504.

Bare steel

Cleanliness: Power tool cleaning to min. St 2, mill scale free (ISO 8501-1:2007). Improved surface treatment (blast cleaning to Sa 2½) will improve the performance. In case of hydrojetting the flash rust degree shall not exceed moderate in SSPC and NACE standards for water prepared surfaces.

Shopprimed steel

Clean, dry and undamaged approved shopprimer.

Coated surfaces

Clean, dry and undamaged compatible primer. Contact your local Jotun office for more information. For maintenance UHPWJ to WJ2 (NACE No.5/SSPC-SP 12) or Power tool cleaning to min. St 2 for rusted areas

Other surfaces

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

Condition during application

The temperature of the substrate should be minimum +10°C (Std) (-5°C in WG) and at least 3°C above the dew point of the air, temperature and relative humidity measured in the vicinity of the substrate. Good ventilation is required in confined areas to ensure proper drying.

Hydrojetting of steel surface makes a wet surface. The surrounding air must have a relative humidity not exceeding 85 %. Before painting the surface shall not be glossy with moisture, but can have a patchy appearance.

Application methods

| | |
|---------------|--|
| Spray | Use airless spray (thin 10%) |
| Brush | Recommended for stripe coating and small areas, care must be taken to achieve the specified dry film thickness. |
| Roller | May be used for small areas but not recommended for first primer coat, however when using roller application care must be taken to apply sufficient material in order to achieve the specified dry film thickness. |

Application data

| | |
|-----------------------------------|--|
| Mixing ratio (volume) | Std Comp. B: 5,5:1 WG Comp. B: 3,7:1 |
| Mixing | 5.5 parts Comp. A (base) to be mixed thoroughly with 1 part Jotamastic 87, Std Comp. B (curing agent) 3.7 parts Comp. A (base) to be mixed thoroughly with 1 part Jotamastic 87, WG comp. B (curing agent) |
| Induction time | 10 minutes. |
| Pot life (23°C) | Std Comp. B: 1½ hours WG Comp. B: 1 hour |
| Thinner/Cleaner | Jotun Thinner No. 17 |
| Guiding data airless spray | |
| Pressure at nozzle | 15 MPa (150 kp/cm ² , 2100 psi). |
| Nozzle tip | 0.53 - 0.79 mm (0.021-0.031") |
| Spray angle | 65-80° |
| Filter | Check to ensure that filters are clean. |
| Note | * The temperature of the mixture of base and curing agent is recommended to be at least 15°C, otherwise extra solvent may be required to obtain correct viscosity. * Too much solvent results in lower sag resistance and slower cure. * If extra solvent is necessary, this should be added after mixing of the two components. |

Drying time

Drying times are generally related to air circulation, temperature, film thickness and number of coats, and will be affected correspondingly. The figures given in the table are typical with:

- * Good ventilation (Outdoor exposure or free circulation of air)
- * Typical film thickness
- * One coat on top of inert substrate

| Std Comp. B | | | | | | |
|--|-------------|------------|------------|-------------|-------------|-------------|
| Substrate temperature | | | | 10°C | 23°C | 40°C |
| Surface dry | | | | 8 h | 4 h | 2 h |
| Through dry | | | | 24 h | 10 h | 4 h |
| Cured | | | | 14 d | 7 d | 2 d |
| Dry to recoat, minimum | | | | 24 h | 10 h | 4 h |
| Dry to recoat, maximum ¹ | | | | | | |
| WG Comp. B | -5°C | 0°C | 5°C | 10°C | 23°C | |
| Substrate temperature | | | | | | |
| Surface dry | 24 h | 18 h | 12 h | 6 h | 2,5 h | |
| Through dry | 48 h | 26 h | 18 h | 12 h | 5 h | |
| Cured | 21 d | 14 d | 7 d | 3 d | 2 d | |
| Dry to recoat, minimum | 48 h | 26 h | 18 h | 12 h | 5 h | |
| Dry to recoat, maximum ¹ | | | | | | |

2. Provided the surface is free from chalking and other contamination prior to application, there is normally no overcoating time limit. Best intercoat adhesion occurs, however, when the subsequent coat is applied before preceding coat has cured. If the coating has been exposed to direct sunlight for some time, special attention must be paid to surface cleaning and mattening/removal of the surface layer in order to obtain good adhesion.

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.

Typical paint system

| Jotamastic 87 Aluminium | 1 x 200 µm | (Dry Film Thickness) |
|-------------------------|------------|----------------------|
| Jotamastic 87 | 1 x 200 µm | (Dry Film Thickness) |
| Hardtop AS/XP | 1 x 50 µm | (Dry Film Thickness) |

Other systems may be specified, depending on area of use

Storage

The product must be stored in accordance with national regulations. Storage conditions are to keep the containers in a dry, cool, well ventilated space and away from source of heat and ignition. Containers must be kept tightly closed.

Handling

Handle with care. Stir well before use.

Packing size

17,4 litre unit: 14,7 litres Comp. A in a 20 litre container and 2.7 litres Jotamastic 87, Std Comp. B in a 3 litre container.
18,7 litre unit: 14,7 litres Comp. A in a 20 litre container and 4 litres Jotamastic 87, WG Comp. B in a 5 litre container.

Health and safety

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not breathe or inhale mist. Avoid skin contact. Spillage on the skin should immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and medical attention sought immediately.

For detailed information on the health and safety hazards and precautions for use of this product, we refer to the Material Safety Data Sheet.

DISCLAIMER

The information in this data sheet is given to the best of our knowledge based on laboratory testing and practical experience. However, as the product is often used under conditions beyond our control, we cannot guarantee anything but the quality of the product itself. We reserve the right to change the given data without notice.

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