Catalogue NO. NPMC-048-E

World's First Super Heat Resistant Long Exposure Shopprimer

NIPPON CERAMO

NIPPON PAINT MARINE

NIPPE CERAMO is a prefabrication primer with super heat resistance and excellent anticorrosion properties.
This product was developed through five-year joint research of NIPPON PAINT Co.,Ltd. and member companies of the Shipbuilders' Association of Japan.
Since its launch in 1987, NIPPE CERAMO has gained favour and been selected among the other paints in many yards.
As of 1 November 2004, with NIPPON PAINT MARINE COATINGS Co., Ltd. (NPMC) starting its business overseas, the worldwide brand NIPPON CERAMO is to be used for this product, but the current brand NIPPE CERAMO will be written on the container, too, as a Japan local brand.
NPMC hopes to keep you as a satisfied customer for years to come.

INTRODUCTION OF NIPPON CERAMO

It provides strong coating film with excellent anticorrosive and heat-resistant, which prevents rust spot generation/rust caused by damages and reduces burned area. Generation of white rust is reduced due to its low zinc concentration.
Special pollution-free anticorrosive pigment realizes anticorrosive protection against long-exposure.
The secondary surface preparation work volume depends on the performance of shopprimer.
We believe that the super heat-resistance of NIPPON CERAMO can prevent burning damage due to welding and fairing reducing the secondary surface preparation process. In other words, this product can improve operating efficiency and reduce the cost.

CHARACTERISTICS

◆ Super resistance to high temperatures
With this property, the surface is protected against damages due to welding, gas cutting, fairing, etc. It brings benefits such as less rust, sharp reduction in the secondary preparation work, improved working environment, etc.

◆ Excellent anticorrosive property
Specially formulated binder and pigment with super resistance to high temperatures provides long term protection against corrosion even after heated up to 800℃.

◆ Reduced production of white rust
Compared with existing organic and inorganic zinc rich primers, NIPPON CERAMO produces less white rust during long storage periods of prefabricated hull blocks. It leads to the reduction in secondary surface preparation work.

◆ Wider overcoatability
NIPPON CERAMO can be overcoated with various rust-preventive paints such as inorganic zinc rich, pure epoxy, tar epoxy, chlorinated rubber, vinyl and other synthetic resins. No bubbling occurs and good adhesion is obtained.

◆ Excellent weldability
NIPPON CERAMO has excellent welding properties. Generation of pits and blowholes is minimized, leading to higher welding rates and efficiency.

◆ Low production of zinc fume
Due to its low zinc content, NIPPON CERAMO generates less zinc fume during welding and cutting.

◆ Reduced pollution in the environment
The major solvent of NIPPON CERAMO is alcohol. This is an effective measure against air pollution, because alcohol has low photochemical activity and no noxious heavy metals such as chrome, lead, etc are contained.

◆ Quick drying
NIPPON CERAMO releases solvents quickly, reducing damage to paint film caused by rollers. It also provides excellent EPM (electro photo marking) properties.

◆ Good workability
NIPPON CERAMO has good atomization and there is no clogging in spray tips and jamming in spray pump cylinders. Low pressure application reduces maintenance costs of painting equipment.

◆ Good oil resistance
NIPPON CERAMO is not dissolved by lubricating oil and causes no contamination in fuel or lubricating oil tanks.

Features and Merits

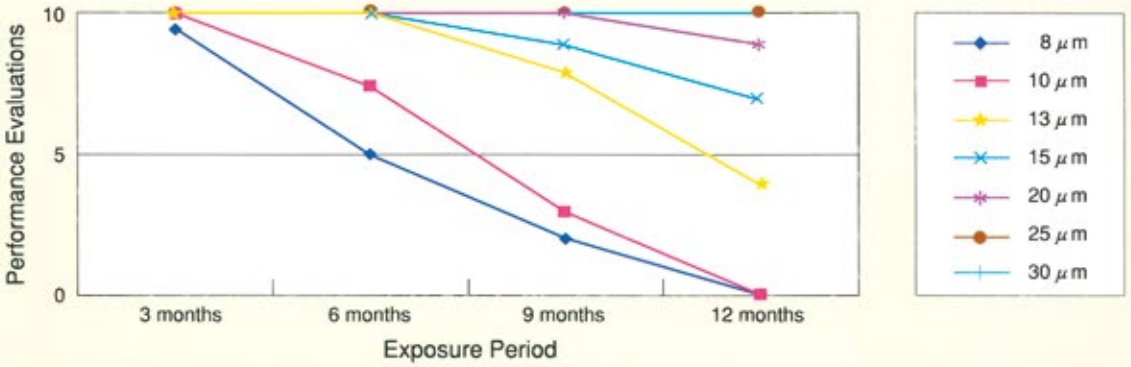
Super Heat Resistance
High-speed Welding
Good Cuttability
Excellent Anticorrosive Property
Wide-range Overcoatability

Yard
- Increased Productivity
- Low Cost in Secondary surface Preparation
- Improved Working Environment
- Preserved Ship Appearance

Owner
- Longer Paint Film Life
- Long-term Anticorrosion
- Prolonged Aesthetic Appearance

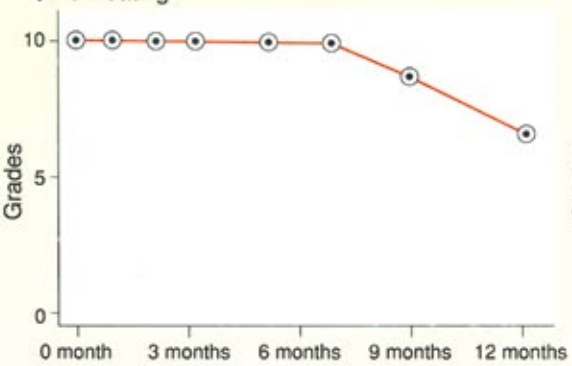
Anticorrosive Performance

Relationship between Film Thickness and Anticorrosive Performance

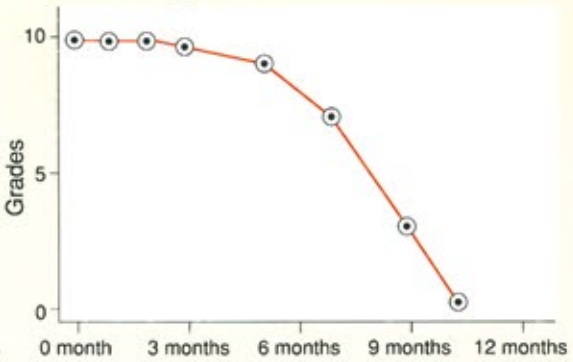


Anticorrosive Property (Exposed on the seaside)

◆No Heating



◆After Heating at 800℃



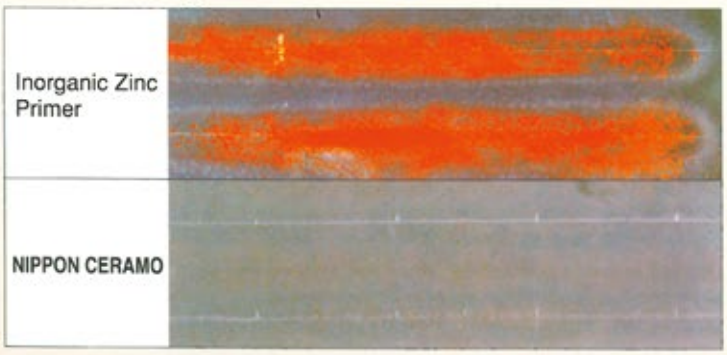
⊙ : NIPPON CERAMO
▶ Film thickness: 15μm

▶ Grades:

10pt.	0%	4pt.	10%
9pt.	0.03%	3pt.	16%
8pt.	0.1%	2pt.	33%
7pt.	0.3%	1pt.	50%
6pt.	1%	0pt.	50%or more
5pt.	3%		

ASTM-D610-68
Visual Check(except White Rust)
Over 8 pt. show the practical performance

◆After Heating at 800℃



Evolution of Shopprimer, Shipbuilding Process and Topcoat

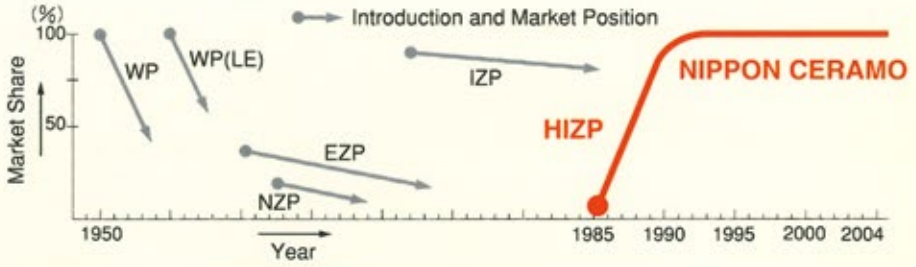
◆Shipbuilding Process

- Block Construction
- CO_2 Welding
- Robotic Welding
- Hand-driven Gas Cutting
- Spread of Automatic Gas Cutting
- Spread of Plasma Cutting
- Spread of Laser Cutting

◆Topcoat

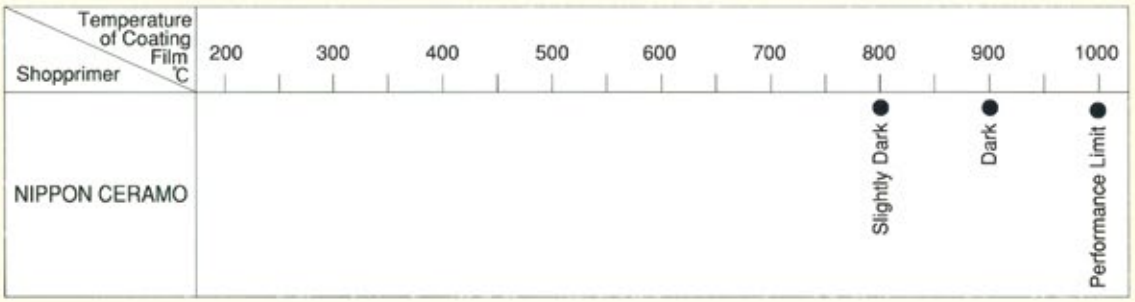
- Oleoresin
- Chlorinated Rubber
- Vinyl
- Coal Tar Epoxy
- ODEMARINE PF
- NOA Series
- Epoxy Primer
- HS・SF

◆S/P



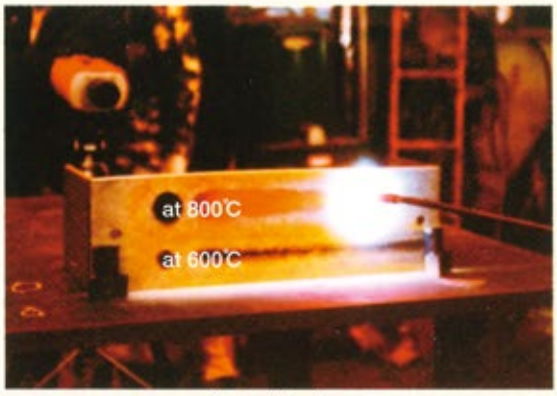
HS: High-solid
SF: Solvent-free
WP: Wash Primer
WP(LE): Long Exposure Wash Primer
EZP: Epoxy Zinc Primer
NZP: Nonzinc Primer
IZP: Inorganic Zinc Primer
HIZP: Heat Resistant Inorganic Zinc Primer

Heat-resistance



During Heating

Reverse Side of Heated Surface



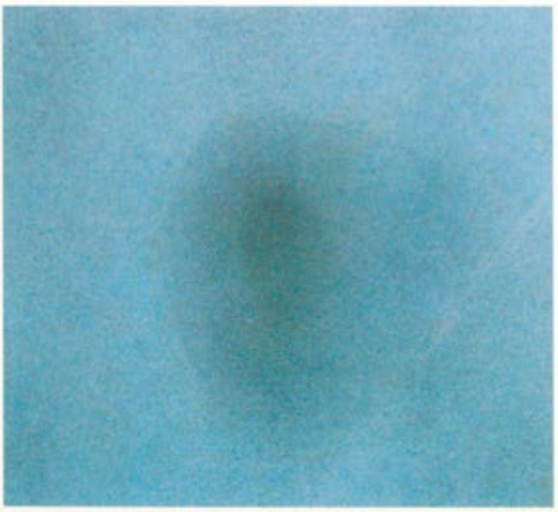
Heated Surface

Physical Properties

Suitable Use	Super heat-resistant long-exposure shop primer for steel plate
Type	Zinc dust / Heat-resistant anticorrosive pigment / Heat resistant silicate (Two-pack)
Colour	Gray IT, Light gray IT, Brown IT, Green IT
Gloss	Flat
Volume Solids	32.5±2%(ISO3233:1998)
Coverage	25.00 m^2/ L (13μm)
Drying Time	Surface Dry: 5 minutes(5℃) 2 minutes(20℃) 1minute(30℃) Dry Hard :10 minutes(5℃) 5 minutes(20℃) 3minutes(30℃) Full Cure : 14 days (5℃) 10 days(20℃) 7 days(30℃)
Interval before Overcoating (Topcoat indicated below)	Min. : 10 days (5℃) 7 days (20℃) 5 days(30℃) Max. : —— (5℃) —— (20℃) —— (30℃)
Thinner	NIPPON MARINE THINNER 900 (0～15%, by weight)
Application Method:Airless Spray	Yes, Tip No. Graco 719, 821, 923 Asahi Sunac 20C15, 20C17 Output pressure : 80～100kg／cm^2
Brush	Yes
Mixing Ratio by Weight	BINDER 43 / PASTE 57
Pot Life after Mixing	32 hours(5℃) 24 hours(20℃) 16 hours(30℃)
Suitable Topcoat	Various kinds of paints
Japan Local Brand	NIPPE CERAMO
Flash Point	BINDER 11℃, PASTE 7℃

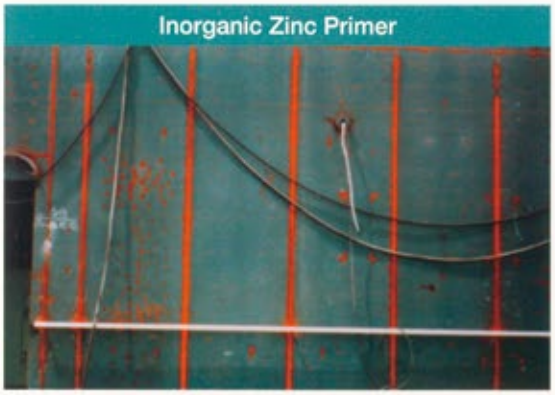
Inorganic Zinc Primer

NIPPON CERAMO



Reverse side of Heated Surface at Site

3 months After Exposure



Classification Society Approvals

Approval	Classification Society
SHOP PRIMER	LLOYD'S REGISTER OF SHIPPING (Certificate No. MATS/478/2) DET NORSKE VERITAS (Certificate No. K-2714)

Intended Uses

For the shotblasted steel plate of ships, marine structures, and other steel structures.

Colors

Gray | Light Gray | Brown | Green

● Colour samples are matched as accurately as possible and the manufacturer cannot be responsible for slight variations.

SAFETY PRECAUTIONS

This product is slightly more toxic than the other paints of ordinary use. Inhaling of the vapours and skin contact with the paint might cause poisoning and a rash. Therefore, before handling, please read the instruction manual well and refer to the following precautions.

HANDLING AND STORAGE OF OUR PRODUCTS

1. Application must be conducted in an area equipped with local air exhausters and free from flame Use non-sparking handtools.
2. While painting and drying, ventilate thoroughly and avoid inhaling the powder dust, fumes, gases or spray.
3. When handling, protect your skin wearing, for example, organic gas protection mask, air-supplied respirator, hood, safety glasses, long-sleeved work clothing, towels, gloves, aprons, and so on.
4. After the application, rinse your mouth and wash hands thoroughly so that the paint and so on are removed.
5. Keep the container closed from daylight and store in good ventilation at temperatures below 40℃
6. Store the paint dust in the nonflammable container until they are disposed.
7. Lock up and store any product in the place out of children's reach.
8. The container is sometimes pressurized by gas. When opening, wear safety glasses and slowly lift the lid holding it with a cotton waste. Be careful about spout of gas and paint.
9. Remove paint dust and powder dust at all times. They contain high level of zinc dust and are very flammable. Moreover, hydrogen gas might be generated in contact with water.
10. Take the preventive measures to electrostatic discharge. Use explosion-proof apparatus, ventilation equipment and illumination apparatus.
11. Do not use the products for improper purposes.

EMERGENCY PROCEDURE

1. If a fire involving paint does occur, use CO_2, foam or dry chemical extinguisher. Do not use water for extinguishing fire.
2. If the paint and so on get in your eyes, wash off with water and take medical advice from a doctor immediately. Take out the contact lens if possible.
3. If the paint splashed on your skin, wash off with soap and water. When you feel pain or find any change in the appearance of the skin, consult a doctor immediately.
4. If you feel sick after inhalation of fumes, gases etc., lie quietly and, when necessary, consult a doctor immediately.
5. If you swallow the paints by mistake, wash out your mouth and consult a doctor immediately.
6. If the contents spilled out of the container, wipe it with a piece of cloth and store in the nonflammable container.

WHEN DISPOSING THE CONTENTS/CONTAINER, TREAT THEM WASTE MATERIALS AS INDUSTRIAL WASTES IN ACCORDANCE WITH REGULATIONS OF GOVERNMENT ETC.

For detailed information, please refer to the Material Safety Data Sheet (MSDS).
Please consult us beforehand when you are going to export them.

NIPPON PAINT MARINE

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