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NIPPON EA9 FINISH HB

Product Description:

NIPPON EA9 FINISH HB is a two-pack amine-adduct cured epoxy specially developed to achieve long term corrosion protection for many types of surfaces i.e. aluminium, galvanising, steel and concrete. This feature combined with its wide range of resistance properties make **NIPPON EA9 FINISH HB** a durable, high performance and economical coating for immersion as well as non-immersion services. **NIPPON EA9 FINISH HB** system has been extensively used for long term corrosion protection lining of storage tank for palm oil derivatives, vegetable oil, potable water etc.

Physical Characteristics of Paint:

Colour	:	As per colour card
Texture	:	Low Gloss
Specific Gravity	:	1.25 - 1.38 (for mixture of base and hardener)
Solid Content	:	55 ± 2% by volume (ASTM D2697 1973)
Abrasion	:	Good resistance to abrasion and mechanical damage.
Adhesion	:	Excellent on correctly prepared surfaces.
Chemical Resistance	:	The fully cured coating offers outstanding resistance to aqueous solutions and a wide range of industrial chemicals.
Temperature	:	Dry service temperature range up to 100°C.

Recommendation For Use:

Surface Preparation:

Steel Surface

When used as a top coat within a NIPPON protective system, the steel surface would have been prepared in accordance with the recommendations provided within the product data sheet of the primer being used. This will normally be abrasive blast cleaning to minimum **Sa 2½ ISO 8501-1:1988** or other equivalent international standard. The primed surface must be dry and free from any abrasive residues, dirt, oil and grease and other contaminants prior to painting.

Concrete Surface

The surface must be treated with about 5% sulphuric acid solution until effervescence has stopped. It should then be washed thoroughly with clean water and allowed to dry completely before coating with **Nippon EA9 Finish HB**.

Recommended No. Of Coats	: 1 - 2 coats
Recommended Dry Film Thickness Per Coat	: 80 ~ 150 microns for dry film 150 ~ 275 microns for wet film
Theoretical coverage at recommended dry film thickness	: 6.8 m ² /litre (for dry film thickness of 80 microns) 3.6 m ² /litre (for dry film thickness of 150 microns)
	Theoretical Coverage = $\frac{\text{Volume Solids (\%)} \times 10}{\text{Dry Film Thickness (\mu)}} \text{ (m}^2\text{/litre)}$
Practical Coverage (20% Loss Factor)	: 5.4 m ² /litre (for dry film thickness of 80 microns) 2.9 m ² /litre (for dry film thickness of 150 microns)
<p>Note : This theoretical coverage rate has been calculated from the volume solids of the material and is related to the amount of coating applied onto a perfectly smooth surface without wastage. For a practical coverage rate, due allowance should be made for atmospheric conditions, surface roughness, geometry of the article being coated, the skill of applicator, method of application etc. when estimating quantities required for a particular job.</p>	

Application Methods	: Brush, roller, compressed air spray and airless spray. Preferably use airless spray if a thicker coat is required in one application. Brush, roller, compressed air spray generally lead to lower film thickness, so more applications may be required to obtain the recommended thickness per coat.
1) Brush/Roller	: Recommended for small areas and touch-up only. Good quality brushes and mohair/ short nap rollers should be used with full strokes. Avoid rebrushing. Thin up to 10% by volume of SA-65 Thinner for proper flow-out. Additional coats may be required to achieve minimum specified film thickness.
2) Spray	: When airless spray is being used, excessive high tip spraying pressure should be avoided. The minimum pressure at the pump conducive with good atomisation should be used.
Guiding Data For Airless Spray	: Delivery Pressure : 140-170 kg/cm ² Tip Size : 0.015"-0.017" Spray Angle : 60 - 70°
Thinning	: If necessary, add up to 5% thinner by volume for application by brush, roller and airless spray; about 10%-15% by volume for application by compressed air spray.
Mixing Ratio	: 9 parts by volume of Nippon EA9 Finish HB (Base) to 1 part by volume of Nippon EA9 Finish (Hardener) . Stir the content of the Base component, continue stirring and gradually add the total contents of the Hardener component, continue stirring until a homogeneous mix is obtained.
Pot Life at 25°C to 30°C	: 4-6 hours after mixing

Thinner	: SA-65 Thinner
Cleaning Solvent	: SA-65 Thinner
<p>Note: All equipment should be cleaned IMMEDIATELY with thinner after use. For thinning, substitute thinners other than those approved or supplied by Nippon Paint may adversely affect the product performance and void product warranty whether expressed or implied.</p>	

Drying Time at 25°C ~ 30°C : Dry to touch - 1-2 hours
 : Dry to handle - 4-5 hours
 : Dry to overcoat - Minimum 16 hours

Curing Time at 25°C ~ 30°C : 7 days

Note: Drying time will become remarkably delayed under low temperature. Overcoating the previous coat of Nippon EA9 Finish HB should be done within 6 ~ 7 days but preferably as soon as possible after it has been allowed 16 hours drying or else, it is desirable to roughen it by dry sanding with sandpaper before it is overcoated. This is to ensure proper intercoat adhesion. Exposure of the paint film to water, chemical and abrasion should be avoided as far as possible before full cure of the coating. When chalking occurs, chalks should be removed by water washing. Allow the surface to dry thoroughly prior to overcoating.

Standard Packing : 5 litres (4.5 litres Base, 0.5 litre Hardener)
 : 20 litres (18 litres Base, 2 litres Hardener)

Shelf Life (at 25°C ~ 30°C) : 2 years

Environmental Conditions During Application:

1. Do not apply when the relative humidity exceeds 85% or when the surface to be coated is less than 3°C above the dew point.
2. Do not apply at temperature below 7°C. If not, drying and overcoating times will be considerably extended.
3. During application of the paint, naked flame, welding operations and smoking should not be allowed and adequate ventilation should be provided.

Safety, Health and Environmental Information:

Safety

Improper use and handling of this product can be hazardous to health and cause fire or explosion.

Handling and Storage

Danger from solvent, varnish and solvent based paints:

1. Solvent itself and solvent mixed with paint or varnish can create a dangerous atmosphere by its evaporation and mixing with air.
2. Therefore, understand the explosion limit of solvent in CSDS/SDS.
3. An electric spark, impact spark, static spark and high temperature substance could be an ignition source.
4. Keep away from sources of ignition. No smoking.

Handling of solvent, varnish and solvent based paints

1. Handle solvent, varnish and paint with utmost care to prevent them from spilling or leaking.
2. If spilled or leaked, immediately wipe up completely with waste cloth and put the waste cloth into the designated container
3. When discharging and charging solvent, varnish and paint, do not increase the flow rate more than necessary in order to prevent charging of static electricity.
4. Keep the lid of the container containing solvent, varnish and paint closed except when it is used.
5. Before use, earth/ground the exposed metal of the device, container, hopper and instrument on which is required to be earthed
6. Do not attempt any action which causes an impact spark such as strongly hitting the container or equipment with a steel tool, giving shock to or dropping the container.
7. When the humidity is less than 60%, spray steam or sprinkle water on the floor in order to prevent electrical charging.

8. For solvent, varnish and paint specially identified, take suitable measures such as not storing under sunlight.
9. Do not place solvent within one meter of an object such as motors and switches which may generate electric spark.

Engineering Measures

1. Check whether any special ventilation requirements for the application.
2. Use in well-ventilated area.
3. Ensure ventilation is adequate to maintain air concentration < Explosion Limit / Permissible Explosion Limit (205 mg/m³).
4. Ensure that there is adequate ventilation, proper lightings in the area where the product is being applied. Do not breathe vapour or spray, especially in confined or enclosed spaces, such as tank interior and building.

Personal Protection

1. The specific types of respirators etc; 'approved half-face respirator suitable for organic vapours.
2. Gloves or other protective clothing to prevent skin exposure eg; PVC gloves or nitrile gloves.
3. Eye protection eg; 'general use industrial safety glasses
4. This product is flammable. Keep away from sources of ignition. Do not smoke. Take precautionary measures against static discharge.

Disposal

1. Paint and the used containers/pails are classified as schedule waste (SW322 & SW410).
2. Used containers/pails can be sent for recycle as "used drum" (approved recycler).
3. Disposal into sewerage system should be discouraged.
4. Cover the empty waste containers/pails with plastic sheets or put them in the designated place outside the workplace.
5. Do not empty into drains or watercourses. Dispose of any paint waste in accordance with the appropriate Environmental Quality Regulations.

Static Electricity

The following activities will generate static electricity:

1. When discharging solvent and varnish from a drum and piping into a container or when charging into a drum, tank, bowl and mill.
Note: One solvent which is likely to generate static electricity is hydrocarbon solvent with a resistivity over 10¹³ ohms cm. For example, there are xylene, toluene, naphtha, kerosene, gasoline, triethyl amine and diethyl amine.
2. When stirring paint, solvent and varnish in a tank and various containers using a dissolver.
3. When discharging solvent from a drum through a drum pump.
4. When washing the inside of a tank with a brush using highly non conductive solvent.
5. When using an air spray.
6. When draining or blowing compressed air.

Practice grounding and bonding of all the tools and equipment.

Other information

1. In the wet state, this product is highly inflammable. In case of fire, blanket flames with foam, carbon dioxide or dry chemicals.
2. Keep container tightly closed and keep out of reach from children.
3. Do not breathe vapour/spray. Applying paint to large surface areas under closed environment should use air supplied breathing equipment. For small areas or short periods,

a suitable cartridge mask should be worn.

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| Inhalation | : | Remove to fresh air, loosen collar and keep patient rested. |
| Ingestion | : | In case of accidental ingestion. DO NOT INDUCE VOMITING. Seek immediate medical attention. |
4. Avoid contact with skin and eyes. Wear suitable protective coating such as overalls, goggles, dust masks and gloves. Use a barrier cream.
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| Eyes | : | In the event of accidental splashes, flush eyes with water immediately and obtain medical advice. |
| Skin | : | Wash skin thoroughly with soap and water or approved industrial cleaner. DO NOT USE solvent or thinners. |
5. Care must be taken when transporting paint. Keep container in a secure upright position.

Chemical Safety Data Sheet (CSDS)

CSDS is a document that describes the properties and uses of a chemical product or formulation including identity, chemical and physical properties, health hazard information, precaution for use; and safe handling information etc.

Please refer to this document before handle the paint.

Note : A Chemical Safety Data Sheet (CSDS) is available upon request.

NOTE :

This product is to be used by those knowledgeable about proper application method. NIPPON PAINT makes no recommendation about the type of safety measures that many need to be adopted because these depend on application environment and space, of which NIPPON PAINT is unaware and over which it has no control.

We reserve the right to alter the given data without notice.