

TECHNICAL DATA SHEET FOR

## FLOOR-PRO 312 SF ESD EPOXY FINISH

**FLOOR-PRO 312 SF ESD EPOXY FINISH** is a two-component, solvent-free 100% solid high performance colored ESD (Anti-Static) epoxy coating. It is a dust free, seamless and glossy finish developed specifically for area subjected to chemicals and abrasion with light or high traffic

### FEATURES

- Solvent free, low odour
- Hygienic, easy to clean and maintenance
- High chemical resistance to wide range of chemicals
- Good abrasion resistance against medium traffic and trolley movement
- Electrostatic conductive
- Hard wearing floors finish
- Seamless
- Complied to ANSI/ESD S-20.20-2007 human body voltage system resistance

### APPLICATION AREAS

- Floor area which requires conductive properties that subjected to medium traffic
- Ideal to use at military arsenal, ammunition dump, electronic, semi-conducting device areas, high power station, explosion risk plants, clean room, warehouse, assembly automotive plant, aircraft hangar, electronic plant and R&D laboratory

### PHYSICAL PROPERTIES

<b>Chemical Composition</b>	Solvent-free epoxy
<b>Colour</b>	As per standard colours
<b>Density, mixed</b>	1.40 ± 0.05 g/cm <sup>3</sup> @ 28°C

### PERFORMANCE DATA

<b>Adhesive strength</b>	> 2.0 N/mm <sup>2</sup> (Concrete failure)
<b>Compressive strength</b>	55 N/mm <sup>2</sup> @ 28 days
<b>Flexural strength</b>	35 N/mm <sup>2</sup>
<b>Tensile Strength</b>	25 N/mm <sup>2</sup>
<b>Shore D Hardness</b>	75 ~ 82 (ASTM D2240)
<b>Temperature resistance</b>	Up to 70°C
<b>Water Permeability</b>	Nil-Karsten test (Impermeable)
<b>Cytotoxicity (2.4 or less)</b>	Below < 0.5
<b>Taber Abraser Wear Index</b>	5 mg / 1000 revolutions / 1 Kg (ASTM D 4060)
<b>Decay Time Through Human Body</b>	Spec: <20 sec
<b>Complied ANSI/ESD S-20.20-2007</b>	
Human Body Voltage (HBM)	< 100 VOLTS
System Resistance	< 3.5E + 7ohm (Ω)
<b>ESD Standard Compliance</b>	ANSI/ESD S-20.20-2007

<b>ESD Floor Main Checking Criteria &amp; Spec: <u>Conductive</u></b>	
Surface to Ground (Earth) Rg Spec (BS-2050)	5E+4 Ω ~ 5E+6 Ω (5 x 10 <sup>4</sup> ohm to 5 x 10 <sup>6</sup> ohm)
Surface to Surface (Earth) Rs Spec (BS-2050)	5E+4 Ω ~ 5E+6 Ω (5 x 10 <sup>4</sup> ohm to 5 x 10 <sup>6</sup> ohm)
<b>ESD Floor Main Checking Criteria &amp; Spec: <u>Dissipative</u></b>	
Surface to Ground (Earth) Rg Spec (BS-2050)	5E+6 Ω ~ 5E+9Ω (5 x 10 <sup>6</sup> ohm to 5 x 10 <sup>9</sup> ohm)
Surface to Surface (Earth) Rs Spec (BS-2050)	5E+6Ω ~ 5E+9Ω (5 x 10 <sup>6</sup> ohm to 5 x 10 <sup>9</sup> ohm)
*Conditions such as installation process, inappropriate maintenance, short and long-term wear and use as well as surface contaminants (wet or dry) affects the slipperiness of flooring materials. To meet slip resistance requirement for wet conditions and/or surface contaminants (wet or dry), appropriate textured or anti-slip floor systems are recommended. Please contact Nippon Paint for further details and specifications.	
**The final floor finish shall follow the profile of the concrete, therefore appropriate levelling compound is recommended to treat the undulating surface.	

### APPLICATION GUIDE

<b>Mixing Ratio (by weight)</b>	Part A : Part B 6 : 1																
<b>Recommended Thickness</b>	140 μm DFT per coat																
<b>Material consumption</b>	0.2 kg/m <sup>2</sup> /coat																
<b>Recoating time</b>	Within 14-18 hrs @ 28°C																
<b>Pot Life (Working time)</b>	30 mins @ 28°C																
<b>Curing time</b>	<table border="1"> <thead> <tr> <th></th> <th>15°C</th> <th>25°C</th> <th>32°C</th> </tr> </thead> <tbody> <tr> <td>Foot traffic (hrs)</td> <td>30</td> <td>28</td> <td>24</td> </tr> <tr> <td>Light traffic (hrs)</td> <td>48</td> <td>36</td> <td>30</td> </tr> <tr> <td>Exposure to chemicals (days)</td> <td>10</td> <td>7</td> <td>7</td> </tr> </tbody> </table>		15°C	25°C	32°C	Foot traffic (hrs)	30	28	24	Light traffic (hrs)	48	36	30	Exposure to chemicals (days)	10	7	7
	15°C	25°C	32°C														
Foot traffic (hrs)	30	28	24														
Light traffic (hrs)	48	36	30														
Exposure to chemicals (days)	10	7	7														
<b>Substrate Temperature relative to dew point</b>	≥ 3°C																
<b>Recommended application temperature range</b>	Minimum 5°C Maximum 40°C																
<b>Relative Humidity</b>	< 85%																

### SUBSTRATE REQUIREMENTS

- Concrete or screed substrate compressive strength should be of minimum 25 N/mm<sup>2</sup> and adhesive pull off strength of 1.5 N/mm<sup>2</sup>.
- The moisture content of concrete shall be < 4% or dried up to 85% RH as per BS8204. It shall be free from rising damp and must be waterproofed against negative ground water pressure.

### SURFACE PREPARATION

- Concrete substrate must be clean, free of laitance and contaminants.
- In the event the moisture content is > 4%, FLOOR-PRO 203 SL EPOXY MOISTURE BARRIER may be applied as temporary moisture barrier system.
- Allow to cure over-night before the application of subsequent coating system. Prepare the concrete substrate surface by captive shot blasting, scarifying or mechanical grinding. Repair damaged area and patch up cracks and holes using a suitable repair material compatible with the coating system.

### APPLICATION METHOD

- Stir Part A mix for 30 seconds by using a suitable electrical stirrer (with 750 watt high power mixer), then pour all of Part B (Hardener) and mix both liquid parts thoroughly for one minute until a fully homogenous, then slowly add 5% of clean water while mixing continues for a further 1 minute 30 seconds until a fully homogenous mix has been achieved. Transfer the mixed material to a clean container and mix for another minute. Avoid inclusion of air during the mixing process.
- Apply FLOOR-PRO 103 CONDUCTIVE EPOXY PRIMER at 0.12 kg/m<sup>2</sup> as a primer for sealing well the substrate porosity. Usually within 8-14 hours; FLOOR-PRO 103 CONDUCTIVE EPOXY PRIMER cured, then only allow to do layering FLOOR-PRO 312 SF ESD EPOXY FINISH topping onto the FLOOR-PRO 103 CONDUCTIVE EPOXY PRIMER
- Apply FLOOR-PRO 312 SF ESD EPOXY FINISH within the pot life (working time), can be applied by brush or roller. Spread with a squeegee and back roll with a roller
- For Dissipative, no need to apply FLOOR-PRO 103 WB CONDUCTIVE EPOXY PRIMER

### PACKAGING

Components	PART A (BASE)	PART B (HARDENER)
TOTAL 21 Kg	18	3

### STORAGE AND SHELF LIFE

The product must be stored in accordance with national regulations. Keep the containers in a dry, cool, well ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care. (Unopened and in good condition temperature 10°C to 30°C)

Components	PART A (BASE)	PART B (HARDENER)
Months	12	12

### SAFETY PRECAUTION

- This product is intended for use by 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 flushed 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.

### 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.