

TECHNICAL DATA SHEET FOR

FLOOR-PRO 316 SL ESD EPOXY FINISH

FLOOR-PRO 316 SL ESD EPOXY FINISH is a self-smoothing ESD (Anti-static) epoxy resin floor finish applied at 1.5~2mm. It provides a seamless, high mechanical, conductive, good abrasion resistance glossy finishing and available in a wide range of attractive colours.

FEATURES

- Solvent-free, low odour
- Electrostatic conductive
- Hygienic, easy to clean and maintenance
- High chemical resistance to wide range of chemicals
- Good abrasion resistant against medium traffic and trolley movement.
- Hard wearing floors finish
- Seamless
- Complied to requirements of ANSI/ESD S20.20 and IEC 63140-5-1

APPLICATION AREAS

- Floor area which requires conductive properties and area 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

Chemical Composition	Solvent-free self-smoothing epoxy
Colour	As per standard colours
Density, mixed	1.40 ± 0.05 g/cm ³ @ 28°C
Solid Content, mixed	100% (by weight)

PERFORMANCE DATA

Adhesive strength	>2.0 N/mm ² (Concrete failure)(ASTM D4541)
Compressive strength	55 N/mm ² @ 28 days (ASTM C942)
Flexural strength	35 N/mm ² (ASTM C348)
Tensile Strength	25 N/mm ² (ASTM C881)
Shore D hardness	75 ~ 82
Temperature Resistance	Up to 70°C
Water Permeability	Nil-Karsten test (impermeable)
Cytotoxicity (2.4 or less)	Below < 0.5
Taber Abrasion Wear Index	5 mg / 1000 revolutions / 1Kg (ASTM D 4060)
Decay Time Through Human Body	Spec: <20 sec
ESD Standard Compliance	ANSI/ESD S-20.20 & IEC 61340-4-5
Human Body Voltage (HBM)	<100 VOLTS
System Resistance	< 35 MΩ

ESD Floor Main Checking Criteria & Spec: Conductive

Surface to Ground (Earth) Rg Spec (BS-2050)	$10^4 \Omega \sim 10^6 \Omega$
Surface to Surface (Earth) Rs Spec (BS-2050)	$10^4 \Omega \sim 10^6 \Omega$

ESD Floor Main Checking Criteria & Spec: Dissipative / ESD

Surface to Ground (Earth), Rg Spec (IEC 61340-4-1, ANSI ESD S20.20)	$< 10^9 \Omega$
Point to Point Resistance Rp.p Spec (IEC 61340-2-3)	$< 10^9 \Omega$
Resistance to Person/ESD Shoes/Flooring to Ground, Rg System Spec (IEC 61340-4-5)	$< 10^9 \Omega$
Body Voltage Generation Person/ESD Shoes/Floor (IEC 61340-4-5)	$< 35 \text{ M}\Omega$ $< 100\text{V}$

*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.

***Readings of the ESD flooring test may vary based on environment conditions; types of measurement equipment, room temperature and humidity

APPLICATION GUIDE

Mixing Ratio (by weight)	Part A : Part B 6 : 1			
Number of coats	1 coat			
Recommended Thickness	1.5 – 2 mm DFT per coat			
Theoretical Coverage	1.4 Kg/m ² /mm			
Recoating time	Within 14-18 hrs @ 28°C			
Pot Life (Working time)	30 mins @ 28°C			
Curing time		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
Substrate Temperature relative to dew point	≥ 3°C			
Recommended application temperature range	Minimum 5°C Maximum 40°C			
Relative Humidity	< 85%			

SUBSTRATE REQUIREMENT

- Concrete or screed substrate compressive strength should be of minimum 25 N/mm² and adhesive pull off strength of 1.5 N/mm².
- 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

Applying Primer

- Apply FLOOR-PRO 103 WB CONDUCTIVE EPOXY PRIMER at 0.2 Kg/m² for sealing the substrate porosity

Applying FLOOR-PRO 316 SL ESD EPOXY FINISH

- FLOOR-PRO 316 SL ESD EPOXY FINISH is only allowed to overcoat onto FLOOR-PRO 103 WB CONDUCTIVE EPOXY PRIMER within 8-14 hours cured
- 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 two minute until fully homogenous.
- Transfer the mixed material to a clean container and mix for another minute. Avoid inclusion of air during the mixing process. May be applied by brush, roller or spray. Spread with a squeegee and back roll with a roller

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.