

TECHNICAL DATA SHEET FOR

FLOOR-PRO 401 WB PU MF SCREED

FLOOR-PRO 401 WB PU MF SCREED is a four-component, self-smoothing polyurethane industrial floor topping with thermal shock resistance properties.

FEATURES

- Water-based, low odour
- High compressive strength
- Excellent chemical resistance to alkali and acids especially organic acids, vegetable/palm oils, animal fats and solvents
- Thermal shock resistance-wide service temperature from -5°C to 100°C
- Anti-microbial
- Complied with HACCP requirement

APPLICATION AREAS

- Ideal to be used at abattoir, meat, poultry, seafood and food processing plants, food and beverage facilities, cold storage, commercial kitchens, warehouse/logistic centres and industrial plants

Note: Colour may change on exposure to UV as this is a common characteristic of all polyurethane screed system

PHYSICAL PROPERTIES

Chemical Composition	Water-based polyurethane with cement aggregates
Colour	Green, Red, Grey, Cream, Buff, Light Grey
Finish	Matt
Density, mixed	1.9 g/cm ³ @ 28°C

PERFORMANCE DATA

Adhesive strength	>2.0 N/mm ² Concrete failure (ASTM C1583)
Compressive strength	28 days : >57.0 N/mm ² 14 days: >51.0 N/mm ² (BS 6319)
Flexural strength	>26 N/mm ² (ASTM C348)
Tensile Strength	>25 N/mm ²
Static modulus of elasticity	9400 – 9800 N/mm ²
Shore D hardness	79 ~ 84
Cytotoxicity (2.4 or less)	Below < 0.5
Taber Abraser Wear Index	38 mg / 1000 revolutions / 1 Kg (ASTM D 4060)
Growth of Aquatic Microorganisms	< 2.39 or less (BS 6920: Part 1 :2000 clause 6)
Water Vapor Transmission	1.23 g/hr.m ² (ASTM E96/E96M-10)
Anti-microbial efficacy	> 2 Log reduction based on JIS Z 2801:2012 for E. coli (ATCC 8739), S. aureus (ATCC 6538) and MRSA (ATCC 43300)
Linear shrinkage	0.053% (ASTM C 531)
Surface resistance	2.71E+11 (ABSU/ESD STM11.11)
Thermal Expansion	5.07 x 10 ⁻⁵ / °C (ASTM C 531)
Water absorption	0% at 49 days (ASTM C413)

Chemical Resistance (28°C)	Chemical	Resistance
	10% Acetic acid	Excellent
	Beer	Excellent
	Blood	Excellent
	20% Citric acid	Excellent
	Detergents- acidic	Excellent
	Detergents-alkaline	Excellent
	Fats-animals and vegetable	Excellent
	Fish oils	Excellent
	5% Lactic Acid	Excellent
	Oil-diesel	Excellent
	Oil-fuel	Excellent
	Oil-mineral	Excellent
	Sugar	Excellent
50% Sodium hydroxide	Excellent	
Sodium Sulphate	Excellent	
Service temperature	At 3 mm : 5°C ~ 80°C (max) At 6 mm : -5°C ~ 100°C (max)	

*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				
Mixing Ratio (by weight)	Part A	: Part B	: Part C	: Part D
	3	: 3	: 0.5	: 13.5
Recommended Thickness	Minimum 3 mm Maximum 6 mm			
Theoretical Coverage	1.9 Kg/m ² /mm			
Recoating time	Within 14-18 hrs @ 28°C			
Pot Life (Working time)	28 mins @ 15°C 22 mins @ 25°C 16 mins @ 30°C			
Curing time		15°C	25°C	30°C
	Foot traffic (hrs)	36	30	24
	Light traffic (hrs)	48	36	30
	Exposure to chemicals (days)	7	6	5
Substrate Temperature relative to dew point	≥ 3°C			
Recommended application temperature range	Minimum 5°C Maximum 40°C			
Relative Humidity	< 85%			

SUBSTRATE REQUIREMENTS	
<ul style="list-style-type: none"> Concrete or screed substrate compressive strength should be of minimum 30 N/mm² and adhesive pull off strength of 1.5 N/mm². The moisture content of concrete shall be < 6% 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.
- If the substrate moisture exceeded 6%, apply FLOOR-PRO 202 SF EPOXY MORTAR at 5mm thickness as moisture barrier.
- 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.
- Prepare grooves of 3mm wide x 3mm deep at all edges, bay joints, columns, doorways and drains for anchoring purpose.

APPLICATION METHOD

Applying Primer

- FLOOR-PRO 101 WB EPOXY PRIMER WHITE and FLOOR-PRO 102 WB EPOXY PRIMER RED are the recommended primers.
- Empty Part A and Part B into a clean mixing container. Start mixing using a mechanical mixer at low speed (approx. 500 rpm) for 1 minute or until homogeneous. Transfer the mixed material into another clean container and mix for 1 minute.
- Pour the mixed primer onto the prepared floor, spread with a squeegee and back roll with a roller. Allow 14-18 hrs cure before proceeding to the next stage of application.
- If the concrete surface is porous, apply a second coat of primer to ensure the concrete surface is sealed to avoid risk of out-gassing.

Mixing FLOOR-PRO 401 WB PU MF SCREED

- Mix Part C (Colour filler) into Part A using a helical mixer in a clean mixing container for 1 minute moving the mixer from top to bottom and side to side to ensure all filler is properly dispersed or until homogeneous.
- Add Part B into mixing container mixing at low speed (500rpm) for approximately 5
- With mixer running add Part D (Filler) and mix for 3 – 5 minutes or until homogeneous gradually increasing the mixing speed to approximately 750 rpm.
- Transfer the mixed material to a clean mixing container and mix for 1 minute..

Applying FLOOR-PRO 401 WB PU MF SCREED Scratch Coat

- Apply FLOOR-PRO 401 WB PU MF SCREED at 1mm thickness as scratch coat
- Pour the mixture onto the surface and spread with the straight edge trowel press hard against the surface. Allow 14-18 hours cure before applying FLOOR-PRO 401 WB PU MF SCREED at the nominated thickness as above.

Applying FLOOR-PRO 401 WB PU MF SCREED

- Pour the mixture onto the treated surface and spread it with a notched trowel or pin rake set to the nominated thickness and spike roll immediately to release the entrapped air from mixing.
- The application process must be carried out within the pot life (working time approximately 20 minutes).

PACKAGING

Components	PART A (BASE)	PART B (HARDENER)	PART C (COLOUR FILLER)	PART D (FILLER)
TOTAL 20 Kg	3	3	0.5	13.5

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.

Components	PART A (BASE)	PART B (HARDENER)	PART C (COLOUR FILLER)	PART D (FILLER)
Months	9	9	24	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.