

HPR-143-SL **Polyurethane Floor Coating**

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PRODUCT DESCRIPTION

HPR-143-SL is a water-based polyurethane self-smoothing resin floor screed designed to provide heavy duty usage with resistance to thermal shock, abrasion and chemical attack in aggressive industrial environments. The system utilises universal bases, hardeners and colourants in combination with a specific aggregate to provide smooth seamless matt surface with good anti-slip properties. HPR-143-SL is suitable for use in a variety of wet and dry environments as a dense, impervious flooring solution ideal for applications in food and beverage, chemical and pharmaceutical industries to provide a long lasting floor. The product incorporates an antimicrobial agent to minimise microbial growth on the floor surface once installed and is taint free so can be installed in active food production areas.

ADVANTAGES

- High chemical resistance
- Resistant to hot water
- Self sealing
- Extremely hard wearing
- Good slip resistant finish
- Matt finish
- Campden BRI approved as non-tainting
- HACCP certified

RECOMMENDED USE

- Food manufacture and processing
- Brewing and beverage
- Pharmaceutical and chemical plant processing
- Heavy duty plant and traffic areas
- Dairies
- Commercial kitchens
- Abattoirs and meat processing

PRODUCT DATA

Volume Solids:	~100%
VOC:	14 g/l calculated per full mixed unit
Colours:	Black, Blue, Buff, Flint, Green, Marigold, Salsa, Stirling
Finish:	Matt finish
Flash Point:	N/A
Cleanser/Thinner:	N/A
Pack Size:	16 kg
Pack Weights:	2.32 kg blank base (2.68 kg coloured base), 0.44 kg colour, 2.22 kg hardener, 11.10 kg aggregate (16 kg)
Mixing Ratio:	As above packing weights
Mixed Density:	Approximately 1.90 g/cm ³
Shelf Life:	36 months (Base & Colour), 12 months (Hardener) & 6 months (Aggregate)
Storage:	Keep out of direct sunlight. Store in a dry place, between 15°C – 30°C. Aggregates must be stored in a dry area to prevent contamination by moisture, as this will have a detrimental effect on the product.

Application at 20°C

Recoating Intervals:	N/A
Light Traffic:	12-16 hours
Full Traffic:	48 hours
Full Chemical Cure	5-7 days
Pot Life:	15 minutes from mixing

Note: All mixed paint must be used within the pot life time limit, if the paint is left in the container after mixing and not used, it may release hazardous fumes due to exothermic reaction.

Coverage Rate: 16 kg will cover 2.8 m² @ 3 mm (Theoretical)

Coverage rate is calculated based on a sealed and smooth surface and may vary based on the substrate roughness and other conditions.

System Thickness: 3 mm (Recommended)

The suggested thickness range is calculated based on average volume solid as a general recommendation for the specified condition and for each application may vary.

Recommended Application Methods Trowel, Rake and Spike Roller

SURFACE PREPARATION

New Concrete Floors: New concrete must be clean, sound, dry, fully cured and surface laitance removed by vacuum enclosed shot blasting or mechanical grinding, a minimum strength of 25 N/mm² is required.

Existing Concrete Floors: Remove all dirt, oil, grease, old paint or any other surface contaminants by vacuum enclosed shot blasting, scarifying or mechanical grinding. Fats, oils or greases must be removed by mechanical means and detergent washing and making sure all residue of detergent is washed and removed by rinsing with clean water.

Existing Floors (previously coated): All previous coatings and loose floor paints must be removed by mechanical preparation as described in the above section and primed as specified. If the old resin flooring cannot be removed then please consult with our technical team for advice on intercoat adhesion and suitability, as it may not be compatible with the existing floor coating.

Anchor Joints: To ensure the maximum bond is achieved, grooves must be cut into the perimeter of the subfloor, typically 5 mm deep by 10 mm wide. These should be inset approximately 150 mm from and running parallel with the walls and adjacent to any doorways, plinths etc. including any finished edge, i.e. both sides of a day work joint. The groove must have a neat square edge and the **HPR-143-SL** laid to the full depth forming a perimeter anchorage.

APPLICATION

4-pack Mixing: Add the **HPR-143-SL** blank base component **A** pouch and then the **HPR-143-SL** colour pack pouch contents into a mixing bucket or directly into a rotary drum mixer, mix thoroughly for one minute then add the **HPR-143-SL** hardener **B** pouch component. If a separate bucket has been used pour the combined mix into a rotary drum mixer and add the **HPR-143-SL** aggregate component steadily, until a homogeneous mix of the four components is achieved.

3-pack Mixing: Add the **HPR-143-SL** coloured base component **A** pouch into a mixing bucket or directly into a rotary drum mixer, then add the **HPR-143-SL** hardener **B** pouch component. If a separate bucket has been used pour the combined mix into a rotary drum mixer and add the **HPR-143-SL** aggregate component steadily, until a homogeneous mix of the three components is achieved.

HPR-143-SL When thoroughly mixed should be poured evenly over the appropriate area to be covered (monitoring rate of coverage to ensure correct depth of screed). Low floor temperatures and reduced thickness may reduce the flow properties of these products. Work out the mix rapidly and evenly over the area with a notched trowel, pin rake or similar to the appropriate thickness. Roll immediately with a spiked roller to achieve an even smooth surface and remove entrapped air. Do not re-roll later.

HPR-143-SL may be applied to substrates with a surface temperature in the range of 5-20°C and a relative humidity <90% RH, with a minimum air temperature of 8 °C and no condensation. Do not pre-warm this product as working times will be substantially reduced if materials are warm.

NB: Cure times are extended at low temperatures.

RECOMMENDED SYSTEMS

Dry substrates should be primed using **HPR-143-ST** where the relative humidity of the substrate is less than 75%. Where the Relative Humidity of a substrate exceeds 75% ERH **HPR-143-MVT** should be specified and selected on the basis of hygrometer readings in accordance with BS 8203. The number of coats to be applied is chosen in accordance with the following table:

ERH%	Required Coating Thickness
75-85	1 coat of HPR-143-MVT at 200 µm per coat
85-92	2 coats of HPR-143-MVT at 200 µm per coat
92-97	3 coats of HPR-143-MVT at 200 µm per coat

For further information please refer to recommended individual product data sheets.

TECHNICAL INFORMATION

The following figures are obtained from laboratory tests and our experience with this product.

Category Guide:	FerFA Category 5
Bond Strength: (BS EN 13892-8:2002)	>3 N/mm ² (Substrate failure)
Temperature Resistance:	Tolerant of temperatures up to 80°C @ 3 mm
Abrasion Resistance: (BS EN 13892-4:2002)	AR 0.5 (Less than 50 microns wear)
Reaction to Fire: (EN 13501-1:2018)	Bfl-s1
Compressive Strength: (BS EN 604:2003)	43 MPa
Flexural Strength: (BS EN 178+A1:2013)	26 N/mm ²
Tensile Strength: (BS EN 527-2:2012)	7 N/mm ²
Impact Resistance: (ISO 6272-1:2011)	>4
Slip Resistance: (BS 7976-2:2002+A1:2013)	<36 (low slip potential in dry conditions)
Chemical Resistance:	Excellent – please see separate guide or contact Parker James Ltd for more specific advice

WARRANTY	DISCLAIMER
<i>Any person or company using the product without first making further enquiries as to the suitability of the product for the intended purpose does so at their own risk, and Parker James Ltd can accept no liability for the performance of the product, or for any loss or damage arising out of such use.</i> <i>The information detailed in this datasheet is liable to modification from time to time in the light of experience and normal product development, and before using, customers are advised to check with Parker James Ltd, quoting the reference number, to ensure that they possess the latest issue.</i>	<i>The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Parker James Ltd Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Parker James Ltd representative to obtain the most recent Product Data Information and Application Bulletin.</i>

Highlands Performance Resins
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