

A Heavy Duty Polyurethane Screed Flooring System

Guardian PUFS-HD is a 4 component polyurethane screed produced in a range of colours. It is a single layer seamless solvent free system applied at 6-9 mm. with a textured matt finish providing a heavy duty, hard wearing floor finish with excellent chemical, and steam cleaning resistance.

The product may be used in wet or dry process applications.

USES & ADVANTAGES

Guardian PUFS-HD is recommended for areas requiring maximum chemical resistance, strict health & safety requirements and in situations where extreme thermal connection such as in freezers & hot spill areas. Typical areas of use are meat, fish & poultry processing, food & beverage production, dairies, cold & freezer rooms, pharmaceutical & chemical plants.

Advantages include:-

- Anti bacterial properties.
- Hygienic contains an antimicrobial additive.
- Seamless & hygienic biologically inert.
- Excellent chemical resistance.
- Slip resistant.
- Abrasion and impact resistant. Hard wearing.
- 9 mm and above thickness resists temperatures from - 40°C to 120°C.
- Similar coefficient of thermal expansion to concrete.
- Antislip finish.
- Non toxic, non-dusting, non-tainting.
- Short curing time 8 hours access to foot traffic, 20 hours for vehicles.
- VOC free.
- High mechanical resistance.
- Excellent chemical resistance.
- Steam cleanable at 9 mm. thickness.

PROPERTIES @28 Days 25°C

Components:	Part A – Base	Part B – Hardener	Part C – Colour Pack	Part D – Filler
Compressive Strength:	> 40 N/mm ² .		(ASTM C579)	
Tensile Strength:	> 5 N/mm ²		(ASTM D638)	
Flexural Strength:	>25 N/mm ²		(ASTM C348)	
Concrete Adhesion:	Concrete failure			
Abrasion Resistance:	1390 mg; Taber H22			
Water Absorption:	Nil			

Chemical Resistance: Resistant to sugars, mild detergents, some hydrocarbons, inorganic & organic acids such as:-

- Hydrochloric acid 10%
- Methanol
- Sulphuric acid 10%
- Caustic soda 50%
- Citric acid 10%
- Petrol
- Acetic acid 5%
- Oil
- Lactic acid 10%
- Detergents
- Acetone

Values indicated are internal test results. Consult Guardian for detailed information.

Mixed Density:	2.0 ± 0.05 kg/ltr
Pot Life:	15 minutes at 20°C
Colours:	Yellow, Red, Green, Grey
Thickness:	6-9 mm.
Service Temperatures:	- 25°C to 100°C at 6 mm. - 45°C to 120°C at 9 mm.

Important Notes: Guardian PUFS-HD may discolour with ageing and is more noticeable in light colours, this will not impair chemical resistance or physical characteristics.

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SURFACE PREPARATION

The concrete shall be sound, dry, and free from all contaminants. Captive shotblasting is recommended or scarifying. All dust, dirt, laitance, curing compounds, oil, grease, existing coatings etc. must be removed to create a sound substrate surface.

The minimum tensile (pull off) strength shall be 1.5 N/

mm². New concrete shall have cured for at least 28 days and incorporate a continuous waterproofing membrane with a compressive strength greater than 25 N/mm².

Concrete design shall provide for movement joints as needed and provision made for induced joints to allow for any shrinkage of the concrete along defined planes.

Anchorage grooves at least 8 mm wide & 8 mm deep should be formed at edges, bay joints, columns, drains, doorways and at regular centres across the floor.

Moving joints must be carried through **Guardian PUFS-HD** & sealed. Construction joints & cracks may be covered and may reflect through the **Guardian PUFS-HD**.

PRIMING

Guardian PUFS-HD must be applied to surfaces primed with **Guardian TOPHD-PRIMER**. Surfaces to be primed must be clean, dry, dust free, free of laitance and all contaminants.

Old concrete must be checked for contamination e.g. oils, fats and sugars. Surface preparation should be by shotblasting, scarifying, grinding and hot compressed air for oil contaminated surfaces. Acid etching must not be used and wire brushing is not recommended. All dust / debris must be removed, after preparation, by vacuuming.

Do not apply **Guardian PUFS-HD** at material or floor temperatures below 10°C, temperatures must not fall below 5°C for the first 24 hours after application.

Guardian TOPHD-PRIMER must only be applied by trained specialist applicators. Immediately after mixing apply the material using a short nap roller and or squeegee working well into the surface. For very porous surfaces where two coats are required the first coat must cure overnight before applying the second coat.

The consumption of **Guardian TOPHD-PRIMER** is approximately 5-7m²/kg depending on substrate porosity, the texture of the surface applied to, method of application and temperature of substrate.

MIXING

The components are preweighed. Do not split or change proportions of packs. Do not add to or remove anything from the mixes.

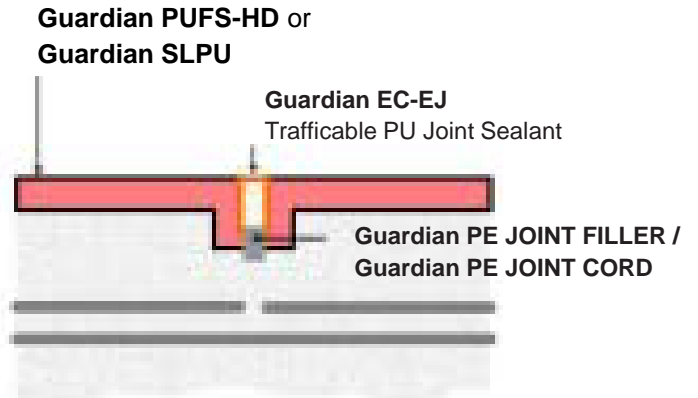
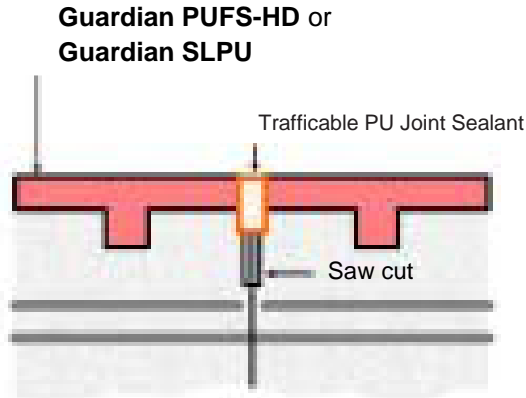
Add the pigment pack to Part A then the hardener Part B and mix for not less than one minute. Then add Part C & D fillers under mixing & mix until a uniform colour is achieved.

APPLICATION

Guardian PUFS-HD should only be applied by trained specialist applicators. Immediately after mixing spread the screed onto the primed floor by steel trowel or screed box wet on wet at a rate slightly thicker than the required thickness. Compact & finish to the required thickness using a steel trowel. To produce a finer textured surface lightly roll using a short nap roller immediately after troweling to avoid pinholes.

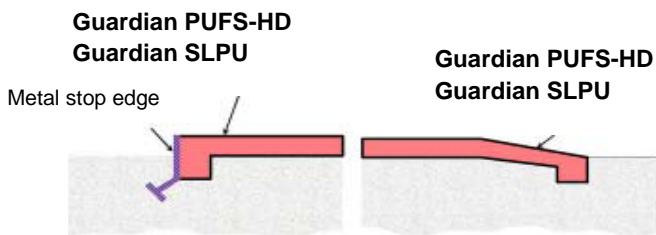
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DETAILS - DRAWINGS

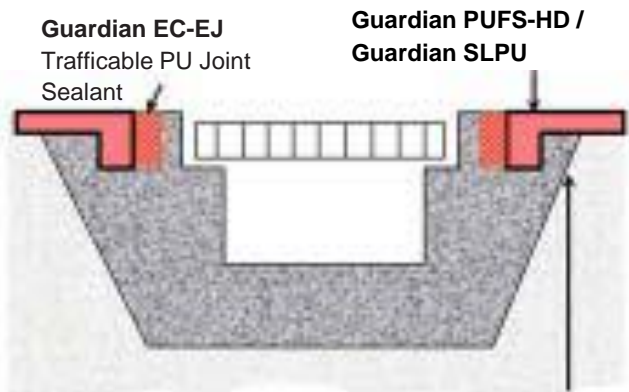
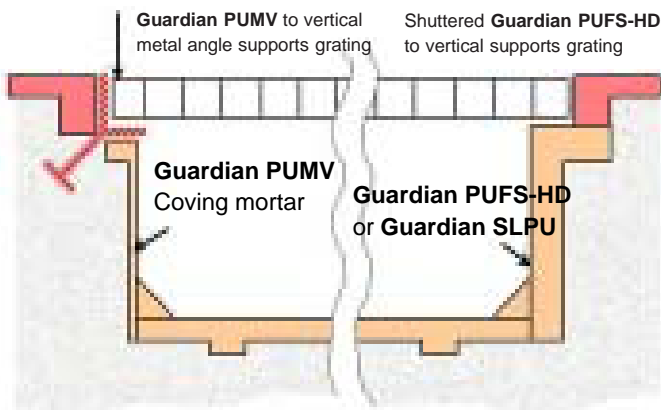
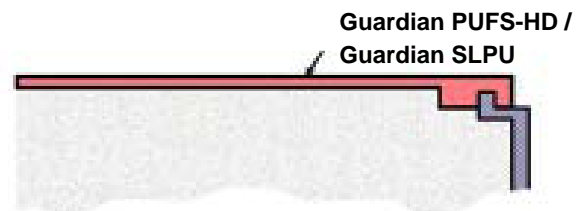


Note: Grooves not needed for **Guardian SLPU**

Induced Joint / Expansion Joint



Final Edge to doorway / Final Edge to Original Level Edge to Glazed Drain Gully



Movement joint may be required at this point

Note: Guardian PUMV fillet is an optional

Lined Channel

Stainless Steel Drainage Channel

COVING

Covings must be formed using **Guardian PUMV**

CONSUMPTION RATES

Approximately 2.00-2.10 kg/m²/mm thickness (wastage not included).

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CURING

30°C foot traffic 8 hours; vehicular traffic 16 hours.
20°C foot traffic 12 hours; vehicular traffic 24 hours.
Full cure 7 days.

PACKAGING

Guardian PUFS-HD is supplied in 25 kg pre-measured sets, never add or remove any of materials from packs.

CLEANING

Regular cleaning, both dry and wet using mechanical scrubbers or the use of hot water with detergent, will maintain the floors appearance and reduce soiling.

STORAGE & SHELF LIFE

The shelf life of **Guardian PUFS-HD** is 9 months when stored in unopened containers out of direct sunlight under cover at below 30°C above ground level.

HEALTH & SAFETY

Gloves and eye protection must be worn during mixing and application. Standard precautions should be taken as with handling all chemicals. Consult and follow the product material safety data sheet. Material splashed onto naked skin should be immediately removed with soap and copious water before curing.

TECHNICAL SERVICE

Guardian Coating Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

IMPORTANT NOTES

Retaining grooves should be placed at exposed edges. Do not apply over polymer modified cement screeds. Protect new floors for at least 24 hours before direct water contact. Protect from condensation when applying. Allow 48 hours after product application before placing into service close to food stuffs. Do not apply to cracked or unsound surfaces.

Guardian products are subject to discolouration when exposed to UV, the extent depends on the colour. There is no measurable change in the products properties. The products may be used outside providing the change in appearance is accepted by the clients.

Colour uniformity cannot be completely guaranteed from batch to batch. If in doubt ask Guardian

Do not apply to green concrete or where moisture content > 5%. Do not mix by hand. Not recommended for shock freezers. Do not apply below 10°C or above 35°C or maximum relative humidity of 85% Hot steam cleaning may result in delamination due to thermal shock.

QUALITY ASSURANCE (OEM)

ISO 9001: 2015 verified by TUV Nord.

ISO14001:2015 verified by Lloyd's Register International.

DISCLAIMER

Performance data is achieved testing in accordance with International Standards. Testing by others may result in different results from those published as a result of external factors such as poor sampling, incorrect mixing, varying temperatures, curing, crushing procedures etc.

Guardian does not take responsibility nor need to defend others testing that does not achieve the published data. The user must test the products suitability for the intended application and purpose. Guardian reserves the right to change the properties of the product.

Site conditions and differences in materials are such that no warranty or fitness for a particular purpose, nor liability can be inferred from the published data sheet, written recommendations or from other advise offered

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