

CASE STUDY

REASONS FOR SPECIFICATION



Polysafe Ultima - heavy-duty safety flooring with enhanced slip resistance

POLYSAFE ULTIMA

Polysafe Ultima - the safety floor designed to suit specification into extremely demanding application areas, offering enhanced slip resistance throughout the guaranteed life of the product.

Where is it used?

Typically used in busy food preparation areas and commercial kitchens, Ultima is ideal in heavily trafficked areas, where high risks of oil and grease spillages demand a floor that performs day in, day out. In areas where a high number of meals are served each day and the floor is subjected to frenetic use, Ultima is ideal to give user confidence and minimise slip risk in these extremely tough conditions.

Polysafe Ultima is a top performer in many heavy-duty commercial areas because of its uniquely engineered surface, with an emboss that facilitates straightforward maintenance. This is combined with a high surface roughness, allowing slip resistance to be maintained in the face of high viscosity contaminants.

4 steps to safety

1. Ultima achieves a result of 40+ on the RRL Pendulum Test in wet conditions using Four S rubber/Slider 96, a HSE recommended test for measuring a floor's slip resistance, in-situ.

2. Polysafe Ultima has a unique Surface Roughness, giving typical results of $Rz \geq 70\mu m$ and therefore suitable for areas encountering oil and grease spillage.

Fully compliant with HSE Guidance, Ultima's pendulum and surface roughness results classify the product as low slip potential. Independent test certificates are available from Polyflor on request.

3. Sustainable slip resistance - the enhanced level of slip resistance is governed by an increased level of aggregates applied within the product - this is from a concentrated amount of coloured quartz, aluminium oxide and silicon carbide, increasing the friction between the foot and floor.

Due to these aggregates being applied throughout the full product thickness, this slip resistance is sustainable and can be maintained throughout the guaranteed life of the product, giving that added reassurance over a number of years.

It is always advisable to be wary of manufacturers claiming slip resistant performance solely to an R value on the Ramp Test (DIN 51130) and not Pendulum and Surface Roughness tests. The Ramp Test does not give a true reflection of in-situ performance as the procedure can only be undertaken ex-factory and cannot be replicated on-site.

4. Proven cleanability - Time and time again, Ultima installations have shown that the flooring in these testing environments can be cleaned without difficulty, using a regular maintenance regime involving a neutral detergent.



CASE STUDY

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PROJECT:	Kitchen area
LOCATION:	Wrightington Hospital, Wigan, Lancashire
FLOORING SUPPLIED:	Polysafe Ultima - Iron Ore 4340
DATE:	January 2007
AREA:	150m ²

Ultimate solution

In the kitchen area of the hospital, there is a requirement for large numbers of meals to be prepared for long hours each day, both to hospital café visitors and patients. In this high pressure environment, with lots of movement and turning between work stations, the choice of flooring specified was extremely important in order to minimise the risk of slipping for workers. An initial risk assessment undertaken by the Estates Department identified that due to the various factors such as the type of environment and the likely regular presence of oil and grease contamination, Polysafe Ultima was the ideal specification choice. Offering enhanced slip resistance, being fully HSE compliant and able to cope with the expected levels of spillage, Ultima is tried and tested to give its users confidence in this challenging environment.

Kitchen Environment

The kitchen area houses a large number of industrial cooking equipment within a relatively confined area, with a variety of grills, fryers and ovens used to create a large number of meals - over a 100 per day. Preparation of meals involves a number of staff working quickly at the same time, with the intense daily routines creating plenty of movement over the floor.

Oil and grease contamination is a daily occurrence from the fryers and grills and this challenge is dealt with by a combination of good extraction, diligent cleaning and the high surface roughness of Ultima, that gives an enhanced slip resistant surface.

Slip resistance testing at Wrightington Hospital



1. The Munro-Stanley pendulum machine was fitted with an in-date Four S rubber /Slider 96 by a trained operator
2. Check made that the pendulum was level and free from obstruction, ensuring the pendulum arm was free to swing



3. Pendulum machine calibrated to ensure the reading was zero
4. The slider stroke length was set and prepared with P400 grade paper



5. Second preparation of the slider undertaken, using pink lapping film
6. The slider length was then set on the floor and a dry test was undertaken



7. Test repeated but in wet conditions
8. Results recorded and the zero reading was re-checked, prior to the next pendulum swing. Polysafe Ultima received a mean average result of over 40 in the wet



9. A hand-held Surtronic Duo meter was used to calculate Ultima's surface roughness
10. A mean average surface roughness of over 70 microns was achieved in-situ. This conforms to HSE Guidance on product suitability where contaminants such as oil and margarine are present.



Slip resistance and in-situ HSE Compliance

In order to demonstrate the slip resistance claims made on the Ultima product are sustainable in use at the hospital and adhere to HSE Guidance, an exercise was undertaken to test the floor in-situ, using the methods favoured by the HSE - the RRL Pendulum wet test and Surface Roughness test. These tests were carried out by a trained operator in strict adherence to the BS 7976 standard, using the protocols described in the UK Slip Resistance Group Guidelines 2005. Tested after a busy period of food preparation, the floor area was swept and then tested, before the daily maintenance regime had been undertaken. The area was then cleaned and the tests repeated.

Firstly, the RRL Pendulum test was carried out in the wet condition, using a Four S rubber/Slider 96 and using the recommended slider preparation techniques. A mean average result of over 40 was achieved after 5 swings of the pendulum had been undertaken, both before and after the floor was cleaned by hospital staff.

A surface roughness meter was also used on the floor surface to determine the micro roughness of the flooring, with a mean value of several peak to valley measurements being electronically calculated on the floor surface. In both

tests before and after cleaning, the mean average of the top three results gave readings of over 70 microns to meet HSE Guidelines. This means that the flooring has sufficient roughness to lower the slip potential in the presence of highly viscous contaminants commonly found in the kitchen, such as olive oil, cooking stock and margarine.

Using these slip test results in conjunction with each other, it can be shown that the floorcovering is fully HSE compliant and has sustainable slip resistance in use. According to HSE classifications, Polysafe Ultima is therefore positioned as low slip potential.

Cleaning

The kitchen at Wrightington Hospital is maintained in a traditional manner, with the daily use of a mop and bucket system. This involves the use of neutral detergent diluted with water to the recommended levels. On a weekly basis, maintenance is also undertaken via a mechanical scrubbing machine.

Polysafe Ultima does not require any special maintenance regime, although a dedicated cleaning procedure needs to be in place. For further cleaning guidance and recommended maintenance products, contact Polyflor's Customer Technical Services Team on 0161 767 1912. Alternatively, maintenance sheets are available directly from the Polyflor website on: www.polyflor.com.

The Ultimate Solution

"We selected the flooring based on HSE recommendations and are extremely pleased with its performance."

Brian Porter,
Estates Manager, Wrightington Hospital.



Health Technical Memorandum 61:

Flooring - Department of Health
Recommendation for Central
Cooking area of a kitchen.
SR (Slip resistant).
Polysafe Ultima



Summary

As has been shown at Wrightington Hospital, Polysafe Ultima is the complete flooring solution. For areas where the outcome of a risk assessment demands a floorcovering that can cope with exacting conditions and frequent, high viscosity contaminants, Ultima is the answer to retain underfoot safety and lower slip potential.

Ideally placed as a tough performer within the safety flooring market, Ultima's sustainable slip resistant surface gives extra durability for years of performance - and a complete piece of mind specification.

Why Ultima?

- Sustainable slip resistance ≥ 40 RRL Pendulum wet test (Four S rubber /Slider 96) assured throughout the guaranteed life of the product
- Surface roughness - typical result of over Rz 70 μ m - to deal with oil and grease spillages
- Simple maintenance
- Flexible for ease of installation, coving and welding - can be seam-welded to achieve an impervious and hygienic finish
- 10 year assurance of product performance, independently assessed by the British Board of Agrément

Useful references for further reading

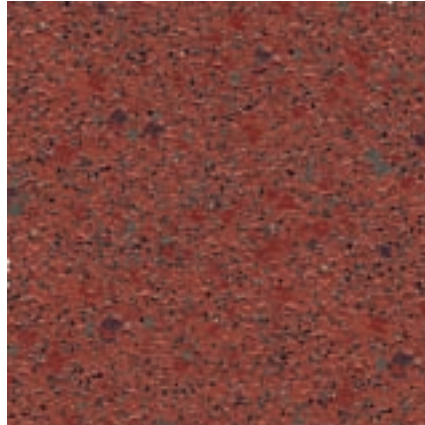
'Assessing the slip resistance of flooring'
HSE Information Sheet, 2007

'Taking Slips and Trips Seriously'
Paul Beaumont, HSC

'Slips and trips: The importance of floor cleaning'
HSE Information Sheet - Slips and Trips 2

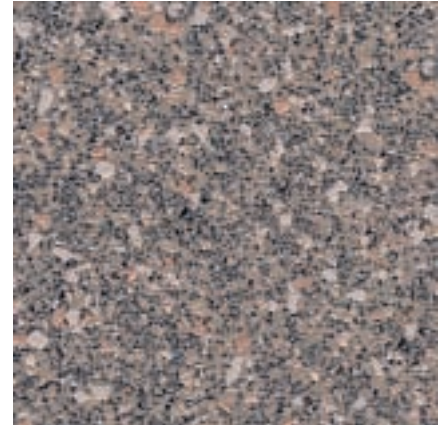
'Slips and trips: Summary guidance for the catering industry' HSE Information Sheet - Catering Sheet No 6

The Colours



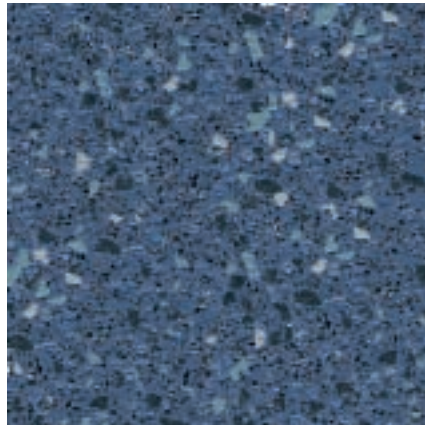
Iron Ore **4340**

w/r **4640**



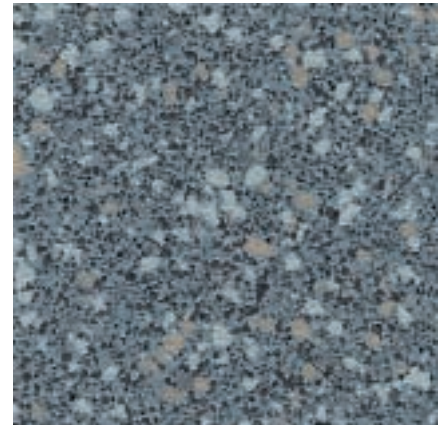
Mortar **4360**

w/r **4600**



Bluestone **4390**

w/r **4910**



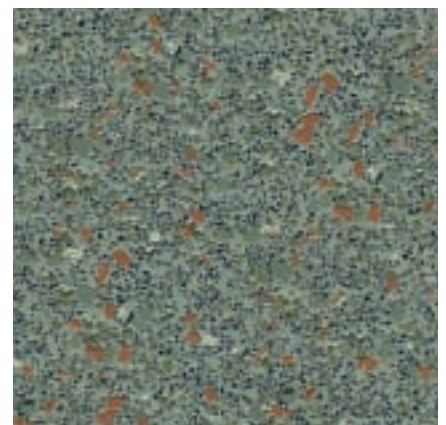
Pearl Granite **4330**

w/r **4670**



Aurora Grey **4290**

w/r **4610**



Baltic Green **4350**

w/r **4350**

w/r = weld rod

'Preventing slips in the food and drink industries - technical update on floor specifications' HSE Information Sheet - Food Sheet No 22

'Preventing slips and trips in kitchens and food service' HSE Information Sheet - Catering Sheet No 6 (revised)

'Preventing slip and trip incidents in the education sector' HSE Information Sheet - Education Sheet No 2 (revised)















'Slips and trips in the health services' HSE Information Sheet - Health Services Sheet No 2

UK Slip Resistance Group (UKSRG) Guidelines, 2005

Health Technical Memorandum 61 : Flooring - Department of Health

All HSE Guidance is available on:
www.hse.gov.uk/slips/information.htm

Technical Specification The table below details the technical properties of Polysafe Ultima.

Gauge		2.5 mm	
Roll Size		2m x 20m = 40m ²	
Product Weight		3000g/m ²	
General Performance		EN 13845 ASTM F1303 Agrément - G5ws	
Use Area Classification		23, 34, 43	
Reaction to Fire		EN 13501-1 Class Bfl-S1 EN ISO 9239-1 ≥8kw/m ² EN ISO 11925-2 Pass ASTM E648 Class 1	
Enhanced Slip		Sustainable wet slip resistance* EN 13845 ESf RRL Pendulum Test ≥40 (wet test - 4S Rubber/Slider 96) Surface roughness Rz ≥70µm (Typical result) AS/NZS 4586 R11 The slip resistance is assured throughout the guaranteed life of the product, with strict adherence to HSE Guidelines	
Abrasion Resistance		EN 13845 50,000 cycles EN 649 Group T	
VOC Emissions		AgBB VOC test: Pass (Low result)	
Agrément Assurance		Polysafe Ultima has been independently assessed by the British Board of Agrément and product performance is assured for at least 10 years in recommended use areas. With proper maintenance, the appearance, colour and slip resistance will be retained during this period	
Resistance to Chemicals		Polysafe Ultima has good resistance to dilute acids and alkalis. The Polyflor Technical Information Manual provides a general guide. Chemical resistance charts by shade are available on request	
Hygiene		Contains antimicrobial agents. This product has been independently tested and results demonstrate that it inhibits the growth of MRSA on the flooring. An effective cleaning regime is however, the most important defence against infection	
Electrical Behaviour		EN 1815 This product does not accumulate static charges above 2kV and is classified as 'antistatic'. For specialist applications where there is a requirement to dissipate the electrostatic charge, see the Polyflor ESD product ranges	

Customer Support

For information regarding handling and installation, adhesives, maintenance, applications and chemical resistance, consult Polyflor Customer Technical Services on +44 (0)161 767 1912 or e-mail tech@polyflor.com.

*For clarification regarding slip resistance, consult Polyflor Customer Technical Services.



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