Dulux PROTECTIVE COATINGS

LUXAFLOOR® HSG

High Solids Epoxy For Concrete Floors — PC 705

FEATURES
- HIGH GLOSS FINISH
- IDEAL FOR INTERIOR AREAS SUBJECT TO HIGH WEAR
- EASY TO APPLY – GOOD FLOW OUT
- TINTABLE – AVAILABLE IN A WIDE RANGE OF COLOURS
- EXCELLENT CHEMICAL RESISTANCE

USES LUXAFLOOR® HSG is a high gloss, two components, epoxy for coating concrete floors. It is high build making it an ideal choice for coating floors that are subject to heavy traffic.

LUXAFLOOR® HSG is available in a wide range of colours from the Luxafloor® Colour Chart and can be tinted using the Dulux COLORFAST™ tint system.

SPECIFICATIONS **AS 4586:2013** Refer to Luxafloor Aggregates Technical Data Sheet for the full list of systems and ratings.

RESISTANCE GUIDE

WEATHERABILITY	Will yellow with time. Will chalk on exposure to UV. Neither yellowing nor chalking detracts from the protective properties of the coating. Use a weatherable topcoat if appearance is important.	**SOLVENTS**	Good resistance to splash and spillage of aromatic and aliphatic hydrocarbon solvents and alcohols.
HEAT RESISTANCE	Up to 120°C dry heat	**WATER**	Excellent resistance to fresh and salt water but not suitable for immersion
SALTS	Excellent resistance to neutral and alkaline salts when suitably topcoated	**ALKALIS**	Good resistance to splash and spillage of most common alkalis
ACIDS	Suitable for splash and spillage of mild acids	**ABRASION**	Excellent when fully cured 128 mg weight loss per 1000 cycles, using a CS-17 wheel and a 1 kg load ASTM D4060

TYPICAL PROPERTIES AND APPLICATION DATA (STANDARD HARDENER)

CLASSIFICATION	Two Component Epoxy
FINISH	High Gloss
COLOUR	N35 Light grey, and a wide range of tinted colours.
COMPONENTS	Two
VOLUME SOLIDS	89% (White)
VOC LEVEL	90g/L (White, untinted)
FLASH POINT	Not applicable
POT LIFE	1 hours (10 litre kit, 25°C)
MIXING RATIO V/V	Part A: 3 Part B: 1
THINNER	920-08925 Dulux® Epoxy Thinner
PRODUCT CODE	721-63001 White/Light Base 721-63003 Clear Base 721-38678 N35 Light Grey 976H0256 Standard Hardener 976H0243 Cold Cure Hardener

APPLICATION CONDITIONS

	Min	Max
Air Temp.	10°C	40°C
Substrate Temp.	10°C	40°C
Relative Humidity		85%
Concrete Moisture		<6%

COATING THICKNESS (MICRONS)

	Min	Max	Recommended
Wet film per coat (µm)	85	225	115
Dry film per coat (µm)	75	200	100

SUITABLE SUBSTRATES	Suitably primed and properly prepared concrete by mechanical means (diamond ground, blast track or similar).
PRIMERS	Suitable to be primed with Luxafloor Primer, Luxafloor LGE or itself.
TOPCOATS	Not applicable
APPLICATION METHODS	Brush, roller, and/or airless spray

DRYING CHARACTERISTICS AT 100µm DRY FILM THICKNESS* (STANDARD HARDENER)

Floor Temperature	Humidity	Touch	Light Traffic	Full Cure	OVERCOAT Min	OVERCOAT Max[1]
10° C	50%	9 Hours	19 Hours	7 Days	19 Hours	7 Days
15° C	50%	7 Hours	12 Hours	7 Days	12 Hours	7 Days
25° C	50%	3 Hours	7 Hours	7 Days	7 Hours	7 Days

*These figures are a guide only, as ventilation, film thickness, humidity, thinning and other factors will influence the rate of drying.
[1]**If the maximum overcoat interval is exceeded then the surface MUST be abraded to ensure maximum intercoat adhesion.**

SPREADING RATE
with Standard Hardener
assuming no losses

8.8 square metres per litre equals 100µm dry film thickness
NOTE: Practical spreading rates will vary depending on such factors as application method, ambient conditions, surface porosity and roughness.

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COLD CURE HARDENER

COATING THICKNESS (MICRONS)

	Min	Ma	Recommended
Wet film per coat (µm)	85	23	115
Dry film per coat (µm)	75	20	100

SOLIDS BY VOLUME	87% (White/Light Base)
VOC LEVEL	102 g/L (White, untinted)
POT LIFE	40 Minutes (10 litre kit, 25°C)

APPLICATION CONDITIONS

	Min	Max
Air Temperature	5°C	40°C
Substrate Surface Temperature	5°C	40°C
Relative Humidity		85%
Concrete Moisture Content		<6%

DRYING CHARACTERISTICS AT 100 µm DRY FILM THICKNESS* (COLD CURE HARDENER)

					OVERCOAT	
Floor Temperature	Humidity	Touch	Light Traffic	Full Cure	Min	Max[1]
5° C	50%	10 Hours	24 Hours	7 Days	24 Hours	7 Days
10° C	50%	8 Hours	17 Hours	7 Days	17 Hours	7 Days
15° C	50%	6 Hours	11 Hours	7 Days	11 Hours	7 Days
25° C	50%	3 Hours	6 Hours	7 Days	6 Hours	7 Days

*These figures are a guide only, as ventilation, film thickness, humidity, thinning and other factors will influence the rate of drying.

[1]If the maximum overcoat interval is exceeded, then the surface MUST be abraded to ensure maximum intercoat adhesion.

SPREADING RATE
with Cold Cure Hardener
assuming no losses

8.7 square metres per litre equals 100 µm dry film thickness
NOTE: Practical spreading rates will vary depending on such factors as application method, ambient conditions, surface porosity and roughness.

TYPICAL SYSTEMS

This is a guide only and not to be used as a specification. Your specific project needs must be discussed with a Dulux Protective Coatings Consultant.

SURFACE	ENVIRONMENT	PREPARATION GUIDE	SYSTEM		DFT (µm)
CONCRETE	Interior floors -Slip Resistant	Remove curing agents and other surface contaminants. Diamond grind or track blast.	1st Coat 2nd Coat	Luxafloor® HSG* Thin by 10 - 15% Luxafloor® HSG Mix in Stir-In Aggregate Coarse @ 30g/L	125 µm 125 µm
CONCRETE	Interior	Remove curing agents and other surface contaminants. Diamond grind or track blast.	1st Coat 2nd Coat	Luxafloor® Primer Luxafloor® HSG	100 µm 100 µm
CONCRETE	Interior	Remove curing agents and other surface contaminants. Diamond grind or track blast.	1st Coat 2nd Coat 3rd Coat	Luxafloor® LGE Luxafloor® HSG Luxafloor® HSG	125 µm 100 µm 100 µm

NOTE: If application is by brush or roller, additional coats will be necessary to achieve the minimum DFT and full opacity
*When using Luxalfoor® HSG as the first coat the sheen level may vary.

SURFACE PREPARATION

Concrete must be at least 28 days old before coating. Remove oil, greases, and other oily contaminants with Gamlen CA 1 (according to the manufacturer's written instructions and all safety warnings). Diamond grind, blast-track or mechanically abrade concrete floors to remove laitance, curing compounds, hardeners, sealers and/or other contaminants and to provide a concrete surface profile of CSP 2-3 per ICRI 310.2R. Remove all dust and debris by vacuum cleaning. Large cracks, voids and other surface imperfections should be filled with a suitable epoxy filler/surfacer as recommended by your local Protective Coatings Representative. Check moisture content of the floor prior to painting*.

*Allow new concrete to cure a minimum of 28 days at 24°C. To minimise the risk of moisture interference, Dulux recommends the following two tests be performed prior to coating – ASTM F2659 – 10 "Standard Guide for Preliminary Evaluation of Comparative Moisture Condition of Concrete, Gypsum Cement and Other Floor Slabs and Screeds Using a Non-Destructive Electronic Moisture Meter"(moisture content not to exceed 6%) and ASTM D 4263 "Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method" (no visible moisture present).

If there is any concern about moisture problems with the concrete slab, or for projects greater than 500m^2, at least one of the following more accurate quantitative test methods should be used - ASTM F 1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride" (moisture vapor transmission should not exceed 1.4 kilograms (3 pounds) per 93 square metres (1,000 square feet) in a 24 hour period), ASTM F 2170 "Standard Test Method for Determining Relative Humidity in Concrete using in situ Probes" (as referred to in AS 1884-2012, relative humidity should be less than 75%) Note: The testing listed above cannot guarantee avoidance of future moisture related problems particularly with existing concrete slabs. This is

	especially true if the use of an under-slab moisture vapor barrier cannot be confirmed or concrete contamination from oils, chemical spills, unreacted silicates, chlorides or Alkali Silica Reaction (ASR) is suspected.
PRECAUTIONS	This is an industrial product designed for use by experienced Protective Coating applicators. Ensure that you read and understand the safety precautions on the relevant Safety Data Sheets before using. The surface to be coated must be totally free of moisture and contaminants. Do not apply at temperatures below 10°C if using standard hardener. Do not apply at relative humidity above 85% or when the surface is less than 3°C above the dewpoint. The rate of cure is dependent upon many factors such as surface/ambient temperature, ventilation/air exchange rate, relative humidity, etc. Where application conditions are outside the parameters stated in this Technical Data Sheet, or where any variation to the recommendations are sought, contact your Dulux® Consultant for written specifications prior to application. Freshly mixed material must not be added to previously mixed material. **Note –** Rubber-tyred vehicles, particularly those using new high-performance car tyres, may cause yellowing or staining on floor coatings. The rubber can contain materials that will migrate into the surface coating and cause this effect. This is dependent on the composition and age of the tyre and may affect all coatings to a greater or lesser extent. Refer to our tech note (https://www.duluxprotectivecoatings.com.au/media/1542/139-concrete-floors-tyre-staining.pdf) to find out more about tyre staining and how it can be managed.
APPLICATION	Mix each can thoroughly using a power mixer until the contents are uniform. Ensure bases have been tinted to the correct colour before use. DULUX® ASSUMES NO RESPONSIBILITY FOR THE APPLICATION OF INCORRECT COLOUR. Mix the contents of both parts together thoroughly with a power mixer. Box all containers before use to ensure colour consistency. Remix thoroughly before application. **Roller:** Thin 10% to 15% with Dulux® Epoxy Thinner (920-08925). Use 10 mm to 15 mm synthetic shed resistant woven nap covers. Note: Two or more coats may be required to obtain recommended film thicknesses. **Brush**: Thin 10% to 15% with Dulux® Epoxy Thinner (920-08925). Recommended for ”cutting in” edges & small touch up areas only. Use high quality natural or synthetic bristle brushes. Note: Two or more coats may be required to obtain recommended film thicknesses. **Airless Spray: Graco King E60** Airless Sprayer or equivalent. Thinning is not normally required but up to 50 ml/litre or 5% of Dulux® Epoxy Thinner (920-08925) may be added to aid application. Apply in multiple wet coats overlapping each pass 50%.

Tip Orifice	Atomising Pressure	Mat'l Hose ID	Pump Manifold Filter
0.015” – 0.019” (381 - 483 microns)	3,200– 4,000 psi (220-276 bar)	3/8” (9.5 mm)	60 mesh (250 microns)

2 metre x ¼” (6.35mm) whip hose is allowed at the end of the material hose for greater ease of application.

CLEAN UP	Clean all equipment with Dulux® Epoxy Thinner (920-08925) immediately after use.
OVERCOATING	Overcoat evaluations must be performed to ensure compatibility between the aged existing coating system and the proposed new coating system. Additionally, it is imperative to understand if an acceptable level of adhesion can be achieved between the two systems. Evaluations which must occur include a visual and physical inspection of the existing coating system and representative test patch evaluations of the new system over the existing aged coating system. Inclusive of the test patch evaluation requires adhesion testing by AS 3894.9, “Determination of Adhesion”, Method A, “Knife Test” and/or Method C, “Pull Off Test”. An acceptable result for Method A would be a rating of 2 or better. An acceptable result for Method C would be cohesive failure of the substrate. If the tensile strength of the coating is less than the tensile strength of the substrate, the coating system should be considered not suitable for coating over. Typical cohesive failure of concrete is in the range of 1.4 to 2.8 MPa. These evaluations should be accomplished in conjunction with your local Dulux PC Representative. If logistically not possible, contact your local Dulux PC Representative and/or Dulux PC Technical Services to discuss what these evaluations should consist of, and what a successful outcome would look like for a proposed overcoat system.

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SAFETY PRECAUTIONS	**Read the Technical Data Sheet, SAFETY DATA SHEET and any precautions on container labels. SAFETY DATA SHEET is available from Customer Service (13 23 77) or www.duluxprotectivecoatings.com.au**
STORAGE	Store in a cool, dry, well-ventilated place and out of direct sunlight. For best product performance, avoid prolonged storage above 40°C, as elevated temperatures may result in thickening or reduced usability. Store away from foodstuffs. Store away from oxidising agents. Store away from sources of heat and/or ignition. Store locked up. Keep container standing upright. Keep containers closed when not in use - check regularly for leaks.
HANDLING	Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols.
USING	Use with good ventilation and avoid inhalation of spray mists and fumes. When spraying, wear combined organic vapour/particulate respirator. Users must always comply with their respective Local Spray-Painting Regulations at all times.
FLAMMABILITY	This product packaging is not flammable. On burning it will emit toxic fumes.

COMPANY INFORMATION

Dulux Protective Coatings a division of

DuluxGroup (Australia) Pty Ltd
1956 Dandenong Road, Clayton 3168
A.B.N. 67 000 049 427

DuluxGroup (New Zealand) Pty Ltd
150 Hutt Park Road, Lower Hutt, NZ
A.B.N. 55 133 404 118

PACKAGING, TRANSPORT AND STORAGE

PACKAGING	Available in 10 litre packs
TRANSPORTATION WEIGHT	1.81 kg/litre (Average of components)
DANGEROUS GOODS	Part A: Class 3 UN 3082 Part B: Class 2 UN 2735

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CHEMICAL RESISTANCE GUIDE

Chemical	96 Hours Result	Chemical	96 Hours Result
Alkali		**Solvents and Fluids**	
10% Sodium Hydroxide	Excellent	Engine Oil 5W40	Excellent
50% Sodium Hydroxide	Excellent	Unleaded Petrol	Excellent
13% Sodium Hypochlorite	Good (D)	Diesel	Excellent
Acid		Skydrol 500-B (G)	Very Good
10% Sulphuric Acid	Very Good (G)	Skydrol LD-4 (G)	Very Good
50% Sulphuric Acid	Very Good (G)	Skydrol PE-5 (G)	Very Good
70% Sulphuric Acid	Very Good (G)	Ethanol	Excellent
98% Sulphuric Acid	Not Suitable	MEK	Excellent
10% Hydrochloric Acid	Very Good (G)	Xylene	Excellent
30% Hydrochloric Acid	Very Good (G)	Ethyl 3-ethoxypropionate	Excellent
10% Acetic Acid	Fair (G) (D)	Benzyl Alcohol	Not Suitable
30% Acetic Acid	Not Suitable	Brake fluid	Excellent
5% Phosphoric Acid	Very Good (G)		
25% Phosphoric Acid	Not Suitable		
10% Citric Acid	Excellent		
50% Citric Acid	Excellent		
10% Nitric Acid	Very Good (G)		
25% Nitric Acid	Not Suitable		

*G = Gloss loss observed
*D = Discolouration observed
The above chart relates to a coating system of two coats of Luxafloor® HSG.