Technical Data Sheet

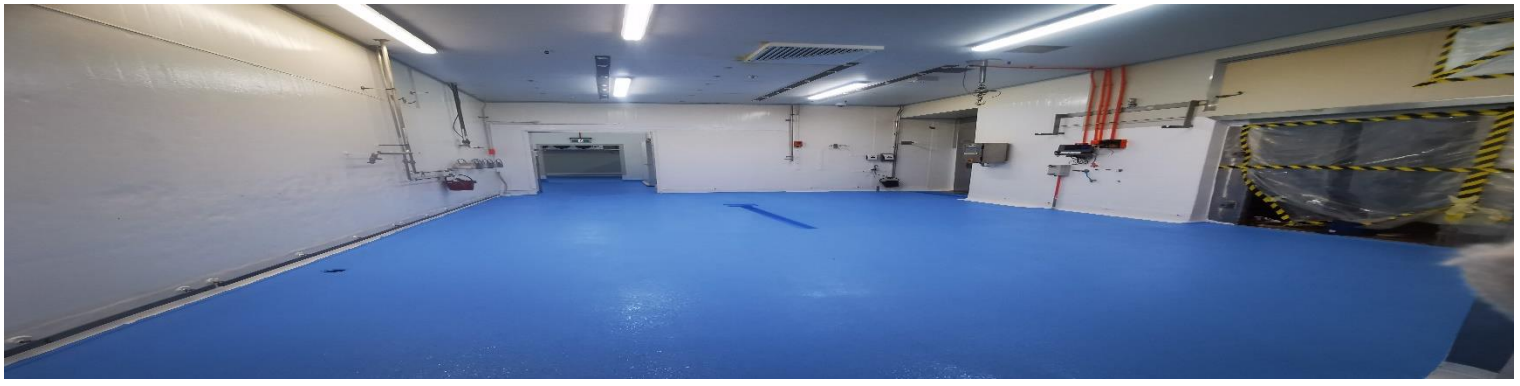
Terratuff Epoxy Coating System

DESCRIPTION:
Terratuff is a two-pack coloured epoxy floor coating system. Terratuff gives a smooth glossy finish with excellent wear resistance. It is a general purpose epoxy floor coating designed for commercial and industrial applications.
Terratuff is a medium build epoxy coating system suitable for application to a wide variety of floor and wall substrates and including concrete and steel.

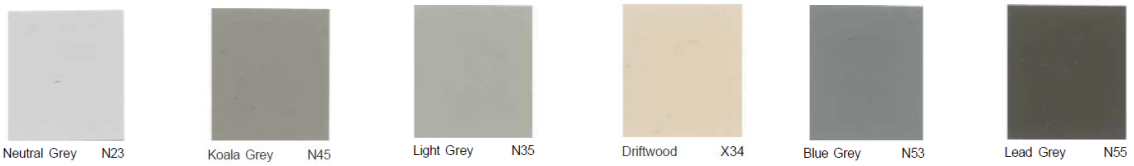
TYPICAL FEATURES | BENEFITS:

- Solvent based resin gives excellent concrete penetration and adhesion.
- Available in various slip resistance options.
- May be used in food safe areas.
- Very good abrasion and scuff resistance.
- Tolerant of application to a slightly damp surface.
- Excellent adhesion to properly prepared substrates.
- Easily cleaned.
- Excellent slip resistance. Specification is needed of the degree required.
  Note
  Please read detail contained within document.
- Cured Film is non-toxic.
- Not moisture permeable.
- Colour: Available in a wide range of colours.
- Attractive Surface Finish – medium gloss.

Note
For higher film builds refer:- Surecote 200
The Surecote 200 system is a non-odour system.



COLOURS:
Terratuff stocked colour is N35 light Grey.



Terratuff is available in many colours in the following charts:

BS5252: Colour Chart | AS2700: Colour Chart | RAL: colours & special colours are also available.

TERRATUFF SURFACE FINISH DESIGN OPTIONS:
Terratuff can be applied as a smooth surface or profiled non-slip application.
The degree of the surface profile is determined by the non-slip requirement for the environment.
Refer: Terratuff Specification.
For specific advice. *Refer: allnex Construction Products.*

PERFORMANCE DATA:

Properties		Values	
Minimum DFT Thickness:		2 x coats | Smooth Finish | 166 microns 3 x coats | Smooth Finish | 250 microns	
Minimum Application Temperature: Air		$^{+}5^{\circ}C$	
Maximum Application Relative Humidity: Air		85%	
In-service temperatures - wet : on fully cured system		$^{-}10$ to $^{+}60^{o}C$	
Critical Radiant Flux:		12.3Kw/m².	
Chemical Resistance		Resistant to chemical spillage –cured 7 days at $^{+}25^{0}C$. Refer: Chemical resistance chart	
Adhesion to correctly prepared substrate		1.5MPa minimum – Concrete Failure GB2567-2008. 2.77(KJ/m2). - Concrete failure	
Heat resistant		$^{+}60^{\circ}C$	
Slip resistance		R11 to R13. Refer: Slip resistance chart	
Hard Dry		$^{+}20^{0}C$ ~ 75%RH	10 hours
Recoat Time	~ Minimum ~ Maximum	$^{+}20^{0}C$ ~ 75%RH	10 hours 16 hours
Full Use		$^{+}25^{0}C$ ~ 70%RH	Effectively cured after 48 hrs. Full Cure: 7 days at 20°C

RECOMMENDED USES:
- Ablution areas.
- Bulk retail.
- Construction and Mining Industry.
- Chemical and Oil Industry.
- Food processing facilities.
- Pulp and Paper mills.
- Refineries.
- Residential garages and workshops.
- Sewerage treatment plants.
- Silos.
- Slip resistant floor finishes.
- Warehouses.

LIMITATIONS:
- Application below $^{+}5^{0}C$.
- Application to green (uncured) concrete. Allow 28 days.
  ** Will tolerate damp concrete**
- Application to unsound substrates.
- Application to incorrectly prepared surface.
- Weathering/UV - *Some chalking will occur in time but will maintain good film integrity.*

CHEMICAL RESISTANCE:

The following chart shows a representation of the chemical resistance of some of the colours available.
Resistant to chemical spillage –cured 7 days at 25^0C.

Note
Variables which may under extreme conditions, influence the chemical or corrosion resistance are:

- Temperature of chemical concentration.
- Intermittent or continuous contact.
- Application in adverse conditions.
- Risks of evaporation from spillage causing concentration to rise adversely.

Test Procedure	Observation	Results
Spot Testing.	Checked for chemical attack and hardness throughout the testing period.	Taken at the times specified.

Test Media	Concentration	Time Lapse			Test Media	Concentration	Time Lapse		
		1 Hour	3 hours	6 Hours			1 Hour	3 Hours	6 Hours
ACIDS					**ALKALIS**				
Hydrochloric Acid	10%	N	N	N	Potassium Hydroxide	30%	N	N	N
Sulphuric Acid	10%	N	N	N	Caustic Soda	50%	N	N	N
Sulphuric Acid	25%	N	N	N					
Acetic Acid	10%	N	SM	SM					
Acetic Acid	50%	MH	MH	MH	**SOLVENTS**				
Nitric Acid	10%	SM	SM	MH	Toluene		SM		
Citric Acid	10%	N	N	N	Acetone		SM		
Lactic Acid	90%	SM	MH	MH	Isopropanol		REC		
Phosphoric Acid	30%	SM	SM	SM	Methanol		REC		
PETROCHEMICALS					**DISINFECTANTS & CLEANERS**				
Kerosene		N	N	N	Ammonia Solution	25%	N	N	N
Industrial Gear Lubricant (Mobil 632)		N	N	N	Iodine (Betadine Solution)	10%	REC	REC	REC
Petrol 91 Unleaded		N			Bleach	2.15%	N	N	N
Fuel Oil – Diesel Oil		N	N	N	Dishwashing Liquid	100%	N	N	N
Hydraulic Fluid (Hyspin AWS646 - Castrol Oil)		N	N	N	MEKP – M50		N	N	N
OTHERS					**SALT SOLUTION**				
Food Emulsion (Milk)		N	N	N	Brine	20%	N	N	N

LEGEND:

N	No mark | No Effect	**SM**	Slightly Marked
D	Damaged | Blister	**MH**	Marked Heavily
REC	Recovered	**EF**	Evaluate Further

Note
Chemical spillages should be cleaned up immediately.

NON-SLIP:- floor definitions:
The contractor shall ensure that the surface finish in all zones is agreed with the client.
(*Samples to be supplied and agreed prior to start of the contract*)

Terratuff Type	Description	Description	CF Rating	SRV Rating	R Rating	Non - Slip
	Installation Type	Finish Type	NZ/AS 3661.1 1993	AS/NZS 4586		Application Rates
Type A	Smooth: Roller applied -	Smooth	0.46	41	R11	
Non-Slip Class 1	Fine/Medium duty non-slip: Roller applied with the addition of:- ~ Microcells *Mixed into the Terratuff prior to application.* *Applied in the second to last coat.*	Fine non-slip	0.54	50	R11	@100grams/4 Ltr
	~ Revtred *broadcast into the second to last coat*	Fine-Medium non-slip	0.56	51	R12	12 grams / m^2
Non-Slip Class 2	Medium duty aggregate: non-slip: Roller applied with the addition of:- ~ J61 Sand ~ Q900 *Broadcast into the wet Terratuff coating with further coats over the aggregate Broadcast*	Fine – Silica Sand Fine – medium garnet	0.63 0.73	57 64	R12 R13	1.0 kg / m^2

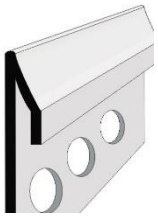
SUBSTRATE: – Preparation
All substrates shall be stable and solid.

Note
All control joints junction cracks in the substrate etc. are to be properly treated.

CONCRETE:
Shall have a surface which has been mechanically trowelled to AS3610:1995 U3/NZ/3114:1987U3 finish.
A minimum compressive strength of 25MPa at 28 days cure.
A minimum of 28 days prior to the installation of Terratuff.
The moisture content shall be less than 75% RH. *(Refer allnex Bulletin on application options for wet or uncured concrete).*

PLYWOOD | TIMBER | FIBRECEMENT
Refer: Terratuff Specification

COVE TOPS:
Install allnex cove upper termination metal strips: **5.2mm or 9.2mm rebated strip**.(*Refer: Typical Resin Flooring Details Document*)


Cove Strip 5.2mm


Cove Strip Rebated 9.2mm

If the coving strip cannot be used refer to the Resin Flooring Details Document for options.

RESIN FLOORING DETAILS
Refer: Typical Resin Flooring Details Document

FALLS TO WASTES:
STZ prefill system (for adding falls, slope modification and floor angles).
Types: *Refer: STZ Prefill Technical Literature.*
The falls must be specified pre-tender. (*Terratuff is thin film coatings system and prefill may involve significant extra materials).*
The quantities of materials required to raise the floor height at wall perimeters is often underestimated.
To do this may involve significant extra costs and should be discussed and agreed.
It is a very common for STZ prefill system to be used under Terratuff to create falls to drains and other filling applications.
Normally for new work falls are laid in the concrete and fall to drains.
However; in refurbishment situations the drains and falls are incorrect. Sometimes new drains are installed.
The Prefill can be installed to any thickness to create falls.
If the project is a food processing facility, ensure that your requirements fall within the guidelines of current legislation.

Floor Fall Definitions	
1:50	Liquids will free run to drainage
1:80	Liquids will migrate to drainage
1:100	Some ponding of liquids will occur, squeegee to drainage will be required.

JOINTS:
All concrete control and construction joints should be carried through the Terratuff.

Jointing Options	
Control | Construction Joints	Cold Joints | Non-Movement Joints
allnex K130 or allnex Sabreseal SMP60	allnex K130 or allnex Sabreseal SMP60

QUALITY ASSURANCE:
The allnex approved Applicator shall ensure all QA checks have been undertaken prior to the installation process and subsequently during the installation process. The completed documentation must be made available to allnex and the client/clients authorised personnel.
The product is to be installed within the required control range to ensure a fully cured hard wearing monolithic floor coating system.
Information to be recorded daily is:

- Concrete sub-base or prefill mix.
- Sequence of mixing, ratios and quantities and formula.
- Ambient temperature | Ambient relative humidity.
- Material batch numbers used.
- Substrate moisture content & Substrate temperature.
- Daily detail of licenced contractors on-site.

CLEANING & MAINTENANCE:
Cleaning:
Refer: Cleaning Maintenance Document

Repairs:
Can be undertaken with further new Terratuff applied directly.

Resurfacing:
allnex recommend ***two*** (2) options:

Smooth System
- Re-surfacing with further coats of Terratuff.

Profiled | Non-Slip System
- A second option is Terratuff Non-Slip which will reinstate the non-slip properties or add non-slip to a previously smooth surface finish.

FIXING OF PLANT AND MACHINERY:
Mechanical fixings into the substrate must be resin fixed. This is to ensure that there is no water migration into the substrate.
Conventional expanding plugs, screws or anchors are not an acceptable fixing method.

PRODUCER STATEMENT:
allnex Construction Products state that:-
Terratuff is compliant with:

- HACCP International Certification.
- E3 Internal water 3.1.1e.
- D1 (Access routes / slip resistance wet & dry).
- Complies with CLEANROOM and controlled environment:-AS/NZS ISO 14644.4: 2002 section E.2.1.4 Floors:-
  - *That the floor shall be non-porous, slip resistant, abrasion resistant and resistant to chemicals.*
  - *That they shall support static and dynamic loads.*
  - *Complies with fire ratings.*

HEALTH & SAFETY: *Refer: safety data sheets (SDS).*

- Applicators are to comply with all current legislation when using this product.

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