Technical Data Sheet

Fibreclene Fibre- reinforced wall cladding system

DESCRIPTION:
Fibreclene is a GRP (glass reinforced plastic) polyester wall cladding system applied in situ to provide a smooth white, jointless, impact resistant, hygienic surface, which follows the substrate contours, profiles etc.

TYPICAL FEATURES | BENEFITS:
- Good stain and chemical resistance.
- Short application period.
- May be applied to a wide variety of surfaces.
- Excellent adhesion to properly prepared substrates.
- May be used in food safe areas.
- Easily repaired and maintained.
- Finish – Semi-gloss.
- Based on chemical resistant vinyl-ester resin.
- Very good abrasion and scuff resistance.
- Cured Film is non-toxic.
- Resistant to peeling and flaking.
- Complies with Food environment regulations
- Easily cleaned.

PERFORMANCE DATA:

Minimum Application Temperature: Air	$^{+}10°C$
Maximum Application Relative Humidity: Air	80%
In-service temperatures:	$^{-}20$ to $^{+}100°C$
Laminate hardness:	Barcol (934-1) 45
Chemical Resistance:	Resistant to chemical spillage –cured 7 days at $25^{0}C$.

COLOURS:
Standard colour: White
Other pastel colours may be ordered. Minimum order quantities may apply.

RECOMMENDED USES:
- Commercial kitchen walls
- Construction and Mining Industry.
- Food storage and processing facilities.
- Pulp and Paper mills.
- Storage tanks / bunds. - walls and floors
- Meat processing facilities.
- Chemical and Oil Industry.
- Pharmaceutical filling and processing areas.
- Dairy Industry.
- Silos.

NOT RECOMMENDED:
- Application below $^{+}10^{0}C$.
- Application to green (uncured) concrete. Allow 28 days.
- Application within proximity of foodstuff (odour may contaminate food products).
- Application to unsound substrates.
- Application to incorrectly prepared surface.

HEALTH & SAFETY: Refer safety data sheets (SDS).
- Avoid skin contact.
- Provide adequate ventilation during application and cure.
- Wear safety equipment including clothing and respirators.
- Resin and catalyst fumes can contaminate adjacent foodstuffs.
- MEKP Catalyst is highly corrosive - protect eyes and skin.
- Solvents highly flammable. Erect “no smoking” signs.
- No welding or naked flames permitted during installation.
- Have fire extinguishers readily available.

SUBSTRATE:
All substrates shall be stable and solid.

Concrete: New
Shall have a surface which has been mechanically trowelled to AS3610:1995 U3/NZ/3114:1987U3 finish.
Concrete shall be cured for a minimum of 28 days prior to the installation of the Situclad VE.
Minimum Compressive Strength at 28 days cure: 25 MPa. (25 N/mm^2)
The moisture content shall be less than: 75% RH.
Have a suitable vapour resistant membrane beneath the concrete.

Concrete: Old
Minimum Compressive Strength: 25 MPa. (25 N/mm^2)
The moisture content shall be less than: 75% RH.
Have a suitable vapour resistant membrane beneath the concrete.

Concrete Block:
Concrete Block must be installed to the manufactures specifications and comply with current building codes.
Have a moisture content less than: 75% RH.
Pointing must be flushed and cured.

Fibre Cement Sheet:
Fibre cement sheet must be a minimum of 9mm with rebated edges that can be stopped to flush the joints.
Fibre cement is loose butted and is to be mechanically fastened by corrosion resistant screws (preferably 30mm 316 stainless screws) at 200mm centres around the perimeter and 300mm centres within the sheets. (All fastenings must be countersunk 0.5mm) Frame centres should be at a maximum 600mm. Centre nog joists at 1200mm. Refer to the Manufacturer's installation instructions.
All joints must be flushed in accordance with the Manufacturer's instructions.
All screw holes must be filled as per the Manufacturer's instructions.

Plywood Sheet:
Plywood must comply with AS/NZS2269 for structural plywood and be a minimum 12mm (walls) and 17mm (floors) H3.2 treated CCA (water-based treatment) with a square edge.
Plywood is loose butted and is to be mechanically fastened by corrosion resistant screws (preferably 50mm stainless screws) at 150mm centres around the perimeter and 200mm centres within the sheets. (All fastenings must be countersunk 0.5mm) Frame centres should be at a maximum 600mm. Centre nog joists at 1200mm.
All joints must be left with a uniform finish.
Install Situclad VE Reinforcement bandage to all plywood joints.

QUALITY ASSURANCE:
The allnex Licensed Contractor 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 Protective Lining System.
Information to be recorded daily is:

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

PRODUCT PROPERTIES:

Pot Life	+25^{0}C ~50%RH	25 - 35 minutes
Touch Dry	+25^{0}C ~50%RH	60 - 70 minutes
Hard Dry	+25^{0}C ~50%RH	3 hours 3.5 hours *With the addition of Retarder
Recoat time ~ Minimum ~ Maximum	+25^{0}C ~50%RH	 60 minutes 48 hours: * Refer note #1 below
Light Use	+25^{0}C ~50%RH	24 hours
Full Cure	+25^{0}C ~50%RH	7 days
Laminate Thickness -approximately	1.75mm (0.070")	
Thinning	Not recommended	
Lubrication of tools	Styrene Monomer	
Clean Up	Acetone	
Dangerous Good Class ~ STZ Primer ~ Fibreclene Resin ~ STZ Hardener	 Hazard Class 3 | Packing Group III Hazard Class 3 | Packing Group III Hazard Class 5.2	
Packaging ~ STZ Primer ~ Fibreclene Resin ~ STZ Hardener	 20 kg Open top metal container 20 kg Open top metal container 3.6 kg Plastic Bottle	
Shelf life	3 months from date of manufacture. (After this period consult with allnex)	

Note #1
After this time severe abrasion of the surface followed by solvent swabbing with Styrene Monomer will be required to ensure satisfactory adhesion.

SURFACE PREPARATION:
Concrete:
Prepare concrete by mechanical abrasion method to: - ***CSP3.*** (Concrete Surface Profile Scale - International Concrete Repair Institute)
See technical literature: - http://www.allnexconstruction.com/pdf/Floor_Preperation_Requirements.pdf
Remove all concrete curing agents, contaminants and any other material likely to affect the adhesion of the Fibreclene.
Do not apply over existing coatings.
Prefill any large divots with allnex Sureshield resin/aggregate and diamond grind to remove any highpoints or contaminants.

FLOOR / WALL INTERNAL JUNCTIONS:
Install Coves using:
- Sureshield resin/aggregate

STZ PREFILL: (for adding falls, slope modification and floor angles)
Where required:
STZ prefill system types: See STZ technical literature. http://www.allnexconstruction.com/pdf/stz_prefill.pdf
The falls must be specified pre-tender. (Fibreclene is medium build fibreglass laminate 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 Fibreclene 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 the drains and falls are incorrect. Sometimes new drains are installed. The Prefill create falls of at least 1: 50 to ensure no ponding water. (1:100 will fall but will have standing water in places).

FIBRECLENE COVERAGE:

System Stage	Material	Coverage Rates | Usage M^2
Primer	STZ Primer	0.166kg
Resin Body-coat	Situclad VE Resin/Hardener	1.2kg
Fibreglass Reinforcement	Chopped Strand Matt ~ 450 gsm	1 m^2
Resin Body-coat	Situclad VE Resin/Hardener	0.8kg
Surfacing Finish	Surfacing Tissue	1 m^2
Resin Body-coat	Situclad VE Resin/Hardener	0.4kg
Resin Topcoat	Surechem VE Topcoat/Hardener	0.166kg

CATALYST:
Use allnex STZ Hardener

FIBRECLENE | HARDENER MIXING RATIO:

Product	Hardener
Fibreclene	1.0 - 2.0% **depending on temperature**

****Note****
Variations on the level added as stated above are permitted with allnex consent in certain environmental conditions.
Refer allnex Construction Products.

RETARDER:
Where extended working time is required allnex Retarder may be incorporated in the resin prior to the addition of catalyst.
Refer allnex Construction Products.

FIBRECLENE MIXING:
Mixing:
Measure correct quantities of resin and hardener and pour into a suitable container. Power mix at low speed (approximately 300rpm) for 2 minutes ensuring both compounds are homogeneously blended.
Note: ensure no unmixed materials remain on the sides, rims or lips of the containers.

****DO NOT THIN****

INSTALLATION:
Primer:
Roller | Brush

Prime the correctly prepared areas with minimum, one coat of STZ Primer. Coverage rate and number of coats will vary depending on the porosity of the substrate. Maximum coverage 6m²/litre/coat.

LAMINATE APPLICATION METHOD:
Roller | Brush | Laminating Rollers

Hand lay-up using laminating rollers to exclude air.
Apply evenly by way of roller/brush the resin body-coat across the area to be laid up.
A wet edge must be maintained across the work face to allow the next section of resin to be worked in without showing a ridge.
Install the pre -prepared 450gsm chopped strand matt into the wet resin body-coat.
The salvage edge of the fibreglass matt must be "teased' prior to installation.
The fibreglass is to have a 75mm minimum overlap.
The fibreglass matt is to be worked with a "Parsley Cutter" (laminating roller) to bring the resin through the matt thus ensuring a complete "wetting out".
When matt is completely "wetted out" apply more Fibreclene resin and immediately install the Surfacing tissue and subsequent coats of Fibreclene resin.
Allow to cure.

TOPCOAT:
Thin polyester films are prone to surface cure inhibition in situations where the styrene evaporates quickly.
This is particularly the case in situations where the topcoat is applied sometime after the laminate has been applied.
Surface cure inhibition is shown by an overly glossy finish and a tacky feel.
To counter this, consider catalyst levels at 2% and add 1.0- 1.5% allnex wax solution (pre-warmed to fully dissolve).
Stir this in well to the resin prior to catalyst addition.

MAINTENANCE:
Repairs:
Chemically clean.
Mechanically abrade surface.
Solvent wipe with Styrene Monomer
Apply Fibreclene as per "Installation instructions".

CLEANING:

Smooth Surface:

Conventional cleaning procedures are normally adequate to maintain clean and hygienic surface.

**** Note****

Ensure all detergent materials, dirt etc. is thoroughly rinsed from the surface following cleaning.

CAUTION:

Fibreclene is a combination of resin/hardener that is mixed in the specified ratio. Only these ratios will produce a hard, non-softening product.

Only the stated mix ratios will work and exhibit the stated performance data.

******Note well******

The consequences of having soft Fibreclene due to poor mixing may be far reaching and costly to repair.
This is a job that must be done once and done right. Many people do not understand the consequences.

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.

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