Technical Data Sheet

Date July 2014
Replaces Jan 2010

Protective Finishes

SITUCLAD VE chemically durable applied wall cladding

GENERAL DESCRIPTION: A vinyl-ester resin based, seamless glass fibre reinforced cladding system.

- **PROPERTIES/ FEATURES**: Situclad VE is a G.R.P. cladding system applied in situ to provide a jointless, impact, and chemical resistant, hygienic surface.
- Situclad VE has been specifically designed to provide excellent all round chemical resistance at both ends of the ph scale i.e. concentrated acids and alkali compounds.
- Excellent stain and chemical resistance.
- Short application period.
- Excellent impact and abrasion resistance.
- Easily cleaned.
- May be applied to a wide variety of surfaces.
- Easily repaired and maintained.
- Complies with Health, Agriculture and Fishery Department requirements.
- Cured films are non toxic.
- Will not peel or flake.
- Finish – semi gloss.
- Colour – clear (amber) while. Tinting of this product is not recommended, as chemical resistance will be affected.
- Minimum application temperature +10°C.

TYPICAL PROPERTIES OF THE CURED LAMINATE:

- Thickness: 1.75mm (0.070")
- Hardness: Barcol 45
- Heat resistance up to 100°C
- Fibreglass reinforcement:
  1st Layer
  450gsm/m² chopped strand E mat
  2nd Layer
  25 micron Finish mat

SUGGESTED USES:

- Food storage and processing plant.
- Chemical storage and bund areas.
- Sewage & wastewater facilities for liquid protection and gas-phase (Hydrogen Sulphide) protection.
- Brine and chemical tanks.
- Chemical processing areas.
- Pharmaceutical filling and processing areas.
- Hygiene areas.

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NOT RECOMMENDED:

- Application to damp surfaces.
- Application when humidity exceeds 80% RH or surface dew point has been reached.
- Application within close proximity of foodstuff (odour may contaminate food products).
- Do not use without Cobalt promoter and catalyst

Chemical Resistance @ 25°C (ambient)

	Concentration	Effect
Acetic Acid	70%	NC
Brine	Sat	NC
Citric Acid	Sat Soln	NC
Distilled Water	All	NC
Hydrochloric Acid	37%	NC*
Hydrofluoric Acid	20%	EF
Hydrogen Peroxide	35%	NC*
Hydrogen Sulphide	All	NC
Lactic Acid	All	NC
Nitric Acid	30%	NC*
Nitric Acid	40%	EF*
Oxalic Acid	Sat	NC
Phosphoric Acid	85%	NC
Potassium Hydroxide	45%	NC*
Sodium Hydroxide (Caustic Soda)	50%	NC*
Sodium Hypochlorite	(Refer Nuplex Industries for a specific recommendation)	
Sulphuric Acid	70%	NC*

NR	Not recommended
NC	Not corrosive
EF	Evaluate further
*	Staining may result

Solutions are Aqueous unless otherwise stated and results apply to fully cured resin.

Note: The table represents a guide only. Variables which may under extreme conditions influence the chemical or corrosion resistance are:

1. Temperature of chemical concentrations.
2. Intermittent or continuous contact.
3. Application in adverse conditions.
4. Risks of evaporation from spillage causing concentration to rise adversely.
5. Good service may be expected where NR or EF is specified if exposure is intermittent or limited to occasional splash, spill or fumes. Refer to Nuplex Industries Ltd for specific advice on this, or chemical contamination other than those listed.
6. Chemical resistance and general physical properties can be improved by post cure treatment (refer to Nuplex Industries Ltd for specific advice).

Note well: New Pails are marked as unpromoted. Nuplex supply the VE in 20 ltr pails with open top lids enabling the Cobalt to be mechanically mixed into the resin base. Buy another catalyst dispenser and mark it for Cobalt use only. The cobalt can be added up to 12 hours prior to use. Always add Cobalt first, mix and then add catalyst. Never mix Cobalt and catalyst. Pre-train staff. The lids are marked as un-promoted – tick or mark once promoted. **Good Trade Practice: - Train staff & mix cobalt and mark all resin in a separate operation on the same day as use. Then take the promoted material to the workface for catalyst addition.**

0.3%. or 60grams GRAMS COBALT TO ADD PER 20Kg:

Check the Cobalt's age and stability by doing a TRIAL prior to work start. Promote at the correct level, then add a high catalyst % to check that the reaction starts. Even if high catalyst levels are added, unpromoted resins will not cure. This trial can also be used if confusion occurs about Cobalt addition.

Be well organised and train staff clearly in the promotion and catalysation processes. Mistakes are costly.

APPLICATION:

Method

- Hand lay-up using parsley cutter type rollers.
- Chopper gun, final wet out using parsley cutter type rollers.
- Resin is applied by brush, roller or 2 component spray equipment.
- Laminate must be applied as a continuous wet on wet type process.

- Apply Situclad VE topcoat or Situclad VE Glassflake

Catalyst: Promote as above , then add Nuplex VE Catalyst only, use 1.5 – 2.5% on resin weight.

Note: Approval must be sought from Nuplex Industries Ltd before use of alternative grade of catalyst.

COVERAGE RATES M²:

STZ Primer	0.125kgs
Situclad VE Resin	2.5kgs
Chopped Strand E Matt	0.45kgs
Nexus or type C Surface Veil	1m²

Note: The above rates are theoretical and do not take into account losses through surface irregularities, mixing and application.

Retarder: Where extended working time is required Nuplex VE Retarder may be incorporated in the resin prior to the addition of catalyst.
Recommended maximum addition on VE resin weight 1.0%.

DRY TIMES @ 25°C:
(1% MEKP catalyst)

Resin gel time	25-35 minutes
Resin gel time (with retarder addition)	65-75 minutes
Recoat minimum	60 minutes
Recoat maximum	48 hours

(After this time sever abrasion of the surface followed by solvent swabbing will be required to ensure satisfactory inner coat adhesion.)

Hard dry	3 hours
Light use	24 hours
Full cure	7 days

THINNING: Not recommended. If necessary consult Nuplex Industries Ltd for advice.

CLEAN UP: Acetone, Styrene Monomer
Lubricate and clean equipment using Styrene Monomer only.

CAUTION:

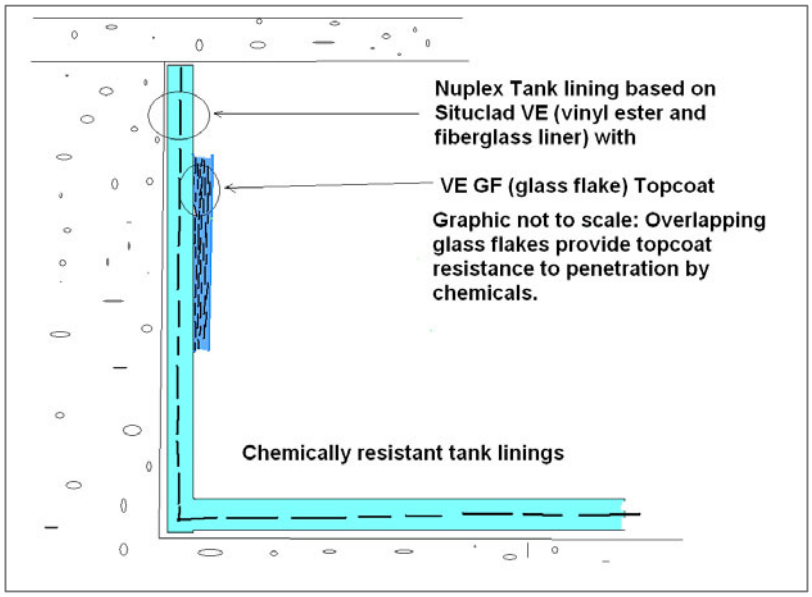
- Provide adequate ventilation during application and cure.
- Resin and catalyst fumes can contaminate adjacent foodstuffs.
- VE catalyst is highly corrosive protect eyes and skin.
- Solvents are highly flammable – erect “No Smoking” signs.
- No welding or naked flames permitted during installation.
- Have fire extinguisher readily available. Wear suitable protective breathing mask.

SHELF LIFE: 3 months in unopened containers.
Maximum useful shelf life is six months (check suitability with Nuplex Industries Ltd before use).

PACKAGING:

Situclad VE Topcoat	20 lt pails
STZ Primer	20Lt metal pails
Situclad VE Resin	20Lt metal pails

NZ DANGEROUS GOODS CLASS: Refer msds online



NB: GF glass flake optional.