

Technical Data Sheet

Situclad VE - Situclad VE Glass Flake Fibre- reinforced protective laminate system



DESCRIPTION:

Situclad VE | Situclad VE Glass Flake is a GRP (glass reinforced plastic) vinyl-ester cladding system applied in situ to provide a smooth, jointless, chemical & impact resistant, hygienic surface, which follows the substrate contours, profiles etc.

The Situclad VE laminate is overcoated with Situclad VE Glass Flake a vinyl-ester resin based, glass flake reinforced coating system (pre-filled).

Situclad VE | Situclad VE Glass Flake system 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.

Situclad VE | Situclad VE Glass Flake system is a Performance Protective Laminate:- it is not decorative | It is not flexible.

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.
- Tolerant of application to a slightly damp surface.
- Resistant to peeling and flaking.
- Complies with Food environment regulations
- Easily cleaned.
- Cured Film is non-toxic.

PERFORMANCE DATA:

| Element | Value | |
|--|--|----------|
| 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 | |
| Laminate Thickness: | 1.75mm (0.070") | |
| Tensile Strength: | 85 MPa | |
| Flexural Strength: | 140 MPa | |
| Flexural Modulus | 3.4 Gpa | |
| Elongation at Break | 6.7% | |
| Permeability: | Impermeable to water vapour | |
| Chemical Resistance: | Resistant to chemical spillage –cured 7 days at 25°C. Refer: Chemical resistance literature – see below | |
| Light Use: | +25°C ~50%RH | 24 hours |
| Full Cure: | +25°C ~50%RH | 7 Days |

RECOMMENDED USES:

- Construction and Mining Industry.
- Food storage and processing facilities.
- Pulp and Paper mills.
- Storage tanks / bunds. - walls and floors
- Chemical bunds
- Chemical and Oil Industry.
- Pharmaceutical filling and processing areas.
- Sewerage treatment plants.
- Silos.

NOT RECOMMENDED:

- Application below +10°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.

COLOURS:

Standard colour: Situclad VE Laminate Resin - Clear (Amber)
Situclad VE Glass Flake – White

Note

Tinting of this product is not recommended, as chemical resistance will be affected.

CHEMICAL RESISTANCE CHART@ +25°C Ambient

| Test Procedure | Observation | Results |
|--|---|-------------------------------|
| Aqueous Solution applied to the surface of test samples. | Checked for chemical attack and hardness throughout the testing period. | Taken after 3 weeks exposure. |

| Test Media | Concentration | Situclad VE GF | Test Media | Concentration | Situclad VE GF |
|-------------------|-----------------|----------------|---------------------------------|---------------|----------------|
| ACIDS | | | ALKALIS | | |
| Hydrochloric Acid | 37% | NC* | Potassium Hydroxide | 45% | NC* |
| Hydrofluoric Acid | 20% | EF | Sodium Hydroxide (Caustic Soda) | 50% | NC* |
| Sulphuric Acid | 70% | NC | Sodium Hypochlorite | | Refer allnex |
| Acetic Acid | 70% | NC | | | |
| Hydrofluoric Acid | 20% | EF | | | |
| Nitric Acid | 30% | NC* | | | |
| Nitric Acid | 40% | EF* | | | |
| Citric Acid | SAT SOLN | NC | OTHERS | | |
| Lactic Acid | All | NC | Distilled Water | All | NC |
| Phosphoric Acid | 85% | NC | Iodophors | | NC* |
| Hydrogen Sulphide | All | NC | | | |
| Hydrogen Peroxide | 35% | NC* | SALT SOLUTION | | |
| Oxalic Acid Sat N | Oxalic Acid Sat | NC | Brine | SAT SOLN | NC |

LEGEND:

| | | | |
|---|------------------|-----------|---------------------|
| NC | Non-Corrosive | NR | Not Recommended |
| EF | Evaluate Further | * | Staining May Result |
| Solutions are Aqueous unless otherwise stated | | | |

The table represents a guide only. 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.
- Chemical resistance and general physical properties can be improved by post cure treatment.
- 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 allnex Construction Products Ltd for specific advice on this, or chemical contamination other than those listed.
- Chemical resistance and general physical properties can be improved by post cure treatment.
 - Refer to allnex Construction Products Ltd for specific advice on this.

Note

Chemical spillages should be cleaned up immediately.

SUBSTRATE:

All substrates shall be stable and solid.

Refer: Situclad VE | Situclad VE Glass Flake Specification Document for substrate types and requirements

JOINTS:

All concrete control and construction joints should be carried through the Situclad VE.

Refer: Situclad & Fibreclene Design Details.

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 Protective Lining System.

Information to be recorded daily is:

- 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.

SURFACE PREPARATION:

Refer: [Situclad VE](#) | [Situclad VE Glass Flake Specification](#)

WALL INTERNAL JUNCTIONS:

Refer: [Situclad VE](#) | [Situclad VE Glass Flake Specification](#)

CLEANING & MAINTENANCE:

Cleaning:

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

Refer: [Cleaning Maintenance Document](#)

Repairs:

- Chemically clean.
- Mechanically abrade surface.
- Solvent wipe with Styrene Monomer
- Apply [Situclad VE](#) | [Situclad VE Glass Flake](#) as per "[Situclad VE](#) | [Situclad VE Glass Flake Specification](#)".

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.

HEALTH & SAFETY: Refer: [safety data sheets \(SDS\)](#).

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

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