

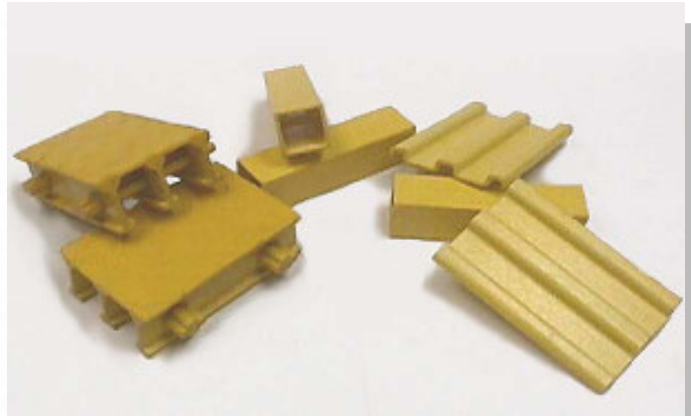
C H E M P O S I T E[®]

FLOORING & COVER SYSTEMS

Chemposite Fiberglass Reinforced Plastic (FRP) Flooring and Cover Systems are designed for tough, corrosive environments. The excellent structural and chemical characteristics of Chemposite FRP Flooring and Cover Systems make fiberglass reinforced plastic products the material of choice for industrial plants and commercial applications.

Chemposite Flooring and Cover Systems are perfect for demanding environments in numerous industries:

- Chemical
- Pulp and Paper
- Mining
- Electronic and Electrical
- Metal Plating
- Transportation
- Food and Beverage
- Textile
- Wastewater Treatment
- Marine
- Oil and Gas
- Pharmaceutical



APPLICATIONS

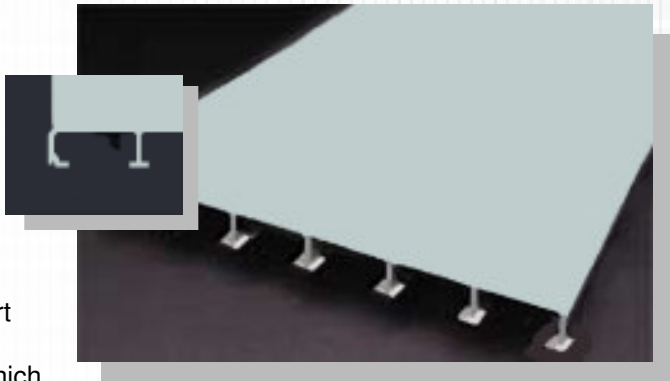
Chemposite FRP Flooring and Cover Systems are the solution wherever systems are subject to corrosion, rapid deterioration and constant maintenance problems.

The characteristics of resin and glass composite technology and advanced manufacturing techniques used in the production process, make FRP products ideal for a wide range of applications:



- Flooring
- Stairs and Platforms
- Ramps and Walkways
- Bridges
- Equipment Covers
- Tank Covers
- Trench Covers

ADVANTAGES

Standards	Chemposite's Interlocking Panel System produced in a single pultrusion manufacturing process, conforms to BS4592: Part 4: 1992.
Corrosion Resistant	The superior corrosion resistance of Chemposite Flooring and Cover Systems make it the product of choice for architects and engineers. Premium grade polyester and vinylester resin systems are used to resist a wide range of caustic, acidic, and other corrosive chemicals.
High Strength to Weigh Ratio	The integral one-piece pultruded I-beam and sheet construction provides tremendous strength by distributing loads evenly. Chemposite products weigh only one-third as much as welded steel flooring of equivalent strength. The flexibility of FRP also allows for load absorption and shock that would otherwise permanently deform metal flooring.
Non-Conductive	The non-conductive property of FRP products is ideal for work platforms, flooring and fencing in electrically hazardous areas. Acting as an insulator, fiberglass greatly reduces the risk of electrical shock for workers. Chemposite Flooring and Cover Systems have low thermal conductivity, are non-sparking and nonmagnetic, essential for installations where hydrogen or other combustible gases are present.
Fire Retardant	Tested in accordance to the ASTM E-84 Tunnel Test Method, a Class 1 Flame Spread Rating of 25 or less was achieved for our standard flooring and cover products. Where maximum resistance with a Flame Spread Rating of 10 or less is required, Derakane 510A (Dow Chemical) epoxy vinylester resin with an antimony trioxide additive is used.
Slip Resistant	After the pultruding process, silica sand is added to the flooring surface to provide a durable non-slip surface for traction and safety. With a 10% - 20% evenly located perforation on the panel surface (optional) eliminates the condensation of any liquid or rain water.
Interlocking & Easy Installation	<p>The interlocking design provides a continuous solid surface. The flooring is light weight, easy to handle and install. Assembly is simple, the flooring is easily attached to the support framework with an interlocking system which eliminates differential deflection at the edges of the panels.</p> 
Maintenance Free & UV Resistant	Rust-free Chemposite Flooring and Cover Systems ensure long life and low maintenance. Ultraviolet inhibitor additives, ideal for outdoor applications, extend life by preventing deterioration and degradation from the sun.

TYPES OF CHEMPOSITE® SOLID FLOORING

Chemposites SFP1000 Flooring is available in four different types for various corrosive and chemical environment applications.

SFP1000 Solid flooring is fabricated using pultrusion technology. One integral piece is formed in the pultrusion process, by a dye consisting of a flat top surface and integral I-beams with interlocking sides. Once the sheet has been extruded, a silica sand non-slip surface is then added for traction and safety. The pultrusion process utilizes high fiber content for high strength and light weight.

DESCRIPTION	TYPE			
	P	S	FR	CR
RESIN	Polyester	Vinylester	Vinylester	Vinylester
FILLER	Yes	Yes	Yes	No
CORROSION RESISTANCE	Good	Very Good	Very Good	Excellent
FLAME SPREAD RATING	25	25	10	115
COLOUR	Yellow	Yellow	Yellow	Yellow

P = Polyester

- Standard Polyester Resin
- Medium resistance to corrosion
- Good impact and fatigue resistance
- Excellent electrical and thermal insulating properties
- For general use in industrial plant applications

S = Standard Vinylester

- Premium Epoxy Vinylester Resin
- Outstanding resistance to corrosion
- High impact and fatigue resistance
- Excellent electrical and thermal insulating properties
- For installation in areas constantly subjected to corrosive chemicals

FR = Fire Retardant

- Fire Retardant Brominated Epoxy Vinylester Resin
- Designed for high fire hazard areas where a Flame Spread Rating of 10 is required
- Outstanding chemical resistance & strength, high impact & fatigue resistance
- Excellent electrical and thermal insulating properties
- For installation in areas constantly subjected to corrosive chemicals
- Lower flame spread rating than Standard Vinylester

CR = Corrosion Resistant

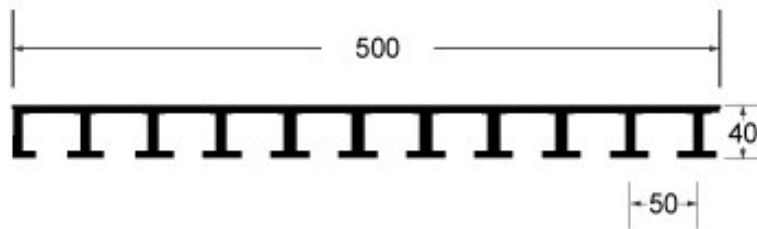
- Premium Epoxy Vinylester Resin (no filler)
- Excellent corrosion resistance
- High impact and fatigue resistance
- Excellent electrical and thermal insulating properties
- For installations subject to submersion in corrosive chemicals

PANEL DESCRIPTION

SFP1000

Panel Size:	500 mm wide x 6 m long
Panel Thickness	40 mm
Weight:	19 kg/m ²
Standard Colour:	Green, Yellow, Gray
Options & Customization:	Special cut sizes available to meet specific application requirements Custom colours to match existing equipment

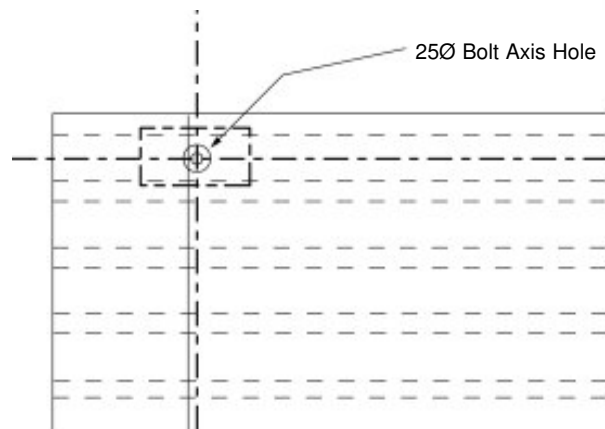
Diagram:



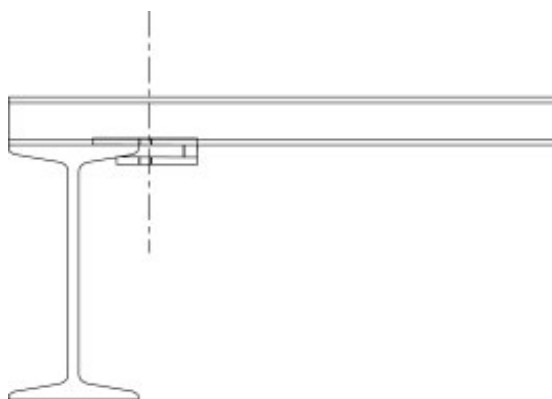
ATTACHMENT DETAIL

Each panel is fixed securely to the support framework with a minimum of four fixing clips. The fixing clips are GRADE A4 Class 80 Stainless Steel complying with BS6105 unless otherwise specified.

The panel will withstand an uplift force of not less than 5.23 kN/m².



PLAN VIEW



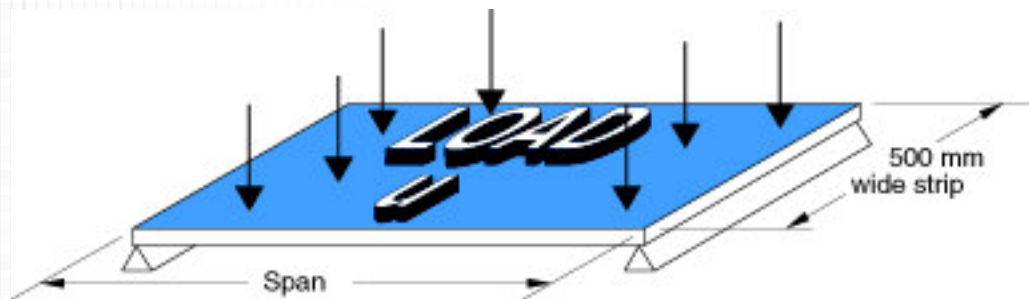
ELEVATION VIEW

**PHYSICAL PROPERTIES OF
CHEMPOSITE SFP1000
FLOORING**

Property (coupon values)	Unit	40 - 45% Glass Longitudinal Transverse Mat + Roving Reinforced Parts	
Tensile Strength	psi	37,500	10,000
Tensile Modulus	psi x 10 ⁶	3.0	1.0
Flexural Strength	psi	37,500	14,000
Flexural Modulus	psi x 10 ⁶	2.0	1.0
Izod Impact	ft.lb./in.	30	5
Compressive Strength	psi	37,500	20,000
Compressive Modulus	psi x 10 ⁶	2.5	1.2
Barcol Hardness	-	50	50
Shear Strength	psi	7,000	6,000
Density	lbs./in. ³	0.058 - 0.062	-
Specific Gravity	-	1.61 - 1.75	-
Coefficient of Thermal Exp.	in./in./ °C	5.2 x 10 ⁶	-
Water Absorption	Max %	0.5	-

UNIFORM LOAD

A 500 mm wide strip of flooring is supported at both ends and spanned at various distances from 1000 mm to 2000 mm. The load is then applied uniformly over the flooring. The flooring holds uniform loads from 1 kN/m² to 5 kN/m².



**DEFLECTION TABLE
PRODUCT: SFP1000**

Load "U" (kN/m ²)	Span (mm)					
	1000	1200	1400	1600	1800	2000
1.0	0	0	1	2	3	4
1.5	0	1	2	3	4	6
2.0	1	1	2	3	6	8
2.5	1	1	3	4	7	12
3.0	1	2	3	5	8	14
3.5	1	2	4	6	11	15
4.0	1	2	4	7	12	18
4.5	1	2	5	8	13	20
5.0	1	3	6	9	14	22

CHEMICAL RESISTANCE CHART

CHEMICAL ENVIRONMENT	TYPE	Maximum Recommended Temperature		TYPE	Maximum Recommended Temperature	
	S / FR / CR			P		
	Concentration %	°F	°C	Concentration %	°F	°C
Acetic Acid	50	180	82	50	150	65
Acid Cleaner (31% Hydrochloric Acid)	-	180	82	-	-	-
Aluminum Hydroxide	100	180	82	20	150	65
Aluminum Nitrate	100	180	82	Saturated	160	71
Ammonia	Gas	100	38	Gas	90	32
Ammonium Chloride	All	210	99	Saturated	180	82
Ammonium Hydroxide	5	180	82	5	NR	NR
Ammonium Nitrate	All	210	99	Saturated	160	71
Ammonium Sulfate	All	210	99	Saturated	170	77
Benzene	100	NR	NR	100	LS:90	LS:32
Benzoic Acid	Saturated	210	99	Saturated	170	77
Bisulfite in Scrubber	Gases	180	82	Gases	NR	NR
Black Liquor (Pulp Mill)	All	180	82	All	NR	NR
BLEACHES						
Calcium Hypochlorite	All	180	82	Saturated	120	49
Chlorine Dioxide Wet	Saturated	200	93	-	NR	NR
Hydrogen Peroxide/Caustic	-	185	85	-	NR	NR
Sodium Hypochlorite	5 ¹ / ₄ - 10	180	82	5 ¹ / ₄	120	49
Brine	All	210	99	-	NR	NR
Calcium Carbonate	All	180	82	Saturated	160	71
Calcium Hydroxide	100	210	99	25	160	71
Calcium Hypochlorite	All	180	82	Saturated	120	49
Calcium Nitrate	All	210	99	Saturated	180	82
Chlorine Dioxide	All	200	93	-	NR	NR
Chlorine Dry Gas	100	210	99	100	180	82
Chlorine Water	Saturated	200	93	Saturated	LS:125	LS:52
Chlorination Washer, Hoods & Vent Systems	-	180	82	-	-	-
Chromic Acid	10	150	65	10	NR	NR
Citric Acid	All	210	99	Saturated	180	82
Copper Chloride	All	210	99	Saturated	180	82
Copper Cyanide	All	210	99	Saturated	90	32
Diesel Fuel	100	180	82	100	175	80
Ethanol	50	100	38	50	90	32
Ethylene Glycol	All	210	99	All	180	82
Ferric Chloride	All	210	99	Saturated	180	82
Ferric Sulfate	All	210	99	Saturated	180	82
Ferrous Chloride	All	210	99	Saturated	180	82
Ferrous Nitrate	All	210	99	Saturated	160	71
Flue Gas Wet	All	180	82	-	-	-
Formaldehyde	All	150	65	25	150	65
Fuel Oil	100	180	82	-	-	-
Gasoline, Leaded	100	180	82	-	-	-
Gasoline, No Lead, No Methanol	100	120	49	-	-	-
Glucose	100	210	99	100	180	82
Glycerine	100	210	99	100	180	82
Hydrobromic Acid	48	150	65	48	160	71

NR = Not Recommended

— = Data Not Available

LS = Limited Service

CHEMICAL RESISTANCE CHART

CHEMICAL ENVIRONMENT	TYPE	Maximum Recommended Temperature		TYPE	Maximum Recommended Temperature	
	S / FR / CR			P		
	Concentration %	°F	°C	Concentration %	°F	°C
Hydrochloric Acid	37	150	65	36	125	52
Hydrogen Peroxide	30	150	65	5	150	65
Lactic Acid	All	210	99	All	160	71
Lithium Chloride	Saturated	210	99	Saturated	160	71
Magnesium Bisulfite	All	180	82	All	-	-
Magnesium Chloride	All	210	99	Saturated	180	82
Magnesium Sulfate	All	210	99	Saturated	180	82
Nickel Chloride	All	210	99	Saturated	180	82
Nickel Sulfate	All	210	99	Saturated	180	82
Nitric Acid	20	120	49	10	90	32
Ozone	-	140	60	3	-	-
Paper Mill Effluent	-	180	82	-	-	-
Phosphoric Acid	100	210	99	85	160	71
Potassium Aluminum Sulfate	All	210	99	Saturated	180	82
Potassium Bicarbonate	50	180	82	Saturated	140	60
Potassium Chloride	All	210	99	All	180	82
Potassium Nitrate	All	210	99	All	180	82
Potassium Sulfate	All	210	99	All	180	82
Propylene Glycol	All	210	99	All	170	77
Sea Water	-	210	99	100	180	82
Sodium Acetate	All	210	99	100	150	65
Sodium Bicarbonate	Saturated	180	82	Saturated	140	60
Sodium Bisulfate	All	210	99	All	180	82
Sodium Bromide	All	210	99	All	180	82
Sodium Chlorate	50	210	99	90	130	54
Sodium Cyanide	All	210	99	Saturated	100	38
Sodium Fluoride	All	180	82	All	-	-
Sodium Hydroxide	25	180	82	25	NR	NR
Sodium Hydroxide	50	210	99	50	NR	NR
Sodium Hypochlorite	5 ¹ / ₄ - 18	180	82	5 ¹ / ₄	120	49
Sodium Hypochlorite 5% NaOH Scrubbing CL ₂ , CL ₀ ₂	5 ¹ / ₄ - 18	180	82	-	-	-
Sodium Nitrate	All	210	99	Saturated	180	82
Sodium Sulfate	All	210	99	All	175	80
Sugar Cane, Liquor & Sweetwater	All	180	82	All	-	-
Sugar / Sucrose	All	210	99	60	90	32
Sulfur Chloride	Fumes	200	94	100	NR	NR
Sulfur Dioxide (Dry or Wet)	-	210	99	100	180	82
Sulfur Dioxide Burner, Wet Gas	-	210	99	-	NR	NR
Sulfuric Acid	50	210	99	50	150	65
Sulfuric Acid	75 - 80	100	38	75	NR	NR
Uranium Extraction	-	180	82	-	-	-
Vinegar	100	210	99	100	180	82
Water, Steam Condensate	100	180	82	100	160	71
White Liquor (Pulp Mill)	-	180	82	-	-	-
Zinc Nitrate	All	210	99	Saturated	180	82
Zinc Sulfate	All	210	99	All	180	82

The chemical resistance chart data is for general information purposes only. Resin manufacturers have provided test data which indicates that each specific resin can withstand the corrosion conditions listed in this chart. Chemposite Inc., believes the data to be accurate and true, but no guarantee is expressed or implied as to specific performance. Testing for specific chemical and corrosion environments is recommended. Our responsibility for claims arising from breach of warranty, negligence or otherwise, is limited to the purchase price of the material sold by Chemposite Inc.

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