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CHEMICAL RESISTANCE FRP SHEET

- **EVEREST FRP** Developed
“Fiberglass Reinforced
Plastic/Polymer” FRP
Chemical Resistance FRP
sheet.

Glance of Chemical Grade FRP sheet

- Why Chemical Grade FRP Sheet Required?
- Advantage of Chemical Grade Everest FRP sheet
- Specification of Chemical Grade Everest FRP sheet
- Application of Chemical Grade FRP sheet
- Comparison of Everest FRP Chemical grade sheet vs Galvalume sheet/ hand made FRP sheet.

Why Chemical Resistance FRP sheet Required?

In Industries there are huge losses incurred due to following reasons.

- Corrosive chemical process
- Costal area
- Spillages of chemicals on the roof
- Due to corrosive vapor
- Due to weathering like snow fall / extreme rainfall

Advantage of Chemical Resistance FRP sheet.

- It can Withstand the Chemical attacks conditions wherein highly corrosive area by using suitable Grade resin.
- By providing top side Gelcoat having thickness of 25 - 30 micron enhance the performance of the sheet.
- Life of Everest FRP chemical grade sheet would be more than 20 years.
- Warranty of top side Gel coated Everest FRP sheet is 15 years against any manufacturing defect. Thus Gelcoated FRP sheet life is much higher than the normal FRP Sheet.

Advantage of Chemical Resistance FRP sheet.

- Excellent resistance to moisture, ultraviolet rays, electrical shock, temperature, water pressure and all chemical effects like oils, acid, different types of fumes etc.
Durable, fire retardant, protection from corrosion, leakages, rust, rot and prevents warping.
 - Avoid breakage, shattering and chipping.
 - Zero Maintenance , leak proof ,
 - It has good thermal / heat insulating property
 - * Quick and easy installation
 - Easy relocatable

TYPE OF RESIN FOR CHEMICAL RESISTANCE FRP PANEL

- Using higher grade of Resin like Isophthalic Resin / Vinyl ester Resin.
- Top side Gel coated having Gelcoat on Vinyl ester Resin / Isophthalic Resin / RL UV with combination of Resin with Vinyl ester / Isophthalic Resin/ RL UV



Chemical Resistance chart

COMPARATIVE CHEMICAL RESISTANCE CHART

NAME OF THE CHEMICAL	CONC.(%)	231	301/331	701	711	601	731
Acetic Acid	25	65	66	99	99	90	99
Acetic Acid	50	27	32	82	82	75	82
Acetic Acid	Glacial	NR	NR	NR	NR	-	38
Acetone	10	NR	NR	-	-	-	82
Alum	All conc.	65	66	99	121	104	121
Ammonium Chloride	All conc.	77	66	99	99	100	99
Ammonium Hydroxide	5	NR	NR	82	82	82	82
Ammonium Phosphate (Mono /Dibasic)	All conc.	60	77/NR	99	99	-	99
Ammonium Sulphate	All conc.	77	60	99	121	100	121
Benezene	Vapour	NR	32	RT	RT	NR	49
Benezene	100	NR	NR	NR	NR	NR	38
Brine	Saturated	77	66	99	99	104	99
Chromic Acid	10	43	NR	65	65	90	65
Crude Oils	100	77	43	99	121	-	121
Detergents Sulphonated	All	49	NR	99	82	-	82
Detergents Organic	All	38	NR	65	82	-	82
Diesel fuels	All	77	60	82	99	-	99

Dimethyl Formamide	100	NR	NR	NR	NR	-	NR
Ethyl Acetate	100	NR	NR	NR	NR	NR	21
Ethyl Alcohol	50	43	32	38	38	RT.	65
Ethylene Glycol	All	-	-	99	99	105	99
Fatty Acids	All	77	66	99	121	104	121
Ferric chloride	All	77	66	99	99	100	99
Fertilisers	-	43	27	65	65	37	65
Fuel Oils	100	65	54	82	99	-	99
Glycerine	100	77	66	99	99	100	99
Hydrochloric Acid	10	71	66	82	110	104	110
Hydrochloric Acid	25	43	-	82	110	80	110
Hydrochloric Acid	37	27	NR	65	82	70	82
Kerosene	-	65	66	82	82	27	82
Methyl Alcohol	100	27	NR	NR	NR	RT	38

- ❖ **231** - Terephthalic Resin
 - ❖ **301/331** - Isophthalic resin.
 - ❖ **701** - General Purpose Vinyl Ester Resin
 - ❖ **731** - Superior Vinyl Ester Resin
 - ❖ **711** - High HDT General Purpose Vinyl Ester Resin
 - ❖ **601** - Bisphenol Resin
- (-) Data not available
NR Not Recommended
RT Room Temperature

Note: Figures shown are the maximum recommended service temperature in °C.



16:20



COMPARATIVE CHEMICAL RESISTANCE CHART

NAME OF THE CHEMICAL	CONC.(%)	231	301/331	701	711	601	731
Mineral Oils	100	77	66	99	121	-	121
Naphtha	100	49	66	82	99	RT	99
Nitric Acid	5	65	49	65	82	70	82
Nitric Acid	20	49	-	49	49	-	65
Nitric Acid	40	NR	NR	NR	NR	RT	RT
Oxalic Acid	Saturated	77	60	99	99	104	99
Phosphoric Acid	80	65	66	99	99	104	99
Pot. Hydroxide	10	NR	NR	65	65	71	65
Pot. Hydroxide	45	NR	NR	82	82	-	82
Sodium Chloride	All	77	66	99	99	100	99
Sodium Hydroxide	5	NR	NR	82	82	93	65
Sodium Hydroxide	50	NR	NR	99	99	--	82
Sod. Hypochlorite	10	NR	NR	82	82	--	65
Soyabean Oil	All	77	54	99	99	104	99
Sulphuric Acid	Vapour	77	--	99	121	100	177
Sulphuric Acid	5	77	--	99	99	100	99
Sulphuric Acid	25	77	49	99	99	105	99
Sulphuric Acid	50	60	49	65	80	105	82
Sulphuric Acid	70	NR	NR	40	55	70	82
Sulphuric Acid	93	NR	NR	NR	NR	--	NR
Tannic Acid	All	65	66	99	99	104	99
Toluene	100	NR	NR	27	38	NR	49
Vinegar	All	77	66	99	99	-	99
Water (Sea)		77	66	82	99	104	99
Water (Deionised)	All	77	32	82	82	-	82
Water (Distilled)	All	77	60	82	82	95	82
Xylene	All	NR	NR	27	38	NR	49

Caution:

How corrosion can affect chemical factory.



Top Side Gelcoated Manufacturing process.



THANK YOU!

