

## ADVANTAGES

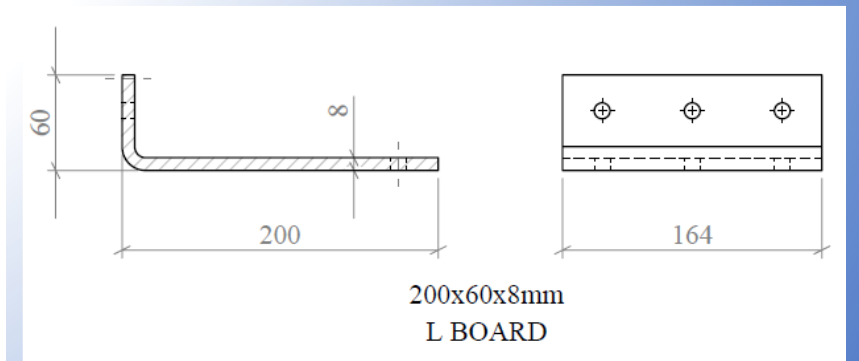
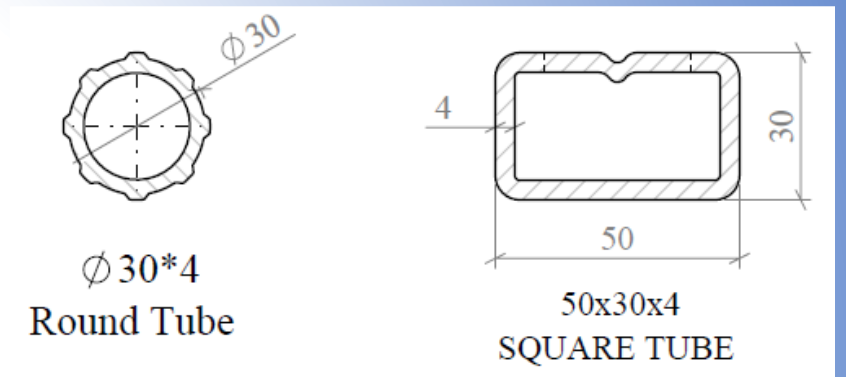
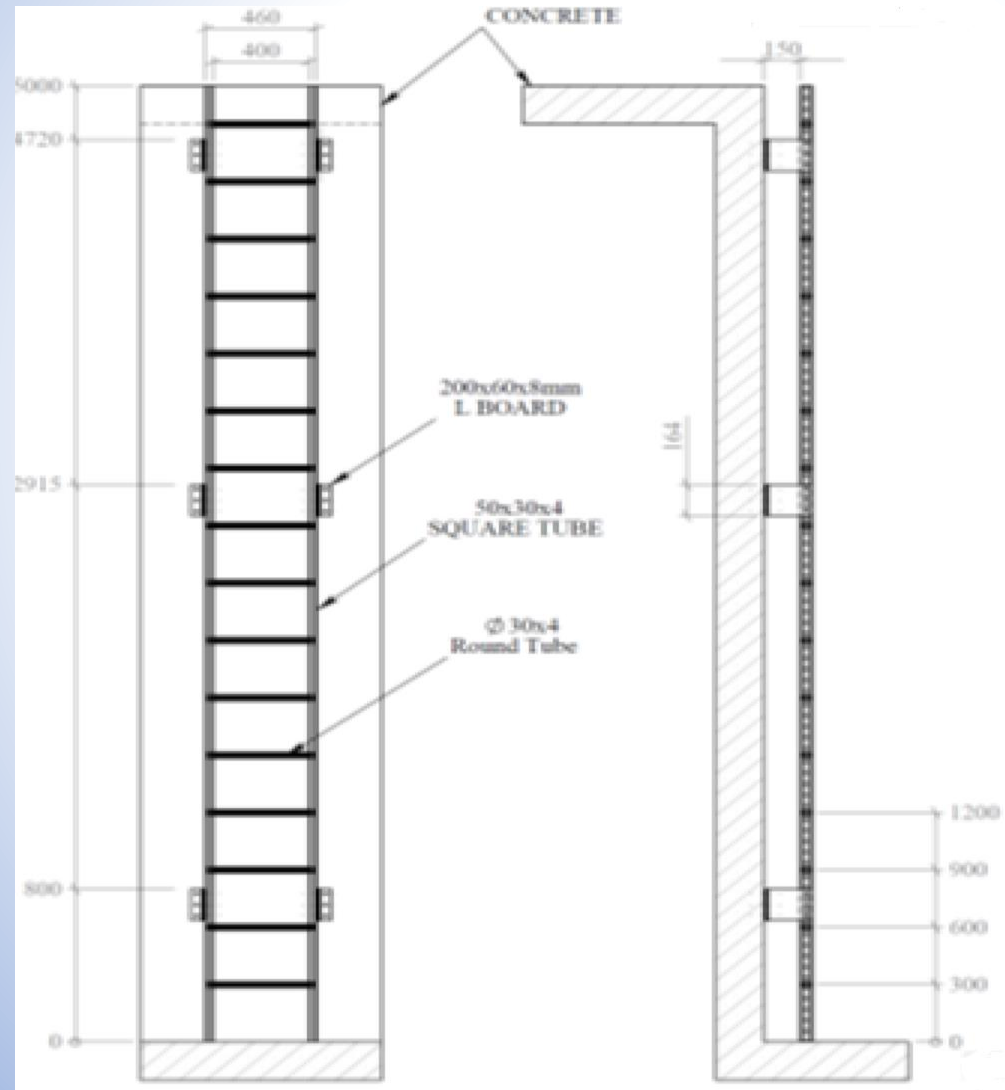
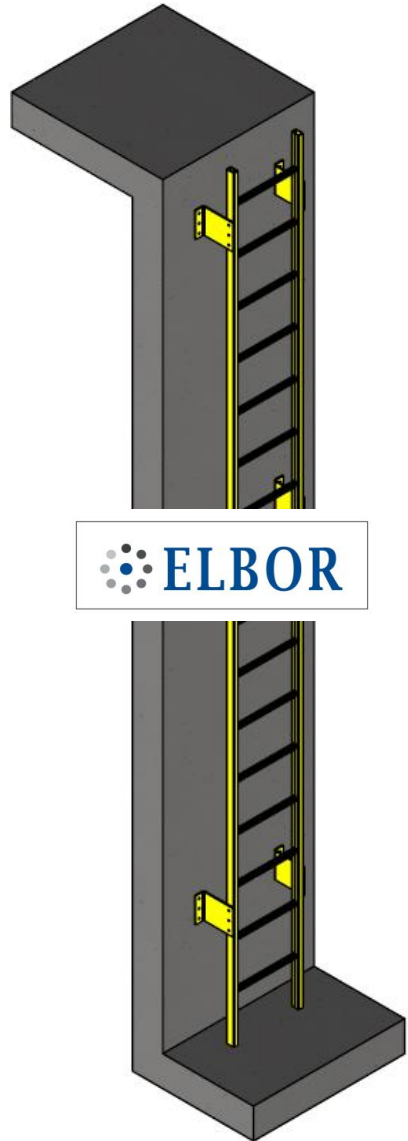
FRP electrical ladders, caged safety ladders and specific ladders with landing. All of them are nonconductive, everlasting and esthetic. Besides these features all ladders are suitable for national and international standards.

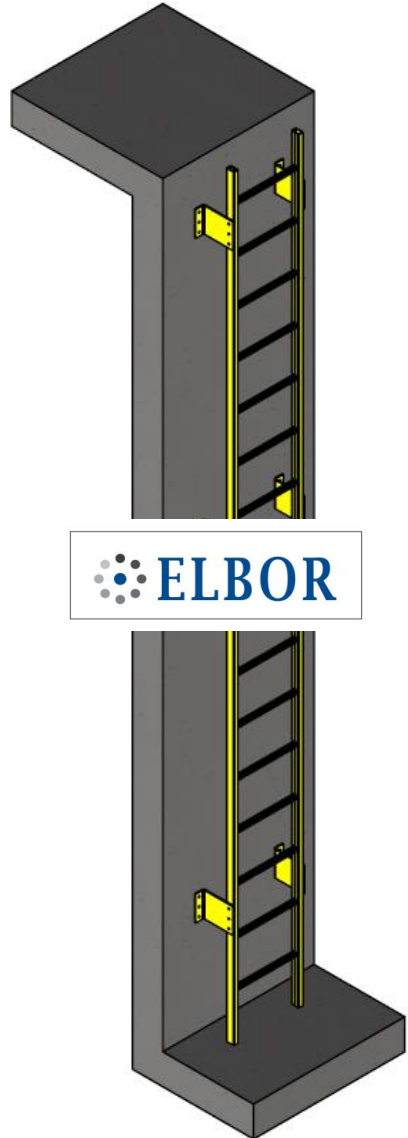
The main features of FRP ladders are

- UV resistance,
- no maintenance,
- manufacturing in a desired colour,
- Dimensional stability
- Does not rust
- esthetic,
- flame retardant and
- nonconductive.



## TECHNICAL DETAILS





## TECHNICAL PROPERTIES

### PHYSICAL PROPERTIES

Barcol Hardness		45
24 Hour Water Absorption % Max.		0.60
Density	gr/cm <sup>3</sup>	1.70 - 2.00
Thermal Conductivity	W/m.k	0.28

### ELECTRICAL PROPERTIES

Dielectric Strength	Kv/cm	L	13.8
		T	78.7
Arc Resistance	Sec.		120
Dielectric Constant	60 Hz		5.6

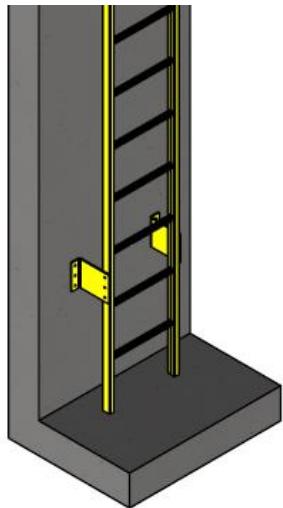
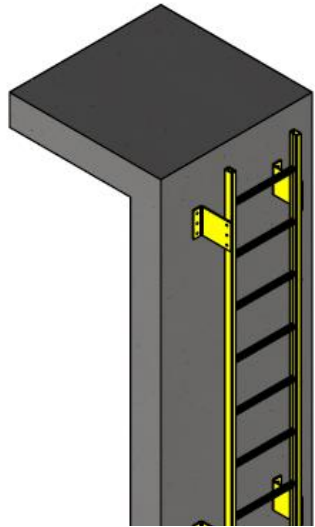
*L: Longitudinally T: Transverse*

### MECHANICAL PROPERTIES

Tensile Strength	Mpa	L	240
		T	50
Tensile Modulus	Gpa	L	23
		T	7
Flexural Strength	Mpa	L	240
		T	100
Shear Strength	Mpa	L	25

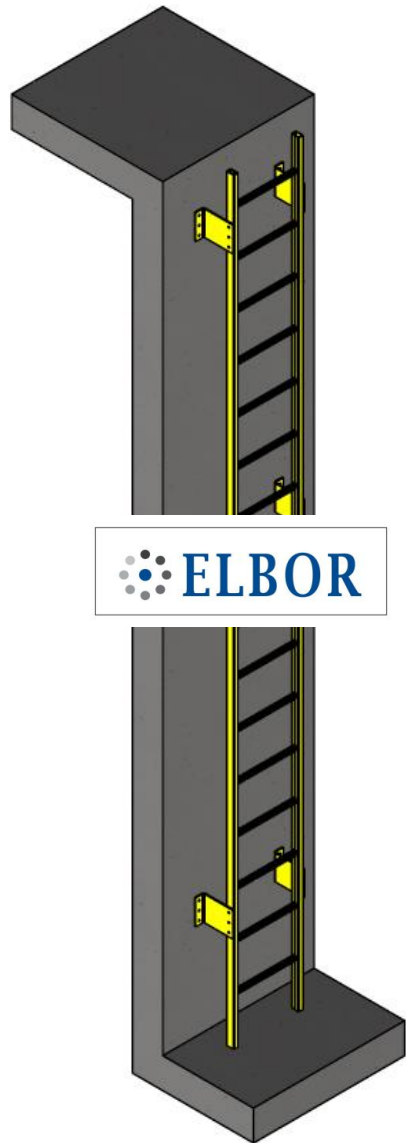
*L: Longitudinally T: Transverse*

## CHEMICAL STRENGTHS



CHEMICAL	VINYLESTER		ISOPHTHALIC POLYESTER		ORTHOPTHALIC POLYESTER	
	% Cons.	Max. Temp. C°	% Cons.	Max. Temp. C°	% Cons.	Max. Temp. C°
Acetic Acid	50	82	50	52	25	NR
Aluminum Hydroxide	100	82	100	71	All	
Ammonium Chloride	All	99	All	77	All	
Ammonium Bicarbonate	50	70	15	52	All	
Ammonium Hydroxide	28	38	28	N/R	All	NR
Ammonium Sulfate	ALL	99	ALL	77	All	
Copper Chloride	ALL	99	ALL	77	All	40
Copper Nitrate	ALL	99	ALL	77	All	
Benzene	All	N/R	All	N/R	All	NR
Benzoic Acid	100	82	100	27	100	25
Borax	SAT	99	SAT	66	All	25
Mercuric Chloride	SAT	99	SAT	77	All	
Zinc Nitrate	100	99	100	66	100	40
Zinc Sulfate	ALL	99	ALL	60	All	40
Copper Chloride	ALL	99	ALL	77	All	40
Ethanol	ALL	99	ALL	77	All	40
Ethylene Glycol	50	38	50	24	10	25
Ferric Chloride	100	93	100	32	100	40
Formaldehyde	ALL	99	ALL	77	All	40
Phosphoric Acid	ALL	65	50	24	25	
Glucose	100	99	100	49	80	NR
Glycerin	100	99	100	77	All	
Hydrobromic Acid	100	99	100	66	100	
Hydrochloric Acid	50	65	50	49	18	
Hydrogen Peroxide	37	65	37	24	10	30
Stannic Chloride	30	65	5	38	5	NR
Calcium Carbonate	ALL	99	ALL	71	All	40
Calcium Nitrate	ALL	82	ALL	77	All	
Carbon Tetrachloride	ALL	99	ALL	82	All	
Chlorine	100	65	100	N/R	100	NR
Chlorinated Water		99		60		NR
Chromic Acid	SAT	93	SAT	27	SAT	NR
Lactic Acid	10	65	5	21	5	NR
Lithium Chloride	ALL	99	ALL	77	All	25
Magnesium Chloride	SAT	99	SAT	66	All	
Magnesium Nitrate	ALL	99	ALL	77	All	40
Magnesium Sulfate	ALL	99	ALL	60	All	30





## CHEMICAL STRENGTHS

Nickel Chloride	ALL	99	ALL	77	All	40
Nickel Sulfate	ALL	99	ALL	77	All	40
Nitric Acid	ALL	99	ALL	77	All	40
Oxalic Acid	20	49	20	21	2	NR
Perchloric Acid	ALL	99	ALL	24	All	NR
Potassium Chloride	30	38	10	N/R	10	NR
Potassium Dichromate	ALL	99	ALL	77	All	40
Potassium Nitrate	ALL	99	ALL	77	All	25
Potassium Sulfate	ALL	99	ALL	77	All	40
Propylene Glycol	ALL	99	ALL	77	All	40
Citric Acid	ALL	99	ALL	77	All	40
Copper Cyanide	ALL	99	ALL	77	All	25
Vinegar	ALL	99	ALL	77	All	25
Distilled Water	100	99	100	77	All	
Sodium Acetate	100	82	100	77	All	30
Sodium Bisulfite	ALL	99	ALL	71	All	40
Sodium Bromide	ALL	99	ALL	77	All	
Sodium Cyanide	ALL	99	ALL	77	5	
Sodium Hydroxide	ALL	99	ALL	77	5	NR
Sodium Nitrate	25	82	N/R	N/R	1	NR
Sodium Sulfate	ALL	99	ALL	77	All	40
Sulfuric Acid	ALL	99	ALL	77	All	40
Sodium Sulfat	75	38	25	24	10	
Sulfurik Asit	ALL	99	ALL	77	All	

NOT :

1. ALL: Means all of the concentrations.

SAT: Means saturated solutions.

N/R: Means "Not Recommended"

- : Means "There is no information"