



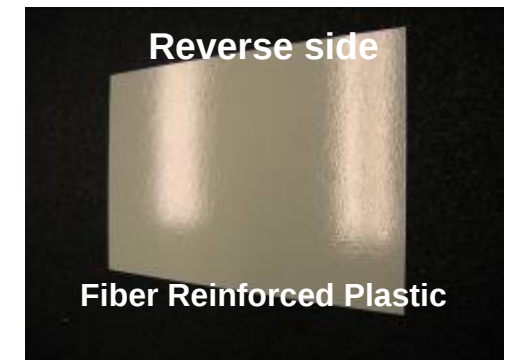
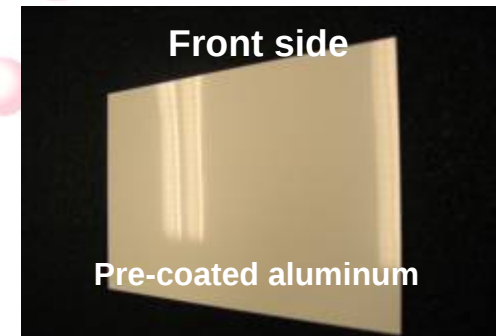
A patented innovation by Euramax which combines the positive characteristics of both pre-coated aluminum and Fiber Reinforced Plastic

Advantages of AluFiber®:

- Better surface appearance compared to FRP
- Great improvement in dent resistance compared to aluminum
- Reduction in telegraphing effects
- Improvement in flatness
- Rest value and better recycle ability than FRP
- Traditional advantages of pre-coated aluminum

Traditional advantages of pre-coated aluminum:

- Appearance which suits the automotive industry
- Very good UV-resistance (non-yellowing)
- Very good ageing resistance
- Very low dirt adhesion
- Possibilities of applying a painted decor
- Great variety of paint qualities, colors and glosses



AluFiber® product line based on 0.020" aluminum thickness:

- ➔ AluFiber® 0.051" = improved hail resistance while cutting on weight (compared to FRP)
- ➔ AluFiber® 0.099" = hail proof up to Ø 0.039" / 0.016 lb

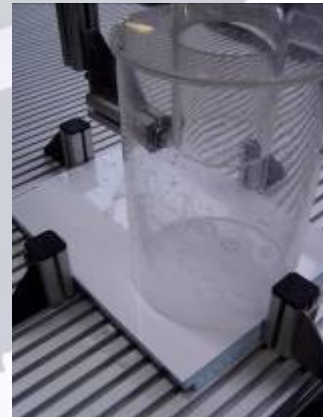
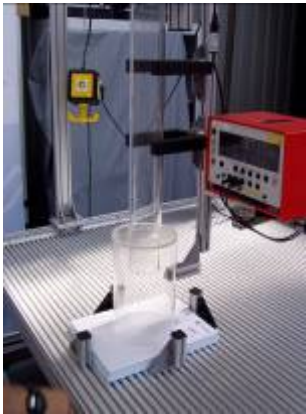
Aluminum:

Width bare material ≤ 88.6" → aluminum thickness 0.020"
 Width bare material > 88.6" → aluminum thickness 0.024"

AluFiber® composition:

	AluFiber® 0.051"	AluFiber® 0.099"	Aluminum 0.024" Reference	FRP 0.079" Reference
Aluminum alloy	3003H46 / 5754H46	3003H46 / 5754H46	3003H46 / 5754H46	-
Thickness AluFiber® (using 0.020" aluminum)	0.051"	0.099"	-	-
Thickness AluFiber® (using 0.024" aluminum)	0.055"	0.103"	-	-
Thickness aluminum (Width ≤ 88.6")	0.020"	0.020"	0.024"	-
Thickness aluminum (Width > 88.6")	0.024"	0.024"	0.024"	-
Thickness FRP	0.031" / ±0.006"	0.079" / ±0.006"	-	0.079"
Weight per sqfoot when using 0.020" aluminum	0.51 lb/sq foot	0.84 lb/sq foot	0.34 lb/sq foot	0.57 lb/sq foot
Weight per sqfoot when using 0.024" aluminum	0.57 lb/sq foot	0.90 lb/sq foot	0.34 lb/sq foot	0.57 lb/sq foot
Glass / resin ratio	1:4	1:3	-	-
Resin type	Polyester	Polyester	-	-
Glass type	Chopped stranded	Chopped stranded	-	-

Hail simulation tests by TÜV Rheinland Group:



Test results after impact with Ø 0.98" hail stones of 0.016 lb.:

FALL SPEED MATERIAL	up to 65.6 ft/sec	65.6 up to 82.0 ft/sec	82.0 up to 98.4 ft/sec
	Optical damage:	Optical damage:	Optical damage:
AluFiber® 0.051"	Yes	Yes	Yes
AluFiber® 0.099"	No	No	No
Bonnet BMW	Yes, slightly	Yes, slightly	Yes, slightly
Aluminum 0.024" 3003H46	Yes	Yes	Yes



The fall speed of a hail stone during a hail storm is approximately 75.5 ft/sec.
This speed may increase up to 98.4 ft/sec in case fall winds occur.

Weight of caravan roofing

	AluFiber® 0.051"	AluFiber® 0.099"	Aluminum 0.024"	FRP 0.079"
 16.4 ft x 7.2 ft ≈ 118 sq foot	60.6 lb	99.2 lb	39.7 lb	67.9 lb
 19.7 ft x 7.2 ft ≈ 141 sq foot	72.8 lb	119.3 lb	47.8 lb	81.6 lb
 22.9 ft x 7.2 ft ≈ 165 sq foot	84.9 lb	139.1 lb	55.8 lb	94.8 lb

Weight of caravan sidings

	AluFiber® 0.051"	AluFiber® 0.099"	Aluminum 0.024"	FRP 0.079"
 2 x 16.4 ft x 6.9 ft ≈ 226.3 sq foot 1 x 7.2 ft x 6.9 ft ≈ 49.7 sq foot ----- +/- 276 sq foot	143.3 lb	235.0 lb	93.9 lb	160.5 lb
 2 x 19.7 ft x 6.9 ft ≈ 271.9 sq foot 1 x 7.2 ft x 6.9 ft ≈ 49.7 sq foot ----- +/- 321 sq foot	165.3 lb	271.2 lb	108.5 lb	185.2 lb
 2 x 22.9 ft x 6.9 ft ≈ 316.0 sq foot 1 x 7.2 ft x 6.9 ft ≈ 49.7 sq foot ----- +/- 366 sq foot	192.9 lb	316.4 lb	126.5 lb	216.1 lb

Weight of a 16.4 ft caravan in AluFiber®



Euramax advice for roofing:

AluFiber® 0.099" (hail proof up to Ø 0.98"/ 0.016 lb)

Euramax advice for sidings:

AluFiber® 0.051" (improved dent resistance / reduction of telegraphing)

	Roofing AluFiber® 0.099" Sidings AluFiber® 0.051"	Aluminum 0.024"	FRP 0.079"
Weight of the complete bodywork	242.5 lb	134.5 lb	229.3 lb

Weight of a 19.7 ft caravan in AluFiber®



Euramax advice for roofing:

AluFiber® 0.099" (hail proof up to Ø 0.98" / 0.016 lb)

Euramax advice for sidings:

AluFiber® 0.051" (improved dent resistance / reduction of telegraphing)

	Roofing AluFiber® 0.099" Sidings AluFiber® 0.051"	Aluminum 0.024"	FRP 0.079"
Weight of the complete bodywork	284.4 lb	156.5 lb	266.8 lb

Weight of a 22.9 ft caravan in AluFiber®



Euramax advice for roofing:

AluFiber® 0.099" (improved dent resistance up to Ø 0.98" / 0.016 lb)

Euramax advice for sidings:

AluFiber® 0.051" (improved dent resistance / reduction of telegraphing)

	Roofing AluFiber® 0.099" Sidings AluFiber® 0.051"	Aluminum 0.024"	FRP 0.079"
Weight of the complete bodywork	330.7 lb	182.9 lb	310.9 lb

Weight of camper sidings

	AluFiber® 0.051"	AluFiber® 0.099"	Aluminum 0.035"	FRP 0.079"
 2 x 19.7 ft x 7.5 ft ≈ 295.5 sq foot 1 x 7.4 ft x 7.5 ft ≈ 55.5 sq foot ----- +/- 351 sq foot	180.8 lb	296.5 lb	177.7 lb	202.4 lb

Weight of camper roofing

	AluFiber® 0.051"	AluFiber® 0.099"	Aluminum 0.035"	FRP 0.079"
 22.9 ft x 7.4 ft ≈ 169 sq foot	87.1 lb	142.9 lb	85.8 lb	97.7 lb

Weight of a 19.7 ft camper in AluFiber®



Euramax advice for roofing:

AluFiber® 0.099" (hail proof up to Ø 0.98" / 0.016 lb)

Euramax advice for sidings:

AluFiber® 0.051" (improved dent resistance / reduction of telegraphing)

	Roofing AluFiber® 0.099" Sidings AluFiber® 0.051"	Aluminum 0.035"	FRP 0.079"
Weight of the complete bodywork	324.1 lb	264.6 lb	299.8 lb

AluFiber® delivery possibilities:

	AluFiber® 0.051"	AluFiber® 0.099"
Deliverable in coil	Yes, with carbon paper core Ø inside approx. 23.9" Remark: topcoat at the outside of the coil	
Maximum coil length	656 ft	394 ft
Maximum coil width	98 inch with 0.020" aluminum or 101.2" when using 0.024" aluminum	
Packaging	According to ECP.VP.008	
Deliverable in sheet	Yes, on non-disposable wooden pallets	
Maximum sheet length	29.5 ft	
Maximum sheet width	98 inch or 101.2"	
Packaging	According to ECP.VP.004	
Topcoat	EuraVehicle® Coatings: / EuraFort® (-Wide)	EuraBase® (-Wide) / EuraDur® (-Wide)
	EuraVehicle® Metallics:	EuraTalic® / EuraTalic®-Wide
Decorations (ON REQUEST)	EuraVehicle® Decorations:	EuraDecor® / EuraDecor®-Wide
Thickness protection foil	3.15 mil	

AluFiber® technical data:

	AluFiber® 0.051"	AluFiber® 0.099"
Coil setting Ø inside 23.9"	< 0.12"/foot	< 0.60"/foot
Minimum bending radius	3.94"	11.81"
Pressure marking	No pressure marking	
Telegraphing	Almost no telegraphing	
Adhesion of PUR foam and PUR adhesives	Good	
Coefficient of expansion (F ⁻¹ , 68 – 212 °F)	41 * 10 ⁻⁶	
Thermal transmittance		
- Forced convection (3.3 foot/sec))	19.87 BTU/sqfoot.hr °F	19.30 BTU/sqfoot.hr °F
- Forced convection (91.9 foot/sec, 62 mile/h)	29.53 BTU/sqfoot.hr °F	28.39 BTU/sqfoot.hr °F
- Radiation	17.03 BTU/sqfoot.hr °F	16.46 BTU/sqfoot.hr °F
Tensile strength	Appr. 15.95 KSI	
Screw ability	Good (detailed information available)	
Milling	Good (detailed information available)	
Stapling	Good	

AluFiber® test results:

	AluFiber® 0.051"	AluFiber® 0.099"
Adhesion after climate test (ETM 1-031)		
0 cycles		34 lbf/foot
40 cycles		20 lbf/foot
100 cycles		20 lbf/foot
Adhesion after kataplasma test (ETM 1-031)		
Standard deviation peel test		4.6 lbf/foot
Foil adhesion	Self adhesive foil type 4801: 1.12 lb /inch	
Dyne value (reverse side)	40-44	

Please feel free to contact your Account Manager and/or Sales Technical Support Manager, who will be happy to provide further and more detailed information on our EV®-AluFiber product line