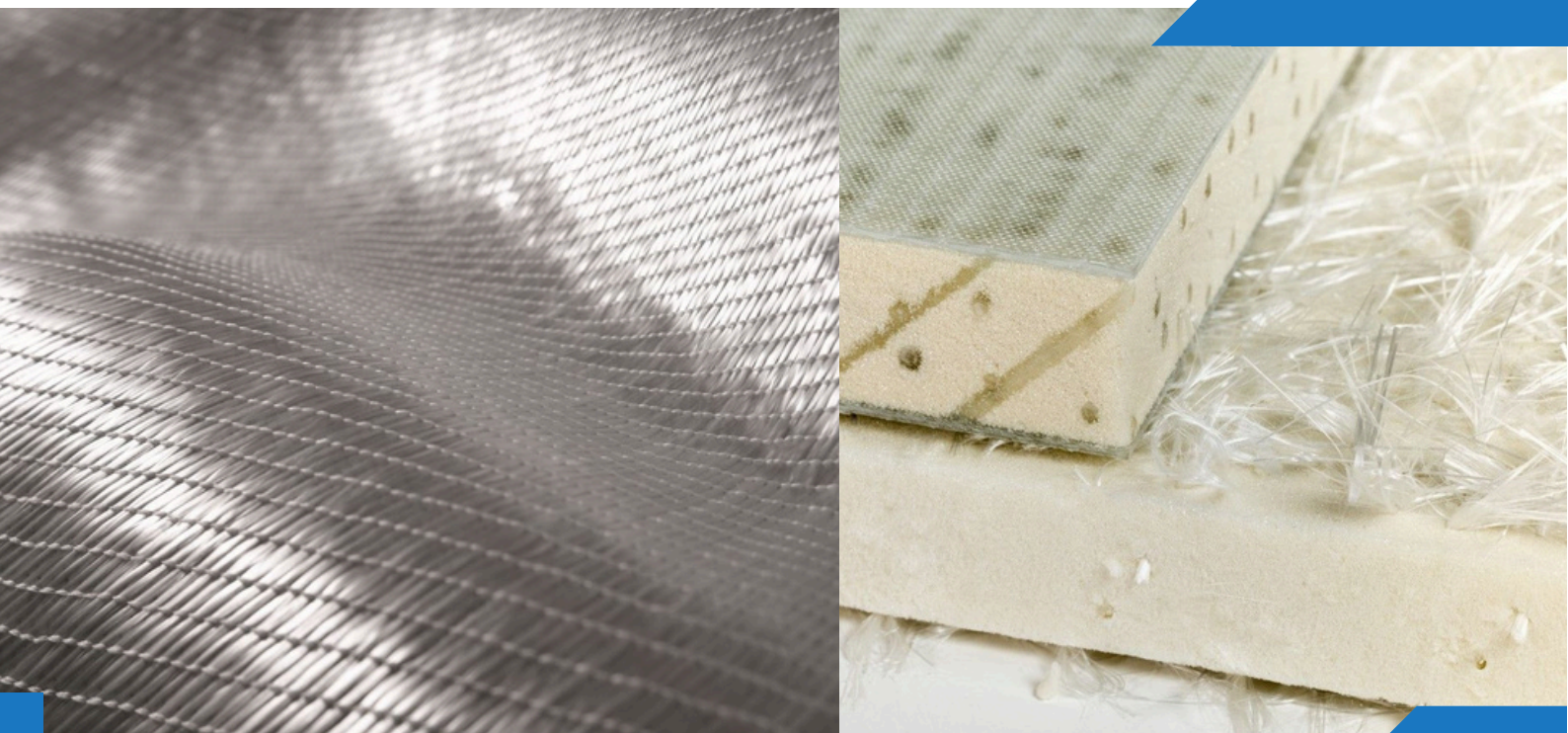


CORE & REINFORCEMENT MATERIALS



AS SDF ENDUSTRI , WE AIM TO PROVIDE SERVICE WITH A WIDE RANGE OF PRODUCTS FROM OUR WAREHOUSES LOCATED IN DIFFERENT LOCATIONS, PRIORITIZING CUSTOMER SATISFACTION FOR YOUR **COMPOSITE PRODUCTION NEEDS.**



REINFORCEMENT MATERIALS

- Mutiaxial Fabrics
 - * Glass Fiber
 - * Carbon Fiber
- Plain Weave Glass Fabrics
- CSM Glass Fabrics
- RTM & Combi Fabrics



CORE MATERIALS

- Honey combs
 - * Aramid / Nomex
 - * Aluminyum
 - * PP
- PVC Foams
- PMI Foams
- Saerfoam
- Balsa



REINFORCEMENT MATERIALS

MULTIAXIAL GLASS FABRICS

Type	Description	Weight (g/m ²)	Width (mm)	Directions
Bidirectional	B-E-625g/m ²	625	1270	90°/0°
	B-E-840g/m ²	840	1270	90°/0°
	B-S-E-931g/m ²	931	1270	CSM300/90°/0°
	B-E-1243g/m ²	1243	1270	90°/0°
Unidirectional 0°	U-E-640g/m ²	640	1260	0°
	U-E-1182g/m ²	1182	1270	0°
Bidiagonal	X-E-302g/m ²	302	1270	-45°/+45°
	X-E-444g/m ²	444	1270	-45°/+45°
	X-E-610g/m ²	610	1270	-45°/+45°
	X-E-810g/m ²	810	1270	-45°/+45°
	X-S-E-835g/m ²	835	1270	-45°/+45°/CSM225
	X-E-996g/m ²	996	1270	-45°/+45°
	X-S-E-1110g/m ²	1110	1270	-45°/+45°/CSM300
	X-E-1210g/m ²	1210	1270	-45°/+45°
Triaxial	Y-E-837g/m ²	837	1270	-45°/+45°/0°
	Y-E-933g/m ²	933	1270	-45°/+45°/0°
	Y-E-1199g/m ²	1199	1270	-45°/+45°/0°
Quadriaxial	Q-E-635g/m ²	635	1270	-45°/90°/+45°/0°
	Q-E-820g/m ²	820	1270	-45°/90°/+45°/0°
	Q-E-986g/m ²	986	1270	-45°/90°/+45°/0°
	Q-E-1184g/m ²	1184	1270	-45°/90°/+45°/0°

MULTIAXIAL CARBON FABRICS

Type	Description	Weight (g/m ²)	Width (mm)	Directions
Bidirectional	B-C-306g/m ²	306	1270	90°/0°
	B-C-406g/m ²	406	1270	90°/0°
	B-C-606g/m ²	606	1270	90°/0°
Bidiagonal	X-C-220g/m ²	220	1270	+45°/-45°
	X-C-306g/m ²	306	1270	+45°/-45°
	X-C-406g/m ²	406	1270	+45°/-45°
	X-C-606g/m ²	606	1270	+45°/-45°
Quadraxial	Q-C-806g/m ²	806	1270	-45°/90°/+45°/0°
Unidirectional	U-C-603g/m ²	603	1230	0°



PLAIN WEAVE GLASS FABRICS

Description
200g/m2 Plain Weave Glass Fabric
300g/m2 Plain Weave Glass Fabric
500g/m2 Plain Weave Glass Fabric
600g/m2 Plain Weave Glass Fabric
800g/m2 Plain Weave Glass Fabric

CSM GLASS FABRICS

Description
225g/m2 Emulsion Bonded CSM
300g/m2 Emulsion Bonded CSM
450g/m2 Emulsion Bonded CSM
600g/m2 Emulsion Bonded CSM
225g/m2 Powder Bonded CSM
300g/m2 Powder Bonded CSM
450g/m2 Powder Bonded CSM
600g/m2 Powder Bonded CSM

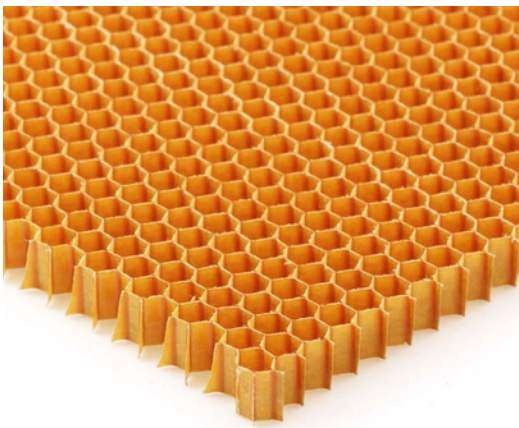
RTM & COMBI FABRICS

Description
SDF CORE (RTM) 450+180+450
931g/m2 Kombi Cam Elyaf
835g/m2 Kombi Biaxial Cam Elyaf
SDF COMBI 600+300 Kombi Cam Elyaf
1110g/m2 Kombi Biaxial Cam Elyaf

CORE MATERIALS

ARAMID / NOMEX HONEY COMB

ATA-NH Aramid Paper Honeycomb Aerospace Grade



ATA-NH meta-aramid paper honeycomb is manufactured from aerospace grade meta-aramid paper and coated with phenolic resin.

Features:

- Light against high strength, flame-retardant, corrosion-resistant, low dielectric and anti-fatigue.

Applied in **aeronautics and astronautics, and military defence** etc.

ATA-NH Mechanical Properties					
Designation Material-Cell-Density NH mm kg/m ³	Compression	Plate Shear			
	Bare	L Direction		W Direction	
	Strength MPa	Strength MPa	Modulus MPa	Strength MPa	Modulus MPa
	Typ	Typ	Typ	Typ	Typ
ATA-NH-3.2-29	0.69	0.61	26	0.29	15
ATA-NH-3.2-48	2.05	1.36	48	0.75	28
ATA-NH-3.2-64	3.80	1.84	62	1.01	33
ATA-NH-3.2-80	5.26	2.32	82	1.28	44
ATA-NH-3.2-96	7.31	2.76	96	1.71	53
ATA-NH-3.2-128	12.30	3.25	126	2.11	71
ATA-NH-3.2-144	15.04	3.52	138	2.35	88
ATA-NH-4.8-32	0.98	0.69	31	0.40	19
ATA-NH-4.8-48	2.15	1.22	40	0.78	28
ATA-NH-4.8-64	3.97	1.81	72	1.10	42
ATA-NH-9.5-32	0.79	0.66	24	0.34	17
ATA-NH-9.5-48	1.95	1.32	39	0.67	28
ATA-NH(OX)-4.8-29	0.68	0.35	11	0.38	19
ATA-NH(OX)-4.8-48	2.36	0.82	21	0.91	46

AT-NH Aramid Paper Honeycomb Commercial Grade

AT-NH meta-aramid paper honeycomb is manufactured from commercial grade meta-aramid paper and coated with phenolic resin.

Features:

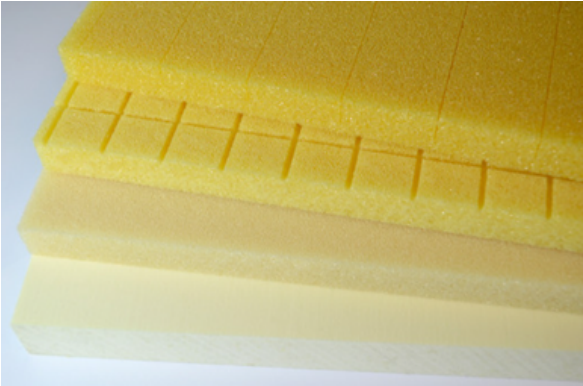
- Light against high strength, flame-retardant, corrosion-resistant, low dielectric and anti-fatigue.

Applied in **transportation interiors, racing boats, antenna covers, military shelters, and sports etc..**

AT-NH Mechanical Properties					
Designation Material-Cell -Density NH mm kg/m ³	Compression	Plate Shear			
	Bare	L Direction		W Direction	
	Strength MPa	Strength MPa	Modulus MPa	Strength MPa	Modulus MPa
	Typ	Typ	Typ	Typ	Typ
AT-NH-3.2-29	0.55	0.46	14	0.31	11
AT-NH-3.2-32	0.64	0.52	17	0.38	14
AT-NH-3.2-40	1.29	0.86	36	0.50	18
AT-NH-3.2-48	1.93	1.10	41	0.62	22
AT-NH-3.2-56	2.23	1.46	47	0.88	28
AT-NH-3.2-64	3.40	1.65	56	0.97	33
AT-NH-3.2-72	4.26	1.79	61	1.02	34
AT-NH-3.2-80	4.95	1.98	68	1.08	36
AT-NH-3.2-96	6.82	2.62	79	1.44	45
AT-NH-3.2-128	11.82	3.15	105	1.83	61
AT-NH-3.2-144	13.55	3.08	114	1.98	70
AT-NH-4.8-32	0.82	0.62	24	0.37	16
AT-NH-4.8-40	1.46	1.03	35	0.43	21
AT-NH-4.8-48	1.98	1.08	38	0.58	26
AT-NH-4.8-56	2.45	1.44	45	0.64	29
AT-NH-4.8-64	3.48	1.65	52	0.91	32
AT-NH-4.8-80	5.37	1.98	67	1.29	38
AT-NH-6.4-40	1.65	1.08	31	0.53	20
AT-NH-6.4-48	1.88	1.18	38	0.69	22
AT-NH-9.5-32	0.68	0.58	17	0.30	12
AT-NH-9.5-48	1.45	1.09	31	0.51	20
AT-NH(OX)-4.8-32	0.55	0.29	11	0.33	15
AT-NH(OX)-4.8-40	1.45	0.52	15	0.62	32
AT-NH(OX)-4.8-48	1.95	0.73	19	0.76	36

PVC FOAMS

“Low water absorption rate and excellent chemical resistance.”



PVC Foam is a closed-cell, cross-linked polymer foam designed for durability, strength, and high processing temperatures. It is compatible with various resins and adhesives. Ideal for lightweight composite applications, it is available in different densities and thicknesses. **Grooved and perforated** versions can also be customized to meet your specific needs.

PMI FOAMS

- High specific modulus and strength
- Heat resistance with deformation temperatures up to 200°C
- Easy processing for complex surfaces
- Compatibility with medium- and high-temperature autoclave curing processes
- Usability in various liquid molding processes
- Excellent dielectric properties
- Significant overall cost benefits



A closed-cell, rigid foam plastic made from PMI (polymethacrylimide) polymer, free of any CFCs.

Hybo FOAM® C features a fine and uniform cell size ranging from 0.2 to 0.4 mm. The foam can be processed at temperatures up to 180°C and withstands a maximum pressure of 0.5 MPa.

Its applications are broad, making it ideal for most sandwich structure composite parts, such as **X-ray/CT tables, sports equipment, vehicles/high-speed railways, and floating/fishing kits, among others.**

Hybo FOAM® E features an exceptionally fine and unique cell size of less than 0.1 mm. The foam can be processed at temperatures up to 150°C and withstands pressures up to 0.5 MPa.

HyboFOAM® RF (Reinforced Fine) features a fine and unique cell size of less than 0.1 mm.

Based on the foundation of HyboFOAM® C, HyboFOAM® RF maintains excellent mechanical properties while offering an even finer cell size, making it particularly well-suited for resin liquid infusion processes. This foam can be processed at temperatures up to 150°C and withstands pressures up to 0.5 MPa.

Its applications are extensive and include most sandwich-structured composite parts, such as **X-ray/CT tables, sports equipment, vehicles/high-speed railways, floating/fishing kits, and more.**

HyboFOAM® CRH (Railway High-Speed) features a fine and unique cell size ranging from 0.1 to 0.3 mm, with the added benefit of fireproof properties.

The foam can be processed at temperatures up to 150°C and withstands pressures up to 0.5 MPa.

Its applications are extensive, particularly in high-speed railway vehicles and other vehicles that require sandwich-structured composite parts. It is ideal for **interiors, wall panels, and components that demand fireproofing or low fire volatile properties.**

HyboFOAM® A (Advanced) features a fine and unique cell size of greater than 0.5 mm.

This foam can be processed at temperatures up to 180°C and withstands pressures up to 0.7 MPa.

The primary applications of HyboFOAM® A include **civil aircraft, UAVs, and related industries.**

HyboFOAM® AF (Advanced and Fine Cell Size) features a unique cell size ranging from 0.2 to 0.4 mm.

Building on the foundation of HyboFOAM® A, HyboFOAM® AF maintains excellent mechanical properties while offering a particularly fine cell size, making it suitable for resin liquid infusion processes.

This foam can be processed at temperatures up to 180°C and withstands pressures up to 0.7 MPa.

The primary applications of HyboFOAM® AF include **civil aircraft, UAVs, and related industries.**

SAERFOAM



Ultralight foam (PU/PE/PIR) is combined with 3D glass reinforcements. The result is SAERfoam, a hybrid core material with customizable mechanical properties and extremely low weight.

BALSA





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