HANKUK CARBON

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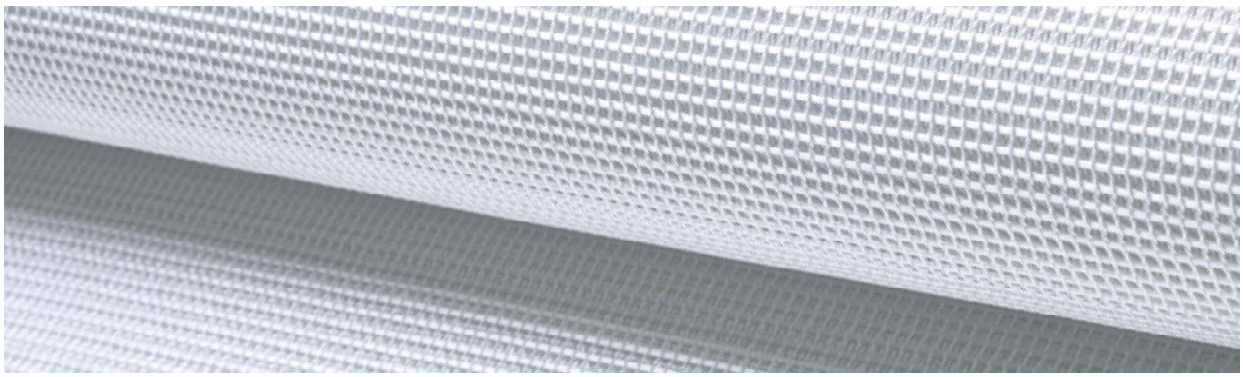

PRODUCT INFORMATION

Woven Fabrics / Paper / CSM / Roving Cloth / AAF / Resin System

HANKUK CARBON CO., LTD.

WOVEN FABRICS

Hankuk Carbon / Hankuk Advanced Materials produces carbon fiber fabric for various weaving types and width having characteristics of high strength and heat resistance. Carbon spread fabric can be weaved wider than 10mm which is excess width limits of carbon yarn and it is possible to manufacture specific design of carbon hologram shape type. We are able to produce hybrid fabric in various types of designs for decorations use which mixed by three fabrics carbon fabric, aramid fabric and glass fiber fabric.

CARBON

STYLE	Yarn Description		FAW (g/m²)	Count(count/in)		Thickness (mm)	Weave
	Warp	Weft		Warp	Weft		
CF1114	CARBON 1K	CARBON 1K	95 ± 6	17.5	17.5	0.14 ± 0.025	PLAIN
CF1115	CARBON 1K	CARBON 1K	122 ± 7	22.5	22.5	0.15 ± 0.025	PLAIN
CF1115-1	CARBON 1K	CARBON 1K	122 ± 7	22.5	22.5	0.15 ± 0.025	TWILL
CF1240-1	CARBON 12K	CARBON 12K	409 ± 25	6.4	6.4		2:2 TWILL
CF1260	CARBON 12K	CARBON 12K	607 ± 36	9.5	9.5	0.60 ± 0.075	PLAIN
CF1260-1	CARBON 12K	CARBON 12K	607 ± 36	9.5	9.5	0.60 ± 0.075	2:2 TWILL
CF1277	CARBON 1K	CARBON 1K	283 ± 17	54	50	0.77 ± 0.075	8H
CF1277	CARBON 1K	CARBON 1K	274 ± 16	50	54	0.30 ± 0.050	PLAIN
CF3322	CARBON 3K	CARBON 3K	160 ± 7	10	10	0.22 ± 0.025	PLAIN
CF 3324-1	CARBON 3K	CARBON 3K	240 ± 14	15	15	0.23 ± 0.025	2:2 TWILL
CF3325	CARBON 3K	CARBON 3K	232 ± 14	15	14	0.25 ± 0.025	PLAIN
CF3326	CARBON 3K	CARBON 3K	256 ± 15	16	16	0.26 ± 0.050	TWILL
CF3327	CARBON 3K	CARBON 3K	208 ± 12	13	13	0.27 ± 0.050	PLAIN
CF3327-1	CARBON 3K	CARBON 3K	208 ± 12	13	13	0.27 ± 0.050	TWILL
CF3327-6	CARBON 3K	CARBON 3K	320 ± 19	20	20	0.27 ± 0.050	4:4 TWILL
CF6637-1	CARBON 6K	CARBON 6K	364 ± 22	11.5	11.5	0.45 ± 0.075	2:2 TWILL
CF6637-3	CARBON 6K	CARBON 6K	364 ± 22	11.5	11.5	0.45 ± 0.075	5H SATIN

ARAMID

STYLE	Yarn Description		FAW (g/m²)	Count (count / in)		Thickness (mm)	Weave
	Warp	Weft		Warp	Weft		
HK170	K-29 1500 DEN	K-29 1500 DEN	166 ± 10	13	12	0.25 ± 0.025	PLAIN
HK285	K-49 1140 DEN	K-49 1140 DEN	170 ± 10	17	17	0.241 ± 0.0254	Crowfoot
HK285-1	K-49 1140 DEN	K-49 1140 DEN	172 ± 10	17	17	0.25 ± 0.025	PLAIN
HK1033	K-29 3000 DEN	K-29 3000 DEN	533 ± 32	20	20	0.62 ± 0.075	4*4 BASKET

HYBRID

STYLE	Yarn Description		FAW (g/m²)	Count(count/in)		Thickness (mm)	Weave
	Warp	Weft		Warp	Weft		
SEA 3K	3K+SEA75 1/0	SEA 75 1/0	187 ± 11	13+13	18	0.13 ± 0.025	PLAIN
CR246	CARBON 3K	ER300 400 Tex	312 ± 19	13	13	0.29 ± 0.050	PLAIN
CR199	3K+ER300 Tex	3K+ER300 Tex	216 ± 13	3+7	3+7	0.20 ± 0.025	PLAIN
CP1114	CARBON 3K	600DEN	94 ± 6	17.5	17.5	0.14 ± 0.025	PLAIN
CK3160	CARBON 3K	K-49195 DEN	170 ± 10	13	13	0.22 ± 0.025	PLAIN
CK3130_1	3K+1140DEN	3K+1140 DEN	215 ± 13	8.5+8.5	8+8	0.25 ± 0.025	PLAIN
CK3130	3K+1140DEN	3K+1140 DEN	215 ± 13	8.5+8.5	8+8	0.25 ± 0.025	3:1 TWILL
CK3118	CARBON 3K	K-49195 DEN	119 ± 7	13	20	0.18 ± 0.025	PLAIN

HYBRID

STYLE	Yarn Description		FAW (g/m²)	Count(count/in)		Thickness (mm)	Weave
	Warp	Weft		Warp	Weft		
CK3115	CARBON 3K	K-49195 DEN	112 ± 7	13	10	0.15 ± 0.025	PLAIN
CG199	CARBON 3K	D 450 1/0	199 ± 12	24	18	0.19 ± 0.025	PLAIN
CF3325-1	CARBON 3K	(1,800DEN)	232 ± 14	15.0	14.0	0.25 ± 0.025	PLAIN
6K FABRIC	6K+SEA75 1/0	SEA 75 1/0	203 ± 12	8+8	20	0.38 ± 0.050	3:1 TWILL
3K FABRIC	3K+SEA75 1/0	SEA 75 1/0	187 ± 11	13+13	18	0.13 ± 0025	3:1 TWILL
CF3327 (SILVER)	3K+SILVER	3K+ST SILVER	218 ± 13	13	13	0.27 ± 0.050	PLAIN
CF3327 (RED)	3K+RED	3K+ST SILVER	218 ± 13	13	13	0.27 ± 0.050	PLAIN
CF3327 (GOLD)	3K+GOLD	3K+ST SILVER	218 ± 13	13	13	0.27 ± 0.050	PLAIN
CF3327 (BLUE)	3K+BLUE	3K+ST SILVER	218 ± 13	13	13	0.27 ± 0.050	PLAIN

GLASS FABRICS

Glass fabrics are widely used in many areas such as aviation, LNG vessels, electronics, sports leisure, and construction for its excellent tensile strength, dimensional stability, electrical insulation, heat resistance and chemical resistance. Hankuk Carbon / Hankuk Advanced Materials is capable of producing 30,000,000m annually. With the nation's largest weaving machines capacity, the equipment can handle to meet customer's requirements such as thicknesses (0.03~0.8mm) and widths (25~3600mm).

ELECTRICAL & ELECTRONICS

STYLE	Yarn Description		FAW (g/m^2)	Count(count/in)		Thickness (mm)	Weave
	Warp	Weft		Warp	Weft		
106	D900 1/0	D900 1/0	25 ± 2	56	56	0.03 ± 0.01	PLAIN
102	D450 1/0	D450 1/0	36 ± 2	50	30	0.05 ± 0.013	PLAIN
153	D450 1/0	G150 1/0	144 ± 9	126	65	0.15 ± 0.025	PLAIN
771	D450 1/0	D900 1/0	33 ± 2	61	25	0.05 ± 0.013	PLAIN
1080	D450 1/0	D450 1/0	49 ± 3	61	48	0.05 ± 0.013	PLAIN
2113	E225 1/0	D450 1/0	79 ± 5	60	56	0.10 ± 0.025	PLAIN
2116	E225 1/0	E225 1/0	105 ± 6	60	57	0.10 ± 0.025	PLAIN
7628	G75 1/0	G75 1/0	208 ± 12	44	33	0.18 ± 0.025	PLAIN

SPORTS & LEISURE

STYLE	Yarn Description		FAW (g/m^2)	Count(count/in)		Thickness (mm)	Weave
	Warp	Weft		Warp	Weft		
792	D900 1/0	D900 1/0	23 ± 1	66	38	0.03 ± 0.013	PLAIN
1952	D900 1/0	D900 1/0	25 ± 2	52	60	0.03 ± 0.013	PLAIN
1960	D900 1/0	D900 1/0	25 ± 2	60	52	0.03 ± 0.013	PLAIN
209	E225 1/0	D450 1/0	76 ± 5	70	30	0.09 ± 0.025	4HS
210	G150 1/0	E225 1/0	108 ± 7	64	25	0.10 ± 0.025	4HS
212	G150 1/0	E225 1/0	133 ± 8	74	37	0.12 ± 0.025	4HS
213	G75 1/0	E225 1/0	165 ± 10	52	28	0.13 ± 0.025	4HS
215	G75 1/0	E225 1/0	183 ± 11	58	30	0.15 ± 0.025	4HS
218	G75 1/0	G150 1/0	207 ± 12	64	26	0.24 ± 0.025	4HS
224	G37 1/0	G150 1/0	307 ± 18	50	26	0.24 ± 0.025	4HS
345R	ER300TEX	ER300TEX	348 ± 21	14.5	14.5	0.35 ± 0.050	TWILL

FILTERING

STYLE	Yarn Description		FAW (g/m^2)	Count(count/in)		Thickness (mm)	Weave
	Warp	Weft		Warp	Weft		
546	G75 1/2	G75 1/2	389 ± 23	33	39	0.46 ± 0.075	IMITATION GAUZE
3107	G75 1/5	G75 1/5	270 ± 16	10	10	0.41 ± 0.075	PLAIN

INSULATION

STYLE	Yarn Description		FAW (g/m^2)	Count (count/in)		Thickness (mm)	Weave
	Warp	Weft		Warp	Weft		
432	G37 1/0	G37 1/0	372 ± 22	34	34	0.32 ± 0.050	3:1 TWILL
451	TH13.7	TH13.7	688 ± 41	26	25	0.50 ± 0.075	2:2 TWILL
451-2	TH13.7	G25 1/0	552 ± 33	26	25	0.46 ± 0.075	2:2 TWILL
451-3	K18 1/0	K18 1/0	573 ± 34	26	25	0.46 ± 0.075	2:2 TWILL
K126	G37 1/0	G37 1/0	273 ± 16	30	20	0.26 ± 0.050	PLAIN
K618	G37 1/0	G3 7 1/0	197 ± 12	18	18	0.18 ± 0.025	PLAIN
K132	G37 1/0	G37 1/0	306 ± 18	34	22	0.32 ± 0.050	PLAIN
7516	G75 1/0	G75 1/0	84 ± 5	16	15	0.12 ± 0.025	PLAIN
7517	G75 1/0	G75 1/0	92 ± 6	17	17	0.12 ± 0.025	PLAIN
G612	G75 1/0	G75 1/0	97 ± 6	18	18	0.12 ± 0.025	PLAIN
G118-1	G75 1/0	G75 1/0	173 ± 10	34	30	0.18 ± 0.050	PLAIN
412	H45 2/3	G75 1/0	876 ± 53	20 ± 2	12.5 ± 1	1.10 ± 0.075	PLAIN

SCREEN

STYLE	Width (mm)	Yarn Description		FAW (g/m^2)	Count(count/in)		Thickness (mm)	Weave
		Warp	Weft		Warp	Weft		
HM3741	2553	G37 1/0	G37 1/0	289 ± 17	32	21	0.26 ± 0.050	PLAIN
HM7626	2130	G75 1/0	G75 1/0	178 ± 11	34	32	0.18 ± 0.025	PLAIN
HM7628	2480	G75 1/0	G75 1/0	208 ± 12	44	33	0.18 ± 0.025	PLAIN
HM7678	2553	G75 1/0	G75 1/0	194 ± 12	44	28	0.15 ± 0.025	PLAIN

TRANSPORTATION

STYLE	Yarn Description		FAW (g/m^2)	Count (count/in)		Thickness (mm)	Weave
	Warp	Weft		Warp	Weft		
T650	TG7.40	TG7.40	529 ± 32	10	8	0.50 ± 0.075	PLAIN
7581	G75 1/0	G75 1/0	299 ± 18	57	54	0.23 ± 0.025	8H SATIN
7626	G75 1/0	G75 1/0	178 ± 11	34	32	0.18 ± 0.050	PLAIN
7781	DE75 1/0	DE75 1/0	299 ± 18	57	54	0.25 ± 0.025	8H SATIN
G118-1	G75 1/0	G75 1/0	173 ± 10	34	30	0.18 ± 0.050	PLAIN
FGC(M)	G75 1/2	G75 1/2	334 ± 20	32	30	0.27 ± 0.050	PLAIN
HG-120	D450 1/2	D450 1/2	106 ± 6	60	58	0.11 ± 0.025	4H SATIN
HG-1581	G150 1/2	G150 1/2	299 ± 18	57	54	0.25 ± 0.025	8H SATIN
T345	G37 1/0	G37 1/0	339 ± 22	32	30	0.27 ± 0.050	PLAIN
650	TH6.88	TH6.88	492 ± 30	10	8	0.50 ± 0.075	PLAIN

BUILDING MATERIALS

STYLE	Yarn Description		FAW (g/m^2)	Count(count/in)		Thickness (mm)	Weave
	Warp	Weft		Warp	Weft		
310	G150 1/0	G75 1/0	54 ± 3	10	10	0.13 ± 0.025	LENO
381	G150 1/0	G75 1/0	43 ± 3	8	8	0.10 ± 0.025	LENO
609	G150 1/0	G75 1/0	81 ± 5	20	10	0.09 ± 0.025	LENO
917	G75 1/0	G75 1/0	229 ± 14	50	35	0.17 ± 0.025	CHESSBOARD PATTERN
918	G150 1/0	G75 1/0	245 ± 15	56	35	0.20 ± 0.025	BROKEN TWILL
920	G150 1/0	TG37 1/0	212 ± 13	56	25	0.20 ± 0.025	BROKEN TWILL
922	G150 1/0	G37 1/0	212 ± 13	56	25	0.21 ± 0.025	12H DERIV-A TIVE TWILL
923	G150 1/2	G75 1/2	286 ± 17	56	25	0.20 ± 0.025	BROKEN TWILL
G118-1	G75 1/0	G75 1/0	173 ± 10	34	30	0.18 ± 0.025	PLAIN
R362	G37 1/0	ER 270	135 ± 8	6.2	6.2	0.26 ± 0.050	LENO

GRINDING

STYLE	Yarn Description		FAW (g/m^2)	Count(count/in)		Thickness (mm)	Weave
	Warp	Weft		Warp	Weft		
356	G75 1/3	H50 1/4	162 ± 10	5	5	0.32 ± 0.050	LENO
385	H45 1/3	H45 1/3	216 ± 13	8	8	0.35 ± 0.050	PLAIN
389	H45 1/4	H45 1/4	288 ± 17	8	8	0.34 ± 0.050	PLAIN
396	H50 1/4	H50 1/4	291 ± 17	9	9	0.35 ± 0.050	PLAIN
376	H45 2/3	H45 2/3	378 ± 23	7	7	0.41 ± 0.075	PLAIN
R329	H25 1/0	ER 400	235 ± 14	7.6	7	0.29 ± 0.050	LENO

GLASS PAPER

Glass Paper division is producing Glass Paper in the wet by glass fiber as a main ingredient. Glass Paper has a dimensional stability, heat resistance, chemical resistance, electrical insulation, print process ability, heat insulation and so on. Due to its advanced quality, the Glass Paper is used by many manufacturers globally for floorings, buildings, and exterior electronics.
Hankuk Carbon / Hankuk Advanced Materials has two machines for Glass Paper which can produce 30~200(g/㎡) and the maximum width of 2,300mm according to customer's needs. Capacity per a month is 3,000,000m, and there are Pulp Type and Non-Pulp Type glass paper. The thickness range is from 0.220mm to 1.200mm. The mechanical properties can be different based on resin matrix. Also, Hankuk Carbon / Hankuk Advanced Materials can produce and develop new product according to customers' request.

FLOOR DECORATION MATERIALS

STYLE	Basis weight (g/m²)	Thickness (mm)	Lg loss (%)
GP-32	32±2	0.22±0.02	29±2
GP-40	40±2	0.25±0.02	29±2
GP-45	45±3	0.29±0.02	30±2
GP-50	50±2	0.32±0.03	29±2
GP-60	60±3	0.38±0.03	29±2

TILE CARPETS

STYLE	Basis weight (g/m²)	Thickness (mm)	Lg loss (%)
AG-30	30±3	0.24±0.03	17±3
AG-40	40±3	0.30±0.03	17±3
AG-50	50±3	0.36±0.03	17±3

PRINT SUBSTRATE & HEAT INSULATION PANEL

STYLE	Basis weight (g/m²)	Thickness (mm)	Lg loss (%)
AG-62	62±3	0.44±0.33	17±3
AG-78	78±3	0.58±0.03	10.5±1.5

FILTER

STYLE	Basis weight (g/m²)	Thickness (mm)	Lg loss (%)
AG-90	90±3	0.64±0.03	11±3

CSM / ROVING CLOTH / AAF

CSM became one of the finest products used in FRP equipment. Glass fiber strand is spread out in every direction and adheres with polyester binder to form as a mattress type.
Its strengths are equal strengths of every directions, and its price is affordable.

CHOPPED STRAND MAT

STYLE	Width (mm)	Weight(g/m²)	Moisture Content(%)
CM series	250~3000	300~600	≤ 0.2

CONTINUOUS STRAND MAT

STYLE	Width (mm)	Weight(g/m²)	Moisture Content (%)
CSM series	250~3000	230~480	≤ 0.2

FABMAT

STYLE	Width (mm)	Weight(g/m²)	Moisture Content(%)
5830	1000	880	≤ 0.2
5838	1000	960	≤ 0.2
5845	1000	1030	≤ 0.2

ROVING CLOTH

STYLE	Yarn Description		FAW (g/m²)	Count(count/in)		Thickness (mm)	Weave
	Warp	Weft		Warp	Weft		
345R	ER 300	ER 300	348 ± 21	14.5	14.5	0.35 ± 0.050	TWILL
420R	ER 600	ER 600	421 ± 42	9.1	8.6	0.35 ± 0.050	PLAIN
580R	ER 1200	ER 1200	580 ± 58	6.1	6.1	0.60 ± 0.075	PLAIN
800R	ER 2400	ER 2400	800 ± 80	4.2	4.2	0.65 ± 0.075	PLAIN

AAF

STYLE	Thickness		Weight (g/m²)	Width (mm)
	Cloth	Al - Foil		
612 #AAF 10	0.12	0.01	151	1015
612 #AAF 40	0.12	0.04	240	1015
618 #AAF 10	0.18	0.01	216	1015
618 #AAF 20	0.18	0.02	243	1015
618 #AAF 40	0.18	0.04	305	1015
G612 #AAF 10	0.12	0.01	116	1015
G612 #AAF 40	0.12	0.04	205	1015

RESIN SYSTEM

Hankuk Carbon / Hankuk Advanced Materials has been developing a various resin formulation for prepreg system to enhance lightweight, fireproof and durability for over 20 years. Based on our continuous development,
we have provided proper solutions to aviation, defense, rail road car, and electronic industries.
In addition to that, we manufacture various impregnated products using thermosetting resin and thermoplastic resin.

HOT MELT COATING

Resin	Resin System	Features	Cure Process	Cure Temperature	Tg	Tack	Flow	Remark	Applications
Epoxy	RS-101		Autoclave, Oven, Press	120℃ / 2hr	120℃	High	High	General system	Fishing Rod
	SE019		Autoclave, Oven, Press	120℃ / 2hr	120℃	High	High	General system	Fishing Rod, Bicycle
	SE-019K		Autoclave, Oven, Press	120℃ / 2hr	120℃	High	High	General system	Fishing Rod, Bicycle
	K-1		Autoclave, Oven, Press	120℃ / 2hr	120℃	Low	Low	General system	Fishing Rod, Bicycle
	L3		Autoclave, Oven, Press	120℃ / 2hr	120℃	Low	Medium	General system	Fishing Rod, Bicycle
	E-7		Autoclave, Oven, Press	120℃ / 2hr	120℃	High	n/a	Semi-toughened system	Fishing Rod, Bicycle
	4545B		Autoclave, Oven, Press	120℃ / 2hr	120℃	Low	Low	Toughened system	Fishing Rod, Golf Shaft
	4545M		Autoclave, Oven, Press	120℃ / 2hr	120℃	Medium	Low	Toughening system	Fishing Rod, Golf Shaft
	4545S	Low temperature curing system	Autoclave, Oven, Press	120℃/2hr, 80℃/10hr	120℃	High	Medium	Toughening system	Fishing Rod, Golf Shaft
	4545P	Low temperature curing system	Autoclave, Oven, Press	120℃/2hr, 90℃/6hr	120℃	High	Medium	Toughening system	Fishing Rod, Golf Shaft, Industrial
	RS250T		Autoclave, Oven, Press	120℃ / 2hr	110℃	High	Medium	Toughening system	Fishing Rod, Golf Shaft, Bycicle
	B1HT		Autoclave, Oven, Press	180℃ / 2hr	180℃	High	Medium	Toughening system	Fishing Rod, Bicycle
	W002	Low temperature curing system	Autoclave, Oven	80℃ / 10hr	120℃	High	High	Low temperature cure	Industrial
	E-8		Autoclave, Oven, Press	120℃ / 2hr	120℃	High	n/a	Semi-toughened system	Industrial
	R11		Autoclave, Oven, Press	150℃ / 1hr	150℃	High	n/a	Medium-High Tg	Industrial
	RS3232		Autoclave	180℃ / 2hr	180℃	High	High	High Tg, 350F system	Industrial
	RS3434-3E		Autoclave	180℃ / 2hr	200℃	n/a	n/a	n/a	Industrial
	C004	FR Resin	Autoclave, Oven	120℃ / 2hr	110℃	Low	High	General system	Industrial (Flame Retardant)
	HFE-A	Halogen Freee FR Resin	Autoclave, Oven	130℃ / 1hr	120℃	Medium	Medium	General system	Industrial (Flame Retardant)
	HFE-P	Halogen Freee FR Resin	Press	130℃ / 1hr	110℃	Low	Low	Toughening system	Industrial (Flame Retardant)
	R11-FC05-04		Press	150℃ / 15min	150℃	Medium	Medium	Fast cure / Medium Tg	Automotive
	G101		Autoclave	120℃ / 2hr	105℃	Medium	High	High transparency (surface)	
	G101-1		Autoclave	120℃ / 2hr	105℃	High	High	High transparency (surface)	
	FC702T		PCM / Press	150℃ / 5min	150℃	Medium	Medium	Fast cure (PCM)	
	FC703T		PCM / Press	150℃ / 3min	160℃	Medium	Medium	Fast cure (PCM)	

SOLVENT COATING

Resin	Resin System	Cure Process	Cure Temperature	Tg	Tack	Flow	Applications
Epoxy	HD430	Press	120℃ / 2hr	120℃	Tack Free	Low	Eletric Insulation
	HM445	Press	120℃ / 2hr	140℃	Tack Free	Low	
	HP580	Press	120℃ / 2hr	160℃	Tack Free	Low	
	FR2(Fishing Rod)	Autoclave, Oven	120℃ / 2hr	120℃	Medium	High	Industrial, Fishing Rod
	RS1212	Autoclave, Oven	120℃ / 2hr	120℃	High	Medium	Industrial, Aerospace
	LP7	Autoclave, Oven	120℃ / 2hr	120℃	High	Medium	Industrial, Frp Pipe
Phenol	PHC	Autoclave, Oven	130℃ / 1hr	120℃	Medium / Low	High / Medium / Low	Industrial, Aerospace, Railroad
Urethane	UTC			-	Tack Free	Medium	Industrial
Acrylic	ABC			-	Tack Free	Medium	Industrial
Silicone Rebber	SRC			-	Tack Free	High	Industrial
PVC	PVC			-	Tack Free	Low	Industrial

HANKUK CARBON OFFICE LOCATION

HANKUK CARBON

Please contact us for more information
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