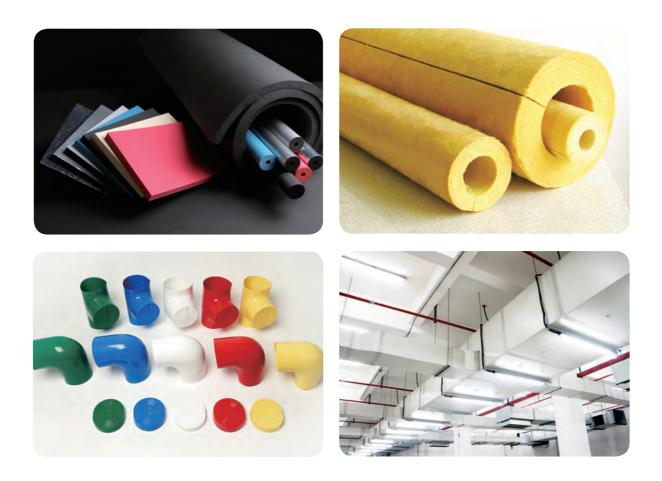




# Electromechanical heating insulation system

Rubber insulation | Glass wool | Ceramic fiber Composite airduct | U-PVC insucover



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### **COMPANY PROFILE**

Established in 2012, Wincell Insulation Group is china national high-tech enterprise integrating R&D, production, sales and service. Wincell has always been focusing on thermal insulation, emission reduction, noise reduction, etc. "Wincell" products have successively passed more than 100 domestic and international certifications such as EU,CE, US FM, UK BS, GREENGUARD, UL, Korea KS, China CQC and China Classification Society CCS certification, and the company has been awarded with many tiles such as "National Manufacturing and Internet Integrated Development Demonstration Enterprise", "Jiangsu Province Green Factory", "Jiangsu Province Industrial Internet Benchmarking Factory", "Jiangsu Province Two Industry Integration Pilot Leading Enterprise", "Jiangsu Province Science and Technology Little Giant", "Taixing City Top Ten Enterprises".

Wincell Insulation Group, as an aircraft carrier-level high-end thermal insulation system solution provider, has deployed across the country through self-construction, holding shares, mergers and acquisitions, etc., focusing on five major areas of the thermal insulation industry: heating general thermal insulation systems, large industrial thermal insulation systems, and energy-saving building envelope structures systems, thermal insulation materials for marine ships, and thermal insulation and noise reduction systems for locomotives, forming a full range of product lines in industries such as rubber and plastic, glass wool, aluminum silicate, aerogel, foam glass, air ducts, and rock wool, which has exported to more than 20 countries and regions.

Wincell Insulation Group has always regarded the R&D innovation strategy as the company's first core competitiveness, and has established and improved a technological innovation system with independent innovation as the main body and a combination of production, learning and research. The company has established national-level CMA, CNAS inspection and testing centers, Jiangsu Provincial Enterprise Technology Center, Jiangsu Provincial Industrial Design Center, Taizhou Special Environmental Protection Flame-retardant Rubber and Plastic Thermal Insulation Material Engineering Technology Research Center and other R&D and testing platforms, and is oriented by industry demand. Promote the joint training of R&D and design talents by universities, institutes and enterprises, and jointly create a cooperation model of "school-enterprise cooperation, full-process embedding" with Hefei Institute of Material Science, Chinese Academy of Sciences, Nanjing University of Aeronautics and Astronautics, Jiangsu Institute of Technology, etc., realizing in-depth The echelon construction of docking industrial talents.

Wincell Insulation Group deepens corporate innovation with a digital strategy, integrates into the industrial ecological chain, establishes an open innovation ecosystem, and organically integrates R&D, manufacturing, supply, talent, investment, integration and other capabilities. Taking customers as the goal, taking the market as the guide, and relying on the core resources of the enterprise, it has created a three-dimensional marketing service system with deep integration of online and offline, and implemented the direct sales system throughout. The Nengdianyun industrial Internet platform built is transparent, Integrated full-process services, so that the project process is under control.

The century-old brand is the ultimate dream of Wincell. It has been developing continuously for decades. We look forward to the direction of the times and reshape the quality of life. We are only an enterprise that practices "creating a good life brought by good insulation for human beings and society". mission. Under the new journey of the new era, Wincell will lead the development of the industry and continue to forge ahead!

### BACKGROUND

The energy used by the existing electromechanical HVAC system is basically high-grade non-renew able energy. The extensive use of these energy sources makes the earth's resources increasingly scarce and brings serious environmental problems.

With the in-depth development of the industry and the continuous improvement of energy saving, emission reduction and environmental protection requirements, how to reduce unnecessary energy loss in the field of HVAC is an important indicator of energy saving.

Wincell's high-quality products and perfect technical solutions are widely used in the field of electro mechanical HVAC. Whether it is used as a thermal insulation material as well as noise reduction, or as an external protection material for beautification and anti-corrosion, Wincell thermal insulation makes extraordinary performance.



### 02 BACKGROUND



## **NBR INSULATION MATERIAL**

Wincell General Rubber and Plastic is a flexible rubber and plastic insulation material with completely closed cells that is foamed with butyl rubber as the main raw material. The excellent product performance makes the product widely used in various public places, industrial plants, clean rooms and Scenarios such as medical education institutions.



CLASS 0

### **PRODUCT PARAMETERS**

Physical Property Steel density Kg/m<sup>3</sup> Thermal conductivity W/(m·k) Permeability coefficient Moisture permeability Wet resistance factor Vacuum holding % Aiming performance Smoke toxicity Ruler % Compression rebound rate % Anti-aging 150h Applicable temperature range °C

#### **GENERAL NBR INSULATION**

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## **GENERAL NBR INSULATION**

CLASS 1

Performance Index	Standard
40-80	GB/T 6343
< 0.030 at -20°C	
< 0.032 at 0°C	GB/T 10294
< 0.037 at 40°C	
: ≤ 1.96x10 <sup>-11</sup>	GB/T 17146
≥ 10000	GB/T 17146
≤ 8	GB/T 17794
Flame retardant B1 level	GB 8624
ZA3 roll grade	GB/T 20285
(105°C ±3°C, 7d) ≤ 10	GB/T 8811
(compression rate 50%, 72h) > 70	GB/T 6669
Slightly wrinkled, no cracks, no pinholes, no deformation	GB/T 16259
-50 ~ 110	GB/T 17794

### W1T/W1S SPECIFICATION

Fits pipe	type		Insulation	Wall thickness					
Seamless steel pipe	Copper pipe	Galvanized pipe	Inner diameter mm	6mm	9mm	13mm	15mm	20mm	25mm
	1/4*		6	06006	09006	13006	15006	20006	25006
	3/8 <sup>≠</sup>	DN6	10	06010	09010	13010	15010	20010	25010
	1/2 <sup>≠</sup>		13	06013	09013	13013	15013	20013	25013
15	5/8	DN8	16	06016	09016	13016	15016	20016	25016
	3/4 <sup>≠</sup>		19	06019	09019	13019	15019	20019	25019
22	7/8 <sup>≠</sup>	DN15	22	06022	09022	13022	15022	20022	25022
25	1″		25	06025	09025	13025	15025	20025	25025
28	1-1/8 <sup>≠</sup>	DN20	28		09028	13028	15028	20028	25028
32	1-1/4 <sup>≠</sup>		32		09032	13032	15032	20032	25032
	1-3/8	DN25	35		09035	13035	15035	20035	25035
38	1-1/2 <sup>≠</sup>		38		09038	13038	15038	20038	25038
	1-5/8	DN32	43		09043	13043	15043	20043	25043
45	1-3/4		45		09045	13045	15045	20045	25045
	1-7/8	DN40	48		09048	13048	15048	20048	25048
	2-1/8 <sup>≠</sup>		54		09054	13054	15054	20054	25054
57	2-1/4 <sup>≠</sup>		57		09057	13057	15057	20057	25057
	2-3/8	DN50	60		09060	13060	15060	20060	25060
			67		09067	13067	15067	20067	25067
76		DN70	76		09076	13076	15076	20076	25076
89		DN80	89		09089	13089	15089	20089	25089
108			108		09108	13108	15108	20108	25108
		DN100	114					20114	25114
133			133					20133	25133
		DN125	140					20140	25140
159			159					20159	25159
		DN150	168					20168	25168

W1T/W0T Wincell CLASS 1 / CLASS 0 Pipe Specification Model Table 1

•Reminder : The delivery period of the products with specifications in red is slightly longer than that of regular products, please contact the sales department in advance to reserve sufficient delivery time.

### W1S Wincell CLASS 1 Sheet mode

Model	Thicknesss mm	Length m	Width m
W1S6	6	20	1.5
W1S10	10	20	1.5
W1S13	13	15	1.5
W1S15	15	15	1.5
W1S19	19	10	1.5
W1S20	20	10	1.5
W1S25	25	10	1.5
W1S30	30	8	1.5
W1S32	32	8	1.5
W1S35	35	5	1.0
W1S38	38	5	1.0
W1S40	40	5	1.0
W1S50	50	2	1.0

Example of model designation	: W1T25048

- W-----Wincell brand
- 1----- Product grade code
- T----- Uniform pipe code
- 25----- Rubber and plastic pipes make wall thickness(mm) 048----- Inside diameter of rubber and plastic pipe(mm)

•Note: If the inner diameter of the pipe to be insulated is greater than 108mm, plate is recommended. If the adiabatic thickness is greater than 32mm, double-layer or multi-layer pipe is recommended.

•Example of model designation: W1S19

- W-----Wincell brand
- 1----- Product grade code
- S----- Uniform plate code
- 19----- Rubber and plastic plates make wall thickness(mm) •Note: When the design of insulation layer is larger than 32mm, it is recommended to use double layer or multi-layer plate insulation.

### W1T/W0T Wincell CLASS 1 / CLASS 0 Pipe Specification Model Table 2

Fits pipe	type		Insulation	Wall thickness	Wall thickn				
Seamless steel pipe	Copper pipe	Galvanized pipe	Inner diameter mm	30mm	32mm	35mm	38mm	40mm	50mm
	1/4	P.P.*	6						
	3/8 <sup>≠</sup>	DN6	10	30010					
	1/2*		13	30013	32013				
15	5/8 <sup>≠</sup>	DN8	16	30016	32016				
	3/4 <sup>≠</sup>		19	30019	32019				
22	7/8 <sup>≠</sup>	DN15	22	30022	32022				
25	1″		25	30025	32025				
28	1-1/8 <sup>≠</sup>	DN20	28	30028	32028	35028			
32	1-1/4*		32	30032	32032	35032			
	1-3/8	DN25	35	30035	32035	35035			
38	1-1/2*		38	30038	32038	35038			
	1-5/8	DN32	43	30043	32043	35043	38043	40043	50043
45	1-3/4		45	30045	32045	35045	38045	40045	50045
	1-7/8	DN40	48	30048	32048	35048	38048	40048	50048
	2-1/8 <sup>≠</sup>		54	30054	32054	35054	38054	40054	50054
57	2-1/4 <sup>≠</sup>		57	30057	32057	35057	38057	40057	50057
	2-3/8	DN50	60	30060	32060	35060	38060	40060	50060
			67	30067	32067	35067	38067	40067	50067
76		DN70	76	30076	32076	35076	38076	40076	50076
89		DN80	89	30089	32089	35089	38089	40089	50089
108			108	30108	32108	35108	38108	40108	50108
		DN100	114	30114	32114	35114	38114	40114	50114
133			133	30133	32133	35133	38133	40133	50133
		DN125	140	30140	32140	35140	38140	40140	50140
159			159	30159	32159	35159	38159	40159	50159
		DN150	168	30168	32168	35168	38168	40168	50168

•Reminder : The delivery period of the products with specifications in red is slightly longer than that of regular products, please contact the sales department in advance to reserve sufficient delivery time.

### W0S Wincell CLASS 0 grade plate specification model

Model	Thicknesss mm	Length m	Width	
W0S6	6	20	1.5	
W0S10	10	20	1.5	
W0S13	13	15	1.5	
W0S15	15	15	1.5	
W0S19	19	10	1.5	
W0S20	20	10	1.5	
W0S25	25	10	1.5	р
W0S30	30	8	1.5	0
W0S32	32	8	1.5	
W0S35	35	5	1.0	_
W0S38	38	5	1.0	
W0S40	40	5	1.0	
W0S50	50	2	1.0	

#### **GENERAL NBR INSULATION**

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## W1T/W1S SPECIFICATION

• Example of model designation: W0T25048

- W-----Wincell brand
- 0----- Product grade code
- T----- Uniform pipe code
- 25----- Rubber and plastic pipes make wall thickness(mm)
- 048----- Inside diameter of rubber and plastic pipe(mm)

Note: If the inner diameter of the pipe to be insulated is greater than 108mm, plate is recommended. If the adiabatic thickness is greater than 32mm, double-layer or multi-layer pipe is recommended.

•Example of model designation: W0S19

- W-----Wincell brand
- 0----- Product grade code
- S----- Uniform plate code

19----- Rubber and plastic plates make wall thickness(mm) Note: When the design of insulation layer is larger than 32mm, it is recommended to use double layer or multi-layer plate insulation.

### AIRCRAFT CARRIER ADVANCED HEALTH INSULATION TUBE

Wincell Rubber Insulation material is a flexible rubber thermal insulation material with completely closed cells made of butadiene rubber as the main raw material through foaming. Excellent product performance makes the product widely used in various public places, industrial plants, and clean rooms and medical education institutions.



### PRODUCT PERFORMANCE

#### Better insulation

The initial thermal conductivity is 0.032W/(mk)0°C WINCELL rubber and plastic adopts a special formula process, has a completely closed-cell internal structure, lower and more stable thermal conductivity, and has obvious energy-saving effects in long-term operation.

#### Safer Guarantee

WINCELL rubber and plastic has obtained CQC certification. CQC certification is jointly issued by China Quality Certification Center and National Fireproof Building Materials Quality Supervision and Inspection Center. The combustion performance of its products has reached the B1 level of the GB8624 standard (additional levels: smoke production s2, burning drippings d0, smoke toxicity tllevel), which is the confidence guarantee for customers to choose Wincell rubber and plastics.

#### Longer service life

Humidity resistance factor > 10000

WINCELL rubber and plastic can effectively prevent the penetration of external water vapor, ensure the long-term stability of the physical properties of the material, and prolong the service life of the product in various environments.

#### Easier installation

Wide application, easy installation, short construction period, high efficiency and more economical!

Better anti-mildew and anti-bacterial properties

Efficient antibacterial ability to prevent the growth and spread of germs and viruses.









### PRODUCT PARAMETERS

Performance
Steel density Kg/m <sup>3</sup>
Minimum service temperature
Highest aiming
Thermal Conductivity
Penetration number
Moisture resistance factor
Oxygen Index
Vacuum suction %
Performance
To warm the evening

Thickness (length) Inside diameter	9mm(1.8m) carton	13mm(2m) carton	15mm(2m) carton	20mm(2m) carton
6mm	160	88	80	45
10mm	120	72	64	40
13mm	100	65	56	35
16mm	80	56	50	30
19mm	72	47	42	25
22mm	60	42	36	25
25mm	60	42	35	25
28mm	50	35	30	20
32mm	40		30	20
35mm	40			20
38mm	40			18
43mm	40			16
48mm	35			14

Note: carton size 400mm x 330mm

#### HEALTH INSULATION TUBE

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### AIRCRAFT CARRIER ADVANCED HEALTH INSULATION TUBE

Indicators	Note
40-80	GB/T 6343
-50°C	
+105℃	
≤ 0.030 at -20°C	
≤ 0.032 at 0°C	GB/T 10294
≤ 0.037 at 40°C	
: 1.96×10 <sup>-11</sup>	GB/T 17146
≥ 10,000	GB/T 17146
≥ 32%	GB/T 2406
≤ 8	GB/T 17794
lame retardant B1 level	GB 8624

### WF COMPOSITE INSULATION

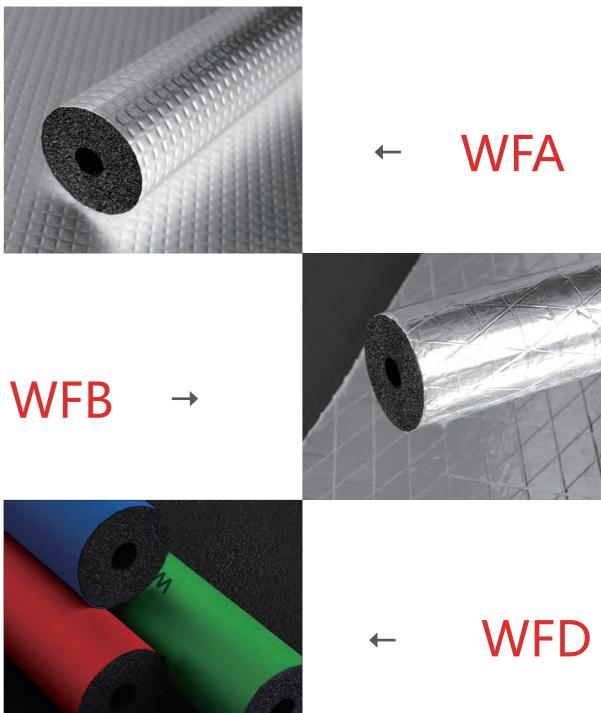
## **COMPOSITE NBR CLASSIFICATION**

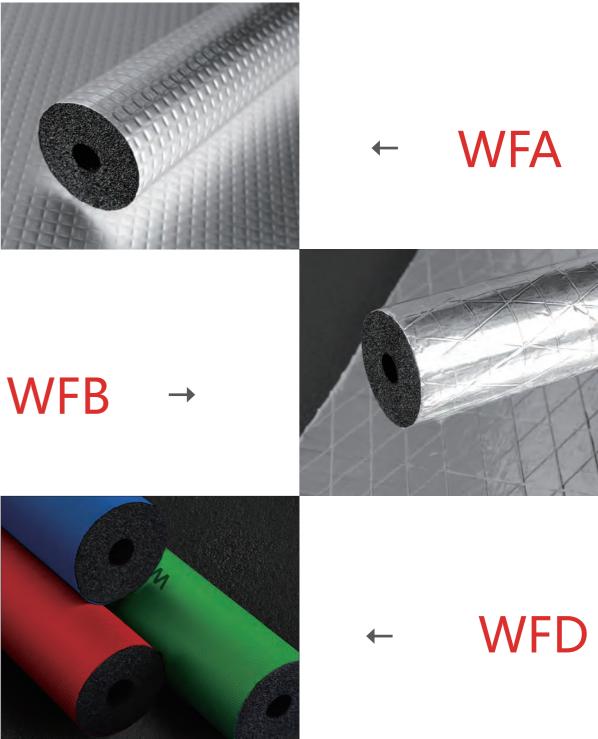
Wincell WF composite rubber and plastic thermal insulation material is made of polymer composite layer and Wincell rubber and plastic thermal insulation material is fused with special technology, which compre-hensively improves the performance and thermal insulation indicators of rubber and plastic thermal insula-tion material, and leads the new technological change of composite rubber and plastic thermal insulation material.



### **PRODUCT PARAMETERS**

Performance item		Performance	Standard compliance	
Meet density Kg/m <sup>3</sup>		40-80	GB/T 6343	
		≤ 0.030 at -20°C		
Derivative number W/(m·k)		≤ 0.032 at 0°C	GB/T10294	
		≤ 0.037 at 40°C		
Moisture	Moisture g/(m·s·Pa)	≤ 1.3x10 <sup>-11</sup>	GB/T17146	
permeability	Moisture resistance factor	≥ 15000	GB/T17146	
Vacuum suc	tion %	≤ 6	GB/T17794	
Deeuweutew		Level B1	GB 8624	
Poor perform	nance	Composite layer non-combustible Class A	GB 8624	
smoke toxic	ity	ZA3 full grade	GB/T20285	
Dimensions	%	(105°C ±3°C, 7d) ≤ 10	GB/T8811	
Compression rebound rate %		(compression rate 50%, 72h) $\geq$ 70	GB/T6669	
Anti-aging 1	50h	Light texture, no pinholes, no Na	GB/T16259	
Applicable to	emperature range ℃	-50 ~ 110	GB/T17794	





### COMPOSITE NBR CLASSIFICATION

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### WFA/WFB/WFD SPECIFICATION

### WFA/WFB/WFD Wincell Pipe Specification Model Table 1

Fits pipe	type		Insulation	Wall thickness					
Seamless steel pipe	Copper pipe	Galvanized pipe	Inner diameter mm	6mm	9mm	13mm	15mm	20mm	25mm
seerpipe	1/4″	pipe	6	06006	09006	13006	15006	20006	25006
	3/8″	DN6	10	06010	09010	13010	15010	20010	25010
	1/2″		13	06013	09013	13013	15013	20013	25013
15	5/8″	DN8	16	06016	09016	13016	15016	20016	25016
	3/4″		19	06019	09019	13019	15019	20019	25019
22	7/8″	DN15	22	06022	09022	13022	15022	20022	25022
25	1″		25	06025	09025	13025	15025	20025	25025
28	1-1/8″	DN20	28		09028	13028	15028	20028	25028
32	1-1/4″		32		09032	13032	15032	20032	25032
	1-3/8″	DN25	35		09035	13035	15035	20035	25035
38	1-1/2″		38		09038	13038	15038	20038	25038
	1-5/8″	DN32	43		09043	13043	15043	20043	25043
45	1-3/4″		45		09045	13045	15045	20045	25045
	1-7/8″	DN40	48		09048	13048	15048	20048	25048
	2-1/8″		54		09054	13054	15054	20054	25054
57	2-1/4″		57		09057	13057	15057	20057	25057
	2-3/8″	DN50	60		09060	13060	15060	20060	25060
			67		09067	13067	15067	20067	25067
76		DN70	76		09076	13076	15076	20076	25076
89		DN80	89		09089	13089	15089	20089	25089
108			108		09108	13108	15108	20108	25108
		DN100	114					20114	25114
133			133					20133	25133
		DN125	140					20140	25140
159			159					20159	25159
		DN150	168					20168	25168

•Reminder : The delivery period of the products with specifications in red is slightly longer than that of regular products, please contact the sales department in advance to reserve sufficient delivery time.

### Specifications and models of WFA/WFB/WFD composite rubber and plastic sheet

Specification	Thickness mm	Length m	Width m
WFA/B/D 10	10	2	1.2
WFA/B/D 13	13	2	1.2
WFA/B/D 15	15	2	1.2
WFA/B/D 19	19	2	1.2
WFA/B/D 20	20	2	1.2
WFA/B/D 25	25	2	1.2
WFA/B/D 30	30	2	1.2
WFA/B/D 32	32	2	1.2
WFA/B/D 35	35	2	1.0
WFA/B/D 38	38	2	1.0
WFA/B/D 40	40	2	1.0
WFA/B/D 50	50	2	1.0

Example of m	nodel designation: WFA/B/D T25048	
	WWincell brand	-
	F Basic composite drawer	-
A/B/DPhili	opine clamp metal layer/aluminum foil layer/ colorful fiber	-35000
, , , , , , , , , , , , , , , , , , , ,	25 Basic drawer tube (mm)	100
048 I	nner diameter of Wincell rubber and plastic tube (mm)	
inner diamete	ength of the pipe is 1 meter per branch. It is recommended to use plate r of the insulated pipe is greater than 108mm , and double-layer or mult ecommended for insulation thickness greater than 30mm .	
Example desc	ription of type designation: WFA/B/C/D S19	
	WWincell brand	
	F Basic composite drawer	
A/B/DPhilip	ppine clamp metal layer/aluminum foil layer/colorful fiber layer	
	The rubber and plastic walls are thick (mm)	
	n the insulation layer is designed to be larger than 32mm , it is recomm i-layer boards for insulation.	ended

• If there are traces of specifications, you can marry our company's sales department

The width of the board scorpion is 1.2 meters, and the length is 2 meters per piece.

## WFA/WFB/WFD SPECIFICATION

### WFA/WFB/WFD Wincell Pipe Specification Model Table 2

Fits pipe	type		Insulation	Wall thickness					
Seamless steel pipe	Copper pipe	Galvanized	Inner diameter mm	30mm	32mm	35mm	38mm	40mm	50mm
steet pipe	1/4″	pipe	6						
	3/8″	DN6	10	30010					
	1/2″		13	30013	32013				
15	5/8″	DN8	16	30016	32016				
	3/4″		19	30019	32019				
22	7/8″	DN15	22	30022	32022				
25	1″		25	30025	32025				
28	1-1/8″	DN20	28	30028	32028	35028			
32	1-1/4″		32	30032	32032	35032			
	1-3/8″	DN25	35	30035	32035	35035			
38	1-1/2″		38	30038	32038	35038			
	1-5/8″	DN32	43	30043	32043	35043	38043	40043	50043
45	1-3/4″		45	30045	32045	35045	38045	40045	50045
	1-7/8″	DN40	48	30048	32048	35048	38048	40048	50048
	2-1/8″		54	30054	32054	35054	38054	40054	50054
57	2-1/4″		57	30057	32057	35057	38057	40057	50057
	2-3/8″	DN50	60	30060	32060	35060	38060	40060	50060
			67	30067	32067	35067	38067	40067	50067
76		DN70	76	30076	32076	35076	38076	40076	50076
89		DN80	89	30089	32089	35089	38089	40089	50089
108			108	30108	32108	35108	38108	40108	50108
		DN100	114	30114	32114	35114	38114	40114	50114
133			133	30133	32133	35133	38133	40133	50133
		DN125	140	30140	32140	35140	38140	40140	50140
159			159	30159	32159	35159	38159	40159	50159
		DN150	168	30168	32168	35168	38168	40168	50168

•Reminder : The delivery period of the products with specifications in red is slightly longer than that of regular products, please contact the sales department in advance to reserve sufficient delivery time.

### PACKAGE

In order to ensure the installation effect of the entire thermal insulation system, the auxiliary Wincell rubber and plastic insulation material products are installed and applied in various fields, and Wincell provides high-quality auxiliary material series products. Superior performance matching makes the overall thermal insulation effect of the project more perfect.



Carton: Plastic bag packaging: The standard five-layer corrugated cardboard box of Xihe container transportation can be stacked up to 10 layers to protect the product from being squeezed.

### 12 WF COMPOSITE INSULATION



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### SPECIAL NBR ACCESSARY

In order to ensure the installation of the entire insulation system, the auxiliary Wincell rubber and plastic insulation materials are installed and applied in various fields, and Wincell provides high-quality auxiliary material series products. Excellent performance matching makes the overall thermal insulation effect of the project more perfect.

### Wincell Special Glue

Wincell special glue is flame retardant glue.

It is mainly used for the bonding of various Wincell rubber and plastic insulation materials. Wincell special glue is easy to install, has a short drying time, and has strong moisture resistance and strong weather resistance after drying, which can effectively prevent water vapor penetration at the joints, thereby ensuring the entire insulation system.

Standard specifications of Wincell special glue: 18.75 L/ barrel; 3.78 L/can. Other volumes can be customized according to the situation



### Wincell Special Tape

#### Wintape CT Duct Tape

It is suitable for the connection, bonding and fixing of joints during the installation of Wincell thermal insulation products in water pipes and air pipes of air-conditioning systems. Cloth tape is energy-saving and environment-friendly, easy to operate, and used together with Wincell thermal insulation materials, it can improve the ability of the joints of thermal insulation materials to resist water vapor penetration, and ensure the airtightness and integrity of the thermal insulation system. Wintape CT Duct Tape

Standard specifications: 30mm (width) x25m (length) /50mm (width) x 25m (length). Other sizes are available upon request.

### Wintape IT Insulation Tape

It adopts the same material as rubber and plastic insulation products, and its performance indicators are consistent with the products. It is applied to valves, pipe joints or complex-shaped special-shaped parts to prevent system heat/cooling loss, control condensation, and reduce vibration. and noise. In order to ensure a good thermal insulation effect, it is recommended to wrap it multiple times to ensure that the overall thickness is basically the same as the required material thickness to prevent condensation.

Wintape IT Insulation Tape

Standard specification: 3mm (thickness) x5cm (width) x20m (length) 5mm (thickness) x5cm (width) x20m (length) Other sizes are available upon request.

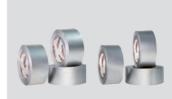
### Wintape AT Wincell composite tape

Wintape AT composite tape is made of aluminum metal material, which is the same material as Wintape composite rubber and plastic outer coating layer, and its performance indicators are consistent with Wintape composite rubber and plastic products, avoiding potential installation hazards. Wintape AT composite rubber has good tillage property and is used in various connection parts to ensure the overall airtightness of the insulation system. When in use, just tear off the outer skin paper, adjust the proper position, and stick firmly.

Wintape AT composite tape: Philippine clamp tape 50mm (width) x25m (length) Aluminum foil tape 50mm (width) x40m (length) Other sizes can be customized.







#### Meeting high-end demands in the field of thermal insulation

with high population density.



#### Application of Wincell rubber and plastic in special fields

Wincell rubber and plastics are used in special environments High-end living environment: high-star hotels, office buildings, supermarkets Various production environments: food workshop, medical and health, microelectronics factory, tobacco, clean room and R&D center Various public facilities: airports, railway stations, convention centers, sports arenas



#### Wincell rubber and plastics are used in harsh environments

trenches, outdoor open places



### 14 **APPLICATION DOMAIN**

## **APPLICATION DOMAIN**

The excellent and stable Wincell rubber and plastics have the advantages of effectively preventing oxidation, ultraviolet rays, acid and alkali corrosion, and resisting external force friction, etc., and are highly praised by customers. Wincell rubber and plastic has become an ideal thermal insulation material for many special applications, fully meeting the harsh environments such as food workshops, medical and health care, microelectronics workshops, tobacco, clean rooms and R&D centers, as well as airports and railway stations

High acid and alkali corrosion environment: petroleum, chemical industry Various closed space environments: ships, power trains, subways and other public facilities: machine rooms,





# **GLASSWOOL**



### **GLASSWOOL**

### Good insulation performance

Wincell glass wool fibers are uniform and slender, and the fibers are arranged perpendicular to the direction of heat transfer, so that it can effectively prevent heat transfer and reduce heat loss. The product has passed the GB8624-2006 combustion performance A2 test, the combustion level is A2 level, and does not produce toxic gas and smoke.

### **Excellent sound absorption**

Wincell glass wool greatly improves the sound-absorbing performance through fiber refinement technology. The glass fibers are intertwined to form many small cavities, which can well confine the air, reduce convection, and attenuate sound energy through fiber vibration to achieve heat insulation and absorption. noise reduction effect.

### Green and environmental protection, no formaldehyde

In order to meet the market's high-standard demand for green and environmentally friendly building materials, and to avoid harmful substances such as formaldehyde and phenol from harming the human body and the environment, Wincell Glass Wool can provide formaldehyde-free products to create a green and environmentally friendly application environment.

### No smell, more skin-friendly

In order to create a more comfortable use experience, Wincell glass wool has changed the adhesive to eliminate the peculiar smell of glass wool and rock wool; the finer fibers make the glass wool feel softer, greatly reducing the tingling sensation, and improving the working environment on site.



### **GLASSWOOL SHEET**

Wincell glass wool board is made of uniform and slender glass fiber and environmentally friendly thermosetting adhesive through special processing, and it is a board product with certain strength. With the increasing market demand for green and environmentally friendly building materials, Wincell has launched a variety of environmentally friendly materials to avoid harmful substances such as formaldehyde and phenol from harming the human body and the environment.





## WGNS →





## ← WGMS



### Wincell glass wool board performance parameter table

performance item			rmance para	meter	compliance with standards	
Working temperature rar	ige	-18°C t	o +250°C			GB/T 13350
Corrosion resistance		no che	mical reaction			GB/T 13350
fiber diameter µm		5-7				GB/T 5480
Slag ball content (particle	e size> 0.25 mm) %	≤ 0.3				GB/T 5480
Moisture content %		≤ 1.0			GB/T 16400	
Moisture absorption %		≤ 5.0			GB/T 5480	
Hydrophobic rate %		≥ 98			GB/T 10299	
Bulk density (kg/m³)			$24 \le P \le 32$	$32 \le P \le 40$	P > 40	GB/T 13350
Thermal conductivity	Average	25 °C	≤ 0.038	≤ 0.036	≤ 0.034	GB/T 13350
K(W/m. °C) Average		70 °C	≤ 0.044	≤ 0.042	≤ 0.040	GB/T 13350
Heat load shrinkage °C		≥ 250 ≥ 250 ≥ 250			GB/T 13350	
Combustion performance		non-co	mbustible		GB 5464	
		Grade	A		GB 8624	

Average temperature: refers to the arithmetic mean of the temperature of the air inside the air duct and the temperature of the outside air. The above test conditions are all glass wool boards without veneer. The data are standard values.

Data source: Test report of National Glass Fiber Product Quality Supervision and Inspection Center.

### Wincell Glass Wool Board Standard Specifications

Bulk density (kg/m <sup>3</sup> )	32	40	48	56	64	80	96
Thickness (mm)		25	30	40	50		
Width (mm)				600			
Length (mm)				1200			

The packaging is in plastic bags, and other specifications can be customized according to requirements.

### 18 GLASSWOOL SHEET

### **GLASSWOOL SHEET**

### **GLASSWOOL TUBE**

Wincell glass wool pipe shell is made of uniform and slender glass fiber and environmentally friendly thermosetting adhesive through special processing. It is suitable for the insulation of various types of cold and hot pipes, hidden/exposed pipes. Due to the particularity of its glass fiber, the product has excellent thermal insulation performance, extrusion resistance and impact resistance.



WGT

# WGNT









### Wincell glass wool shell performance parameter table

performance item	performance parameter	compliance with standards
Working temperature range	-18°C to +250 °C	GB/T 13350
Corrosion resistance	no chemical reaction	GB/T 13350
Average fiber diameter µm	5-7	GB/T 5480
Slag ball content (particle size > 0.25 mm) %	≤ 0.3	GB/T 5480
Moisture content %	≤ 1.0	GB/T 16400
Moisture absorption %	≤ 5.0	GB/T 5480
Hydrophobic rate %	≥ 98	GB/T 10299
Bulk density (kg/m <sup>3</sup> )	48 64 80	GB/T 13350
Thermal conductivity K(W/m. °C ) Average 70°C	≤ 0.042 ≤ 0.042 ≤ 0	.042 GB/T 13350
Heat load shrinkage temperature °C	≥ 250 ≥ 250 ≥ 2	GB/T 13350
Combustion performance level	non-combustible material	GB 5464
	Grade A	GB 8624

The above test conditions are all glass wool tubes without veneer

- connect.
- sections.
- mance of the entire insulation system to weaken.

### Wincell Glass Wool Shell Standard Specifications

Bulk density (kg/m³)	48		64		80	)		100	
Thickness (mm)	25	30	40	50	60	65	70		
Length (mm)			1000	12	200				
Diameter (mm)			10	6-457					

The packaging is in plastic bags, and other specifications can be customized according to requirements. When ordering, please specify the outer diameter of various pipes, the wall thickness of the glass wool shell, the bulk density, and the type of veneer.

### **GLASSWOOL TUBE**

★ For air-conditioning chilled water pipes, cold and hot dual-purpose pipes, every three sections of the pipe shell should be evenly applied to the section of the pipe shell with Wincell Aier's special sealing paste

★ Wingsheng Glass Wool Special Sealing Paste is an elastic polymer with a red environmental protection formula containing anti-mold and antibacterial ingredients. When used, it will form a layer of uniform elastic waterproof film after natural air drying, which can strongly separate the penetration of water vapor and Diffusion, suitable for sealing, strengthening, water vapor separation and partial filling of glass wool

★ The section treatment of the tube shell can ensure that the water vapor and the diffusion of water entering the insulation material will be effectively intercepted in case of an accident, and will not cause the perfor-

### **GLASSWOOL BLANKET**

Wincell glass wool felt has fluffy and interlaced fibers and a large number of tiny pores. It is a typical porous sound-absorbing material with good sound-absorbing properties. When the sound wave is incident on the glass wool, the sound wave can enter the interior of the material along the pores, causing the air molecules in the gap to vibrate. Due to the viscous resistance of the air and the friction between the air molecules and the pore walls, the sound energy is converted into heat energy and lost.



← WGZ











### Glass wool felt performance parameter table

performance item	perfo	rmance para	meter		compliance with standards	
Working temperature ra	nge					GB/T 13350
Corrosion resistance	-					GB/T 13350
Average fiber diameter	kim μm					GB/T 5480
Slag ball content (partic	le size> 0.25 mm) %					GB/T 5480
Moisture content %						GB/T 16400
Moisture absorption %						GB/T 5480
Hydrophobic rate %						GB/T 10299
Bulk density (kg/m³)			$16 \le P \le 24$	24 ≤ P ≤ 32	32 ≤ P ≤ 40	GB/T 13350
Thermal conductivity	Average	25 °C	≤ 0.041	≤ 0.038	≤ 0.036	GB/T 13350
K(W/m. °C) Average		70 °C	≤ 0.048	≤ 0.044	≤ 0.042	GB/T 13350
Heat load shrinkage terr		≥ 250	≥ 250	≥ 250	GB/T 13350	
Combustion performan					GB 5464	
						GB 8624

The above test conditions are for glass wool felt without veneer. Data source: National Glass Fiber Product Quality Supervision and Inspection Center Test Report.

### Wincell Glass Wool Blanket Standard Specifications

Bulk density (kg/m <sup>3</sup> )	24	32	32 40		48	
Thickness (mm)		25	30	40	50	
Width (mm)			12	00		
Length (mm)		10000	10000-30000 ( determined by bulk density and thickness)			

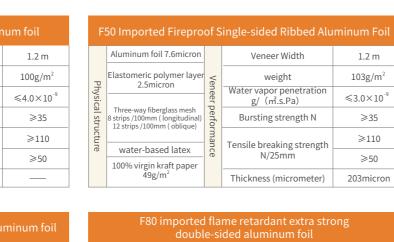
The packaging is in plastic bags, and other specifications can be customized according to requirements.

### 22 **GLASSWOOL BLANKET**

### **GLASSWOOL BLANKET**



# **CERAMIC FIBER**



Aluminum foil 7.6micron

Elastomeric polymer layer

F	F60 domestic flame retardant double-sided aluminum foil										
<b>Physical structure</b>	Aluminum foil 7micron		Veneer Width	1.2 m							
	Three-way fiberglass mesh	Veneer	weight	125g/m <sup>2</sup>							
	20 strips /100mm (longitudinal 12 strips /100mm ( oblique)		Water vapor penetration g/ (m <sup>2</sup> .s.Pa)	≤2.0×10 <sup>-9</sup>							
alstr	Flame Retardant Adhesive	performance	Bursting strength N	≥35							
uctu	kraft paper	rmar	Tanaila kasalda astasa atk	≥120							
re	Flame Retardant Adhesive	lce	Tensile breaking strength N/25mm	>00							
	Aluminum foil 7micron			≥80							
			Thickness (micrometer)								

	W38-II imported flame retardant white/black coated aluminum foil										
	White/black aluminum foi	l	Veneer Width	1.2 m							
-	Elastomeric Polymer	V€	weight	108g/m <sup>2</sup>							
Physical	Three-way glass fiber mesh longitudinal 8/100mm glass fibe		Water vapor penetration g/ (m <sup>2</sup> .s.Pa)	≤6.0×10 <sup>.9</sup>							
alstr	transverse 12/100mm glass fiber	performanc	Bursting strength N	≥80							
structure	Flame Retardant Adhesive	rma	Tanaila kasalda satura atk	≥150							
re	kraft paper	nce	Tensile breaking strength N/25mm	≥90							
			Thickness (micrometer)	208micron							

	W38 imported extra strong moisture-proof and anti-corrosion polypropylene veneer										
	White (black) metallized polypropylene		Veneer Width	1.2 m							
-	film surface layer	<	weight	127g/m <sup>2</sup>							
hys	38.1micron		Water vapor penetration	≤6.0×10 <sup>-9</sup>							
sica	Flame Retardant Adhesive	er p	g/ (m².s.Pa)	≤6.0×10							
lstru	Three-way fiberglass mesh 20 strips /100mm ( longitudinal	erfor	Bursting strength N	≥80							
Physical structure	(including glass fiber and polyphenol wire) 20 pieces /	performanc	Tensile breaking strength	≥150							
e	100mm (oblique direction)	ce	N/25mm	≥90							
	100% virgin kraft paper 49g/m <sup>2</sup>		Thickness (micrometer)	254micron							

	FFR water-resistant and flame-retardant aluminum foil glass fiber cloth veneer					
			Veneer Width	1.2 m		
Р	aluminum foil	weight				
Physical		Veneer performance	Water vapor penetration g/ (m².s.Pa)	≤4.0×10 <sup>-9</sup>		
	glassfiber	perfo	Bursting strength N	≥250		
structure		rman	Tensile breaking strength	≥600		
Ċ	binder	се	N/25mm	≥350		
	Sinder		Thickness (micrometer)			

Aluminum foil 7micron

Three-way fiberglass mesh 8 strips /100mm ( longitudinal 12 strips /100mm ( oblique)

polyethylene binder

Kraft paper 60g/m<sup>2</sup>

## Product veneer performance

Veneer Width

weight

Water vapor penetration g/ (m<sup>2</sup>.s.Pa)

Bursting strength N

Tensile breaking strength

N/25mm

Thickness (micrometer)

2.5micron Water vapor penetration g/ (m<sup>2</sup>.s.Pa)  $\leq 1.0 \times 10^{-9}$ Polyester network cable 4 strips /100mm Bursting strength N ≥35 (longitudinal) latex layer ≥120 Tensile breaking strength Three-way fiberglass mesh 16 strips /100mm ( longitudinal) 20 strips /100mm ( oblique) N/25mm ≥80 Thickness (micrometer) 178micron 100% virgin kraft paper 49g/m<sup>2</sup> fire resistant latex Aluminum foil 7.6micron

Veneer Width

weight

1.2 m

132g/m<sup>2</sup>

anti-corrosion polypropylene veneer					
White (black) allized polypropylene		Veneer Width	1.2 m		
film surface layer	<	weight	127g/m <sup>2</sup>		_
38.1micron		Water vapor penetration	.0		hy
e Retardant Adhesive	er 🛛	g/ (m².s.Pa)	≤6.0×10 <sup>-9</sup>		sic
e-way fiberglass mesh rips /100mm ( longitudinal	perfo	Bursting strength N	≥80		alstr
iding glass fiber and bhenol wire ) 20 pieces /	iber and 3	Tensile breaking strength	≥150		Physical structure
nm (oblique direction)	Ce	N/25mm	≥90		n
0% virgin kraft paper 49g/m²		Thickness (micrometer)	254micron		







### **CERAMIC FIBER**

### Low thermal conductivity

Wincell ceramic fiber is a light-weight heat-insulating refractory material made of selected high-quality raw materials, continuous fiber spinning by resistance furnace melting, double-sided needling, and high-temperature shaping. It has a low bulk density and a very significant heat insulation effect.

### Class A non-combustible

The combustion performance of Wincell ceramic fiber insulation material is Class A non-combustible, and the product has passed the GB 8624 combustion performance test.

### **Thermal stability**

Wincell ceramic fiber has strong stability and does not deform under high temperature, and the service temperature can reach 1250°C.

### **Chemical stability**

When used for a long time in a neutral and oxidizing environment, Wincell ceramic fiber can still maintain good tensile strength, toughness and fiber structure, and the product is not affected by oil corrosion.

### Sound absorption and noise reduction

Porous material, the sound can be converted into heat energy by friction with the fiber and emitted.

CW ceramic fiber is obtained from high-quality raw materials melted at high temperature, spun into fibers, and heat-cured to shape them. According to customer needs, the outer surface can be covered with glass fiber cloth, aluminum foil glass fiber cloth. Products include plates, roll blankets, shells, etc. Ceramic fiber thermal insulation material integrates the functions of fire resistance, heat insulation and heat preservation. It has high strength at room temperature and after burning, and can be widely used in the fields of fire resistance, heat insulation and heat preservation in various industries.

# CWS



# CWZ



### 26 CERAMIC FIBER

### **CERAMIC FIBER**



### Wincell ceramic fiber product performance parameter table

Performance Items	CWS Ceramic Fiber Boards			CWZ Ceramic Fiber Blankets			
Product standard		GB/T			16400		
Operating temperature (°C)		600~	1250		800~1250		
Corrosion resistance	No d	chemic	al reactio	on	N	o chemical rea	ction
Bulk density (kg/m³)		90~	120			64~192	
	Ingredient type	A	l <sub>2</sub> O <sub>3</sub>	$Al_2O_3 + SiO_2$	Ingredient type	Al <sub>2</sub> O <sub>3</sub>	$Al_2O_3 + SiO_2$
	<u> </u>				Common type (C)	≥40.0%	≥95.0%
	Common type (C)	≥4	0.0%	0% ≥95.0%	Standard type (S)	≥43.0%	≥97.0%
	(0)				High purity type (P)	≥43.0%	≥98.5%
Chemical composition	Standard type	indard type ≥43.0% (S)			Zirconium type (Zr)	2 0	$D_2 + ZrO_2 \ge 99.0\%,$ $D_2 \ge 15.0\%$
			≥97.0%		Al <sub>2</sub> O <sub>3</sub> + SiO <sub>2</sub>	+TCr <sub>2</sub> O <sub>3</sub> ≥99.0%,	
	(S)				With Ming type	Total chromi	um(TCr₂O₃) ≥1.2%,
					(Cr)	Hexavalent chr	omium[Cr(VI)] ≤0.1%
Slag ball content (particle size≥	0.212μm) % ≤20				≤20		
Heating permanent line change	% ≥-4.0				≥-4.0		
Compressive strength (kpa)	90~120 kg/n	n³	≥10		-		
Moisture content %		≤:	1.0		≤1.0		
Combustion performance	Grade A			Grade A			
					64~95 kg/m <sup>3</sup> ≤0.178		≤0.178
Thermal conductivity (W/m·k) Average temperature 500°C	90~120 kg/n	120 kg/m <sup>3</sup>		≤0.161	96~127 kg/m³ ≤0.161		≤0.161
					128~160 kg,	/m <sup>3</sup>	≤0.156
					64~95 kg/m <sup>3</sup>		≥10
Tensile strength(kpa)	-		96~127 kg/	m <sup>3</sup>	≥14		
					128~160 kg	/m <sup>3</sup>	≥21



# **COMPOSITE DUCT**

### Standard Specifications of Wincell Ceramic Fiber Products

CWS ceramic fiber boa	rd	CWZ ceramic fiber blanket		
Length (mm)	1000 900	Length (mm)	3600 5400	
Width (mm)	1200 600	Width (mm)	610	
Thickness (mm)	10~50	Thickness (mm)	10~50	

Note: Other specifications can be customized upon request.





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### **COMPOSITE DUCT**

### Thermal insulation, energy saving and consumption reduction

Wincell composite air duct adopts high-density glass wool board with a thermal conductivity as low as 0.033W/mk, which can effectively control the energy loss of the air handling system and reduce the operating cost of the HVAC system.

### A fire protection, high safety

Wincell composite air duct is made of non-combustible A -grade high-density glass wool board, double-sided color steel plate inside and outside and flame-retardant accessories. The entire air duct system fully meets the fire protection requirements of GB8624-2012, ensuring safe fire performance.

### Sound absorption and noise reduction, quiet space

Wincell composite air duct glass wool material itself has excellent sound absorption performance, which can fully absorb various noise energy in the air flow, not only avoiding the operation noise of air conditioning and ventilation equipment from being transmitted to the use space through the air flow, but also preventing the passage of wind between rooms. The tube transmits sound to ensure the tranquility and comfort of each room.

### Anti-mold and anti-bacterial, healthy environment

The inner wall of Wincell composite air duct is made of color steel plate, which is completely sealed to prevent the humid environment, effectively inhibit the growth and reproduction of various bacteria in the air duct, prevent the air inside the air duct from being polluted, ensure the indoor air quality, and prevent the occurrence of various air-conditioning diseases.

### Fast production, shortening the construction period

Wincell composite air duct is an air duct system that is prefabricated from formed glass wool boards and is processed and manufactured by an advanced fully automatic production line. The inner surface of the air duct is flat and smooth. The color steel on the outer surface of the air duct can be changed according to the decoration needs. The horizontal ribs on the outer surface have a three-dimensional and comfortable feeling. It is convenient and quick to manufacture, easy to transport and install, and has high construction efficiency.

### More space saving

No need for secondary insulation, one-time molding, can make full use of the floor height, can be attached to the beam and hoisted, saving space.

### FORMALDEHYDE-FREEENVIRONMENTALMUFFLERDUCT

The formaldehyde-free environmental protection silencer air duct is a new type of air duct developed by using new technology and new materials, and does not contain toxic and harmful substances such as formaldehyde and ammonia benzene. The product is made of inorganic glass fiber bonded with acrylic thermosetting resin. It is durable, provides a cleanable fireproof inner surface, and minimizes friction loss. It is widely used in various places.



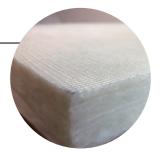
### Wincell performance index of formaldehyde-free environmental protection silencer air duct

Project name	Technical	Unit	Standard
Combustion performance	Integral non-combustible Class A		GB/T 8624
Thermal conductivity	≤ 0.033	W/m⋅k	GB/T 10294
Water absorption rate	< 3	%	GB/T 5480
Compressive strength	2500	Pa	
Mycotic resistance	Mold protection soaring 0		GB/T 2423.16
Formaldehyde, benzene release amount	No release		
Fiber shedding	0		GB/T 16147
Operating temperature	-50-110	°C	

#### Air duct connection form

 PVC Insert Method
 Aluminum Broken Bridge Insulation Method

### 30 **MUFFLER DUCT**



## FIBERGLASS COMPOSITE DUCT WDG glass fiber composite air duct

The glass fiber composite air duct is a new type of air duct plate made of centrifugal glass wool board as the main body, which has low thermal conductivity, excellent heat preservation effect and excellent sound absorption performance. Compared with phenolic composite air ducts, glass fiber composite air ducts have more outstanding fire performance, and can reach the national standard GB8624-2012 Class A non-combustible.



Double-sided color steel glass fiber composite air duct

### Performance index of glass fiber composite air duct

Project name	Unit	Technical parameter	Standard
Core thickness	mm	25、30	GB/T 17794
Core density	kg/m <sup>3</sup>	48-80	GB/T 17794
Color plate thickness	mm	0.4-0.5	
Combustion performance		Overall non-combustible Class A	GB/T 8624
Thermal conductivity	W/m.K	≤ 0.033	GB/T 10294
Water absorption rate	%	<3	GB/T 5480
Compressive strength	Ра	2500	
Mycotic resistance		Mold growth level 0	GB/T2423.16
Formaldehyde, benzene release amount		No release	
Fiber shedding		0	GB/T16147
Operating temperature	°C	-50-110	

#### Air duct connection form

PVC cut-type flange connection

Aluminum alloy broken bridge insulation flange connection

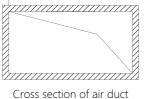
## **SMOKE CONTROL AND EXHAUST DUCT** WDSM smoke exhaust duct

Wincell's anti-smoke exhaust duct breaks through the traditional process, adopts UE galvanized steel skin, which greatly improves the strength of the duct, and can effectively cover up the slight traces of the ton during installation, enhance the aesthetics of the duct, and become a composite duct Another Ft trending product of the material.

#### 1. Coated anti-smoke and heat-insulated air duct

#### 1 hour high temperature glass wool outsourcing structure

1 hour high temperature glass wool outsourcing structure Water-resistant and flame-retardant veneer (outer layer) 50mm special insulation glass wool for smoke prevention and exhaust Engineering air duct (inner layer)





Water-resistant and flame-retardant veneer (outer layer)

1 hour ceramic fiberboard outsourcing structure

35mm ceramic fiber board Engineering air duct (inner layer) 7\_\_\_\_\_

### Inner layer Core Outer layer Co

Co

Inner layer Core Outer layer Co Сог



#### 1.5 hours aluminum silicate fiber cotton outsourcing structure

1.5 hours aluminum silicate fiber cotton outsourcing structure Water-resistant and flame-retardant veneer (outer layer) 40mm aluminum silicate fiber cotton Engineering air duct (inner layer) 1......







Inner

layer

Core

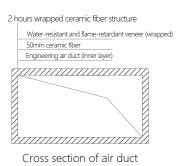
### 32 SMOKE CONTROL AND EXHAUST DUCT

Project name	Technical parameter
Structure	Slightly steel plate + special glass wool for anti-shrinkage + water-resistant and flame-retardant veneer
Material	Galvanized steel
Thickness	Industrial management
Name	Insulation glass wool for female smoke
Thickness	50mm
Density	48k
Material	Water resistant flame retardant veneer
Thickness	
onnection method	Duct making
onstruction methods	Wind pipe hoisting, bream worker

Project name	Technical parameter
Structure	Slightly steel plate + pottery booty + feMTO veneer
Material	Galvanized steel
Thickness	work mm management
Name	ceramic fiber board
Thickness	35mm
Density	90k
Material	Water resistant flame retardant veneer
Thickness	
nnection method	Duct making continues
onstruction methods	Wind pipe hoisting, bream worker

Project name	Technical parameter
Structure	Liaogang board + silicon solution Lu fiber cotton + water resistant veneer
Material	Plated steel plate
Thickness	Work Ou Control Potential
Name	Silica fiber cotton
Thickness	40mm
Density	96k
Material	Water resistant flame retardant veneer
Thickness	
nnection method	Duct making continues
onstruction methods	Wind pipe hoisting, bream worker

#### 2 hours wrapped ceramic fiber structure

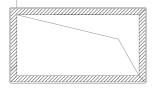


P	Project name	Technical parameter
Structure		Galvanized steel plate + ceramic fiber + water resistant flame retardant veneer
Inner layer	Material	Galvanized steel plate
	Thickness	Engineering duct wall thickness
Core	Name	Ceramic fibre
	Thickness	50mm
	Density	96k
Outer	Material	Water resistant flame retardant veneer
layer	Thickness	
Connection method		Air duct production decision
Construction methods		Air pipe hoisting and cladding secondary construction

### 2.Formed smoke-proof and heat-insulated air duct

#### 0.5 hour fire resistance limit molding structure



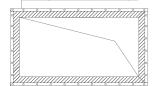


Cross section of air duct

#### 0.5 hour fire resistance limit molding structure

0.5 hour fire resistance limit molding structure

0.5mm galvanized steel sheet (outer layer) 15mm aluminum silicate fiber cotton (sandwich) 0.5mm galvanized steel plate (inner layer)

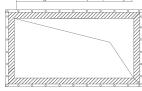


Cross section of air duct

#### 1 hour refractory limit molding structure

1 hour refractory limit molding structure

0.5mm galvanized steel sheet (outer layer) 20mm ceramic fiber board (sandwich) 0.5mm galvanized steel plate (inner layer)



Cross section of air duct

F	Project name	Technical parameter
Structure		Tillage board + glass wool + color board
Inner	Material	scare board
layer	Thickness	0.5mm
	Name	glass wool
Core	Thickness	30mm
	Density	80k
Outer	Material	board
layer	Thickness	0.3mm
Connection method		Aluminum broken bridge (aluminum alloy flange
Construction methods		One-time molding, high-speed hoisting

Project name		Technical parameter
	Structure	Galvanized steel plate + silicon Wulu + musk steel pla
Inner layer	Material	Galvanized steel plate
	Thickness	0.5mm
	Name	Aluminum silicate fiber cotton
Core	Thickness	15mm
	Density	120k
Outer	Material	Galvanized steel plate
layer	Thickness	0.5mm
Connection method		Angle flange/cutting flange
Construction methods		One molding, direct lifting

	Project name	Technical parameter			
	Structure	Galvanized steel plate + ceramic fiber board + galvanized steel pl			
Inner	Material	Galvanized steel plate			
layer	Thickness	Galvanized steel plate + ceramic fiber board + galvanized steel plate         I       Galvanized steel plate         ss       0.5mm         Ceramic fiber board         ss       20mm         120k       1         Galvanized steel plate         ss       0.5mm         fl       Galvanized steel plate         ss       0.5mm         thod       Angle flange/cutting flange			
Core	Name	Ceramic fiber board			
	Thickness	20mm			
	Density	120k			
Outer	Material	Galvanized steel plate			
layer	Thickness	0.5mm			
Connection method		Angle flange/cutting flange			
Co	onstruction methods	One molding, direct lifting			

#### 1.5 hours fire resistance limit molding structure

1.5 hours fire resistance limit molding structure 0.5mm galvanized steel plate/color steel plate (outer layer)

30mm aluminum silicate fiber cotton (sandwich) 0.8mm galvanized steel plate (inner layer) 



Cross section of air duct

#### 2.5 hours fire resistance limit molding structure

2.5 hours fire resistance limit molding structure 0.5mm galvanized steel sheet (outer layer)

40mm aluminum silicate fiber cotton (sandwich) 1.0mm galvanized steel plate (inner layer)



Cross section of air duct

#### 3 hours fire resistance limit molding structure

3 hours fire resistance limit molding structure 0.8mm galvanized steel sheet (outer layer) 50mm aluminum silicate fiber cotton (sandwich) 1.0mm galvanized steel plate (inner layer)



Cross section of air duct

Inner

layer

Inner

layer

Core

Outer layer

Inner

layer

Core

Outer layer

34 SMOKE EXHAUST DUCT

P	Project name	Technical parameter
Structure		Galvanized steel plate + aluminum silicate + galvanized steel/color steel plate
	Material	Galvanized steel plate
	Thickness	0.8mm/1.0mm
	Name	Aluminum silicate fiber cotton
	Thickness	30mm
	Density	120k
	Material	Galvanized steel/color steel
	Thickness	0.5mm
Connection method		Angle flange/cutting flange
Сс	onstruction methods	One molding, direct lifting

P	Project name	Technical parameter			
	Structure	Galvanized steel plate + aluminum silicate + galvanized steel plate			
	Material	Galvanized steel plate			
	Thickness	1.0mm			
	Name	Aluminum silicate fiber cotton			
	Thickness	40mm			
	Density	120k			
	Material	Galvanized steel plate			
	Thickness	0.5mm			
Connection method		Angle flange			
Сс	onstruction methods	One molding, direct lifting			

Ρ	roject name	Technical parameter			
	Structure	Galvanized steel plate + aluminum silicate + galvanized steel plate			
	Material	Galvanized steel plate			
	Thickness	1.0mm			
	Name	Aluminum silicate fiber cotton			
	Thickness	50mm			
	Density	120k			
	Material	Galvanized steel plate			
	Thickness	0.8mm			
Connection method		Angle flange			
Сс	onstruction methods	One molding, direct lifting			

## **COMPOSITE DUCT ACCESSARY**

Composite air duct auxiliary materials are divided into interpolation series, Xizhu series, aluminum alloy series and public series. It is mainly used for the installation and maintenance of composite air ducts.

### Wincell-duct win win composite air duct system product model list

Model	Thickness mm	Width mm	Length mm	
WDFL	20/25/30mm	1200mm	3000/4000mm	
WDFD/WDFS	20/25/30mm	1200mm	3000/4000mm	
WDFG	20/25/30mm	1200mm	3000/4000mm	
WDGL	20/25/30mm	1200mm	4000mm	
WDGD/WDGS	20/25/30mm	1200mm	4000mm	
WDNS 20/25/30mm		1200mm	4000mm	

### Wincell-duct phenolic composite air duct system

Accessory Series	Accessory name	Unit	Ratio/m <sup>2</sup>
Interpolation	Insert plane flange/insert right Angle flange	m/m	1.6/0.15
series	Internal cuttings/zinc iron compensation Angle	m/m	0.8/2.4
	Angle guard	Only	1.2
Evening	External plane flange/external right Angle flange/external insert	m/m/m	1.6/0.15/0.8
series	Outer flange Angle	Only	1.2
Aluminium alloy	Aluminum alloy broken bridge insulation flange	m	1.6
series	Aluminum alloy broken bridge insulation cut	m	0.8
Commenciation	F-flange	m	0.15
Common series	Reinforcing disc	Piece	0.8
	Aluminum foil tape	m	0.3
	Phenolic glue	kg	2.3
	Sealant	Branch	1.4

### Wincell-duct glass fiber composite air duct system (external flange)

Name	Model	Model	Unit	Ratio/m <sup>2</sup>
Aluminum alloy broken bridge insulation flange	20、25、30	root/4M	Μ	1.66
Aluminium alloy cut		root/4M	Μ	0.8
Fixed Angle		Only	Only	8
PVC plane external flange	20、25、30	root/4M	Μ	1.6
PVC external insert inserts		root/4M	Μ	0.6
Right Angle external flange	20、25、30	root/4M	Μ	0.1
F-flange	20、25、30	root/4M	Μ	0.05
U-flange	20、25、30	root/4M	Μ	0.05
Outer flange Angle	20、25、30	Only	Only	8
Reinforcing disc		String/50pieces	Only	2
Glue		Bucket/15KG	KG	0.2
Sealant		Box/24 pieces	branch	0.05



# **PVC INSULATION CLADDING**

INSULATION CLADDING

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### **U-PVC INSUCOVER CLADDING**



#### Strong acid and alkali resistance, good chemical impedance

Unlike stainless steel, aluminum skin, color steel and other products are easy to be corroded, U-PVC shell treasure in strong acid and alkali environment will not corrosion, especially suitable for chemical plants, laboratories and other acid and alkali environment.

#### Anti UV, anti aging, long service life

U-PVC shell treasure products add anti-UV and anti-aging ingredients, effectively improve the product's heat/light stability. In addition, U-PVC shell treasure density is small, greatly improve the service life of the product. According to the international standard ISO4892-2, the WEATHER-O-METER aging test box was used to test the weather-o-meter. The product was exposed to the simulated climate conditions for more than 2000 hours, which is equivalent to the condition of perennial exposed outdoor use for more than 10 years without significant change.

#### Low strength, easy cutting, short construction period

U-PVC shell treasure products are low strength, easy to cut and make, and a large number of shaped parts, no need for on-site production, fast construction, especially suitable for tight project time limit. Traditional metal material processing is difficult, special-shaped production is complex, difficult construction period is long. Under the same conditions, the construction cycle of U-PVC shell treasure products is only about 1/3 that of metal materials, greatly shortening the construction period and saving labor costs.

#### Low thermal conductivity, high flame retardant performance, good fire performance

U-PVC shell treasure products add flame retardant components, flame retardant level reached the national standard B1 level. In the test report issued by the National Fire Equipment Quality Supervision and Inspection Center, the oxygen index reached 42.1%. The small heat conduction coefficient makes it difficult for heat to be released from the pipe wrapped by U-PVC shell treasure products, and the thermal insulation performance is also competitive.

#### Clean and beautiful, clear logo, high degree of modularization

Different colors of U-PVC shell treasure products and rubber and plastic insulation layer close composite, making the whole pipe system more clear, beautiful, convenient maintenance, easy to achieve modular management.

### **U-PVC INSUCOVER protection plate**

for professional workers on-site production.

Color:		$\bullet \bullet \bullet$		
Model	Thickness mm	Width m	Length m/ box	m² / box
UP38	0.38	1.22	41	50
UP51	0.51	1.22	32.8	40
UP76	0.76	1.22	24.6	30

### U-PVC INSUCOVER protection coil

Generally used in more than 200mm pipe and other cylindrical equipment.

#### Color: • • • • • • • • • • •

Model	Thickness mm	Width m	Length m/ box	m² / box
UR38	0.38	1.22	41	50
UR51	0.51	1.22	32.8	40
UR76	0.76	1.22	24.6	30

### U- PVC INSUCOVER protection straight pipe

Generally used in pipe less than 200mm cylindrical equipment, insulation material diameter greater than 200mm can be directly used plate.

Thickne	ess (mm) : (	0.38、0.51、	0.76
Color:			

Model	Outer diameter of mm insulation material	Width m	Model	Outer diameter of insulation material	Width m
UT40	40	1.22	UT120	120	1.22
UT45	45	1.22	UT125	125	1.22
UT50	50	1.22	UT130	130	1.22
UT55	55	1.22	UT135	135	1.22
UT60	60	1.22	UT140	140	1.22
UT65	65	1.22	UT145	145	1.22
UT70	70	1.22	UT150	150	1.22
UT75	75	1.22	UT155	155	1.22
UT80	80	1.22	UT165	165	1.22
UT85	85	1.22	UT170	170	1.22
UT90	90	1.22	UT175	175	1.22
UT95	95	1.22	UT180	180	1.22
UT100	100	1.22	UT185	185	1.22
UT105	105	1.22	UT190	190	1.22
UT110	110	1.22	UT195	195	1.22
UT115	115	1.22	UT200	200	1.22

### **U-PVC INSUCOVER CLADDING**

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## **U-PVC INSUCOVER CLADDING**

Generally used in large pipes, air pipes, tanks and other smooth surface of the outer protective layer, the need

### **U-PVC INSUCOVER CLADDING**

### U-PVC INSUCOVER Protection-90 degree Long radius elbow (WCW)

Color: • • • • • • • • •

	Diameter after cladding		Th	ickness of	insulation	material	mm	
Specification		20	25	30	32	35	40	50
CW48*20	Ф88	48*20	34*25	27*30	21*32	21*35		
CW43*30	Ф103	64*20	48*25	43*30	34*32	27*35	21*40	
CW60*25	Ф110	70*20	60*25	48*30	43*32	34*35	27*40	
CW54*30	Ф114	76*20		54*30	54*32	43*35	34*40	
CW60*32	Ф124	89*20	76*25	64*30	60*32	60*35	43*40	
CW76*32	Ф140	102*20	89*25	76*30	76*32	70*35	60*40	43*50
CW89*32	Ф153	114*20	102*25	89*30	89*32	76*35	70*40	54*50
CW114*25	Ф164	133*20	114*25	102*30		89*35	76*40	60*50
CW108*30	Ф168			108*30			89*40	70*50
CW114*32	Ф178	140*20	133*25	114*30	114*32	108*35	102*40	76*50
CW134*30	Ф198	159*20	140*25	133*30	133*32	114*35	114*40	102*50
CW159*30	Ф219	168*20	168*25	159*30	140*32	140*35	133*40	108*50
CW168*30	Ф228			168*30	168*32		140*40	
CW140*50	Ф240	194*20				168*35	159*40	140*50
CW168*45	Φ258	219*20		195+30	194*32		168*40	159*50
CW194*40	Φ274		219*25			194*35	194*40	168*50
CW219*40	Ф299				245*32	219*35	219*40	194*50



## **U-PVC INSUCOVER CLADDING**

#### U-PVC INSUCOVER Protection -Y (ST)

Color: ••••	
Model	Outer diameter of insulation material
ST41	41
ST47	47
ST53	53
ST62	62
ST68	68
ST72	72
ST82	82
ST88	88
ST102	102
ST116	116
ST128	128
ST141	141
ST154	154
ST167	167
ST180	180
ST193	193
ST219	219



### U-PVC INSUCOVER PROTECTION Outer Tube Cap Strip (EC)

Color:					$\bigcirc$					
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Model	Specification mm (seam width x insulation thickness)
EC20	30×20
EC30	30×30
EC40	30×40
EC50	30×50
EC60	40×60

### U-PVC INSUCOVER CLADDING

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Model	insulation material mn
GM41	41
GM47	47
GM53	53
GM62	62
GM68	68
GM72	72
GM82	82
GM88	88
GM102	102
GM116	116
GM128	128
GM141	141
GM154	154
GM167	167
GM180	180
GM193	193
GM219	219
GM245	245
GM273	273
GM299	299
GM324	324
GM356	356
GM381	381
GM406	406

#### U-PVC INSUCOVER Protection Tube Cap (GM)





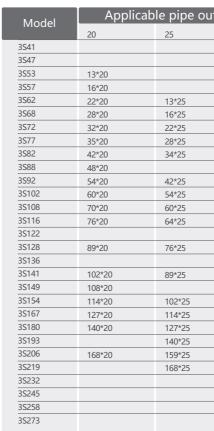
### **U-PVC INSUCOVER CLADDING**

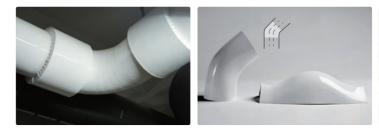
### U-PVC INSUCOVER Protection-90 degrees Short radius Elbow (WDW)

### Color: • • • • • • • • •

	Diameter	Thickness of insulation material mm						
Model	after cladding	20	25	30	40	50	60	
DW41	Ф41							
DW47	Ф47							
DW53	Ф53	13*20						
DW57	Φ57	16*20						
DW62	Ф62	22*20	13*25					
DW68	Ф68	28*20	16*25					
DW72	Φ72	32*20	22*25	13*30				
DW77	Φ77	35*20	28*25	16*30				
DW82	Ф82	42*20	34*25	22*30				
DW88	Ф88	48*20		28*30				
DW92	Ф92	54*20	42*25	34*30	13*40			
DW102	Ф102	60*20	54*25	42*30	22*40			
DW108	Ф108	70*20	60*25	48*30	28*40			
DW116	Ф116	76*20	64*25	54*30	35*40			
DW122	Φ122			60*30	42*40	22*50		
dw128	Ф128	89*20	76*25	64*30	48*40	24*50		
DW136	Ф136			76*30	57*40	34*50		
DW141	Ф141	102*20	89*25	83*30	60*40	43*50	21*60	
DW149	Ф149	108*20		89*30	70*40	48*50	27*60	
DW154	Ф154	114*20	102*25		76*40	54*50		
DW167	Ф167	127*20	114*25	108*30	89*40	70*50	48*60	
DW180	Ф180	140*20	127*25		102*40	76*50	60*60	
DW193	Ф193		140*25	134*30	114*40		76*60	
DW206	Ф206	168*20	159*25		127*40	108*50	89*60	
DW219	Ф219		168*25	159*30	140*40	114*50		
DW232	Ф232					134*50	114*60	
DW245	Φ245				168*40	140*50	127*60	
DW258	Φ258					159*50	140*60	
DW273	Ф273					169*50		
DW283	Ф283			219*30		183*50		
DW299	Ф299					193*50	169*60	







### U-PVC INSUCOVER CLADDING

Color: • • • • • • • • • •

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## **U-PVC INSUCOVER CLADDING**

### U-PVC INSUCOVER Protection-45 degree Elbow (3S)

		insulation mat	
30	40	50	60
13*30			
16*30			
22*30			
28*30			
34*30	13*40		
42*30	22*40		
48*30	28*40		
54*30	35*40		
60*30	42*40	22*50	
64*30	48*40	24*50	
76*30	57*40	34*50	
83*30	60*40	43*50	21*60
89*30	70*40	48*50	27*60
	76*40	54*50	
108*30	89*40	70*50	48*60
	102*40	76*50	60*60
134*30	114*40		76*60
	127*40	108*50	89*60
159*30	140*40	114*50	
		134*50	114*60
	168*40	140*50	127*60
		159*50	140*60



### **APPLICATIONS**

### U - PVC Insucover treasure-shaped parts installation





Y-valve outside protection

Irregular pipe external protection

### U - PVC Insucover Y - shaped installation



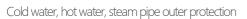
Local straight pipe Y filter



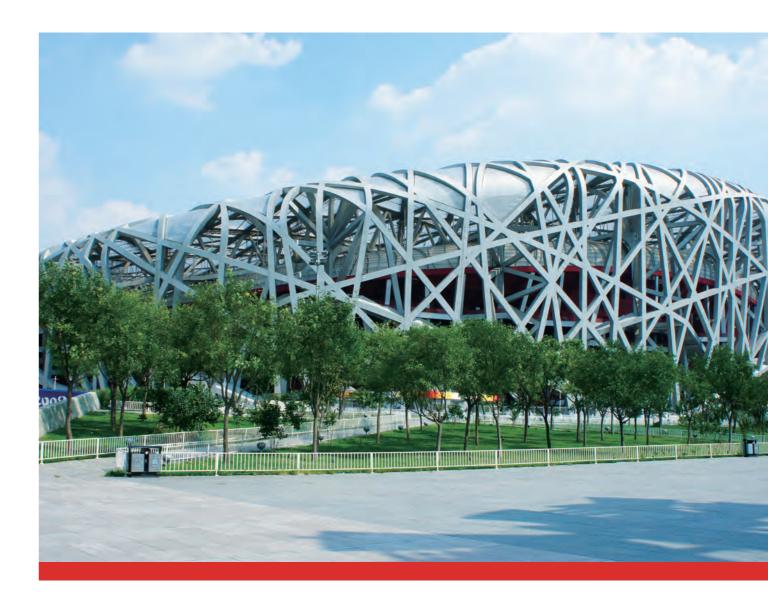
External protection of engineering pipeline

### U - PVC insucover visual project









# **APPLICATIONS**





Tesla factory



Huawei



nnnnn

National People's Congress Office Building



Beijing Tiantan Biology





Shenzhen Universiade



Beijing Universal Theme Park



Beijing AllB

National Theatre

Shanghai World Expo theme Pavilion

#### List of other projects

Beijing Chaoyang Railway Station Guangzhou Asian Games City Shenzhen Convention and Exhibition Center Zhongnanhai Convention Center Chinese Navy Project 9155 National secretary bureau Central Guard Office Armed police hydropower command center Hefei Binhu Center Shandong Coal Geology Bureau China Life Insurance Shaanxi Branch Beijing Shangdi Service Center State Grid Electric Power Research Institute Jiangsu Bureau for Letters and Calls Drilling Research and Development Center of petrochina 713 Research Institute of China Shipbuilding Industry Group National Press and Publication Administration Shanghai Jinshan People's Court Chongqing Imperial Capital Square Hilton Chengdu International Plaza Shanghai Magnolia Plaza Shanghai Century Hui Plaza Mirae Asset Tower in Shanghai Shanghai Huixin International Building China International Purchasing Center Zhongguancun Cultural Mall in Beijing Kaikang Building in Beijing Longshaoheng Building in Beijing Shanghai Sixth People's Hospital Shanghai Eighth People's Hospital Jiangsu Provincial Hospital of Traditional Chinese Medicine Affiliated Hospital of Jiangsu University Shenzhen People's Hospital Guangzhou Luogang Central Hospital The Sixth People's Hospital of Wuhan Wuhan Hankou Hospital Dalian Seventh People's Hospital Affiliated Hospital of Dalian University Xinzheng International Airport in Henan Province

Terminal 3 of Beijing Capital International Airport Chengdu Shuangliu Airport Group office building Nanjing South Railway Station Avic Chengdu Aircraft Design and Research Institute 611 101 scientific research buildings Chongqing Railway Station Beijing Olympic Park Zhengzhou Railway Station Pudong Lujiazui Financial Center Citibank China Construction Bank Shanghai Wudaokou Financial Center Shenzhen China Merchants Bank Shangri-la Hotel Hilton Hotel Atlantis Hotel Haitang Bay, Sanya City Bosiden Hotel, Texas Dezhou Waihai Hotel Dongguan press Building Haining Campus of Zhejiang University College Harbin Institute of Physical Education Minhang Campus of Shanghai Jiao Tong University Zhongguancun Software Park in Beijing Beijing Renmin University swimming Pool Nanjing television studio Center Sports Center of Nanjing Normal University Library of Fuzhou Medical University Shenzhen Grand Theatre Huizhou Xinli Photoelectric Hangzhou Yingfit Electronics Shanghai Baoshan Data Center Green dot Technology Samsung Electronics Flextronics Shanghai Huali Microelectronics Wyeth Pharmaceutical (Suzhou) Co., LTD Jiangsu Yangzijiang Pharmaceutical Group Wuhan Institute of Biology

2023/05/24





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## WINCELL AIRCRAFT CARRIER QUALITY INSULATION

### Wincell Insulation Co., Ltd.

Address: No. 118, Chengjiang West Road, Economic Development Zone, Taixing City, Jiangsu Province Tel: 0523-8759 1234 Email: insulation@wincellchina.com Website: www.wincellchina.com

Wincell (Guangdong) Insulation Co.,Ltd. Address: No.8, Jingcheng Road, Shazai Administrative Village, Minmin Town, Zhongshan City, Guangdong Province

Wincell (Hubei) Insulation Co.,Ltd. Address: No.88 Development Avenue, Xishui County, Huanggang City, Hubei Province

Wincell (Shanxi) Ceramic Fiber Co.,Ltd. Address: Heshengpu Park, Shanyin Economic and Technological Development Zone, Shuozhou City, Shanxi Province

Wincell (Jiangsu) Construction Enginering Co.,Ltd. Address: No. 118, Chengjiang West Road, Economic Development Zone, Taixing City, Jiangsu Province Nengdian (Jiangsu) Nano New Material Co., Ltd. Address: No. 128, Chengjiang West Road, Economic Development Zone, Taixing City, Jiangsu Province

Nengdian Cloud Computing (Jiangsu) Co., Ltd. Address: No. 118, Chengjiang West Road, Economic Development Zone, Taixing City, Jiangsu Province

Benniu (Jiangsu) Electronic Commerce Co., Ltd. Address: No. 118 , Chengjiang West Road, Economic Development Zone, Taixing City, Jiangsu Province

Huahui (Jiangsu) Testing Technology Co., Ltd. Address: No. 118 , Chengjiang West Road, Economic Development Zone, Taixing City, Jiangsu Province

Weijia (Jiangsu) Environmental Integration Co., Ltd. Address: No. 118 , Chengjiang West Road, Economic Development Zone, Taixing City, Jiangsu Province

- National free consultation hotline

400 887 1300