
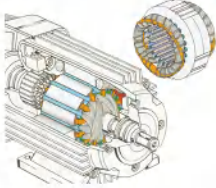





GENERAL APPLICATION FOR OUR PRODUCTS

<p>Insulation material</p> <ul style="list-style-type: none"> -Kraft Paper -Press Paper -Press Board -Laminated wood -DDP (diamond dotted paper) -Crepe paper, crepe tubes -All kind of tapes, glass, cotton, polyester -Aramid paper -Components made from pressboard and laminated wood 	<p>Transformer Application</p> 	<p>Spare parts</p> <ul style="list-style-type: none"> -Off load tap changer -Transformer wheels -Conductor rods, terminal, screws -Lifting's ear, plugs, and others. -Rubber sealing products -Valves -Transformer fans -Bush insulator -Oil indicator
<p>Slot Insulation for Class B, F, H and 200°C with materials as:</p> <ul style="list-style-type: none"> -Papers and Presspapers -Aramide Paper -Polyimide Film -Polyester Film -Flexible Laminates -Insulation spare parts , like slitting tapes, cutting, folding, punching -Pultruded profile 	<p>Electrical Motor Application</p>  <p>In DC and AC low and medium power electricity.</p>	<p>General Products :</p> <ul style="list-style-type: none"> -Rigid laminates -Mica products -Glass and polyester woven tapes and ropes -Glass Banding tapes, Class F&H -Insulation sleeveings -Adhesive tapes -Yarns and polyester ropes for head . -Varnish glass cloth
<ul style="list-style-type: none"> -Rigid laminates, like magnetic epoxy glass laminates etc. -Aramid paper -PI film -Glass banding tapes 	<p>Generator, traction motor, wind and solar energy, cables</p> 	<ul style="list-style-type: none"> -Mica tapes for fire resistance cables. -Mica tapes for Resin Rich and VPI motor insulation in a medium and high voltage -Heat shrinkable tube for cables



Electrical insulation materials for transformer and motor industry



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Company PROFILE >>>

Hangzhou Giantway Import & Export Co., Ltd., was founded in 2005. Our company is mainly devoted in exporting and importing ELECTRICAL INSULATION MATERIALS, which used in oil and dry transformers, electrical motors, generators etc. We have also the products for building industry, household appliances and other areas. Our team member have more than 10 years experience at these fields. We export the products to Europe, South America, Asia, Africa etc..

OUR ADVANTAGE AND PHILOSOPHY,

- Strict quality control, inspection.
- Close and long term relationship with professional manufacturers in China. .
- Meet specific demand from customers, to find whole-packaging range of products solution.
- Can offer spare parts made from base material according to customer's specific requirements.
- Fast response, good service.

Welcome to send us specific inquiry.

INFORMATION

General products >>>

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ELECTRICAL INSULATION LAMINATED WOOD

→ Introduction

Laminated wood is made from high quality well selected birch veneers, the veneers well arranged and hot pressed with electrical thermosetting synthetic resins under high pressure and temperature.

→ Application

Electrical insulation laminated wood is widely used in oil transformers, instrument transformers as insulation and supporting material.

→ Standard Range of Product

The laminated wood is produced in 3 different densities, based on cross direction arrangement of veneers,

- Type : C2B, Density from 0,90 to 1,10 g/cm³
- Type : C3B, Density from 1,10 to 1,20 g/cm³
- Type : C4B, Density from 1,20 to 1,30 g/cm³

→ Laminated wood sheets

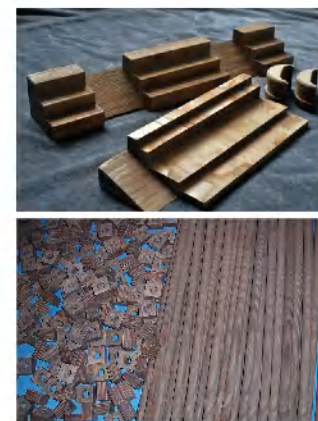
- Thickness from 10 to 200 mm
- Standard sizes 3000 x 1500 mm, 3000 x 1000 mm, 2000 x 1000 mm and 1000 x 1000mm



Cross direction	Paralelly layers
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Laminated wood components



CELULOSE ELECTRICAL INSULATION BASE MATERIAL FOR OIL TRANSFORMERS .

→ Electrical Insulation Kraft paper

Thickness 50μ, 75μ, 100μ and 130 μ, rolls from 1000 mm width

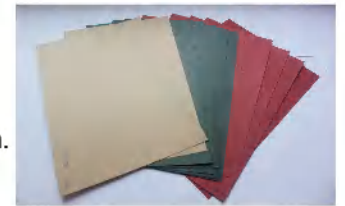
→ High Calendered Presspaper

Thickness range: 0,10 mm, 0,13 mm, 0,18 mm, 0,25 mm, 0,30 mm, 0,38 mm, and 0,50 mm, Rolls from 1000 mm (Production 2000 mm width)

→ Diamond dotted paper

Thickness range: 0,08 mm, 0,10mm, 0,13 mm, 0,18 mm, 0,20mm, 0,25 mm, 0,30 mm, 0,38 mm and 0,50 mm Standard width : 1000 mm, 1200, 1300 mm.

→ Crepe paper and crepe paper tubes



→ Transformer board

Sheet size 1000x2000mm, 1400x2500mm
Thickness from 0.8mm to 4.0mm

→ Transformer board for HIGH POWER TRANSFORMERS

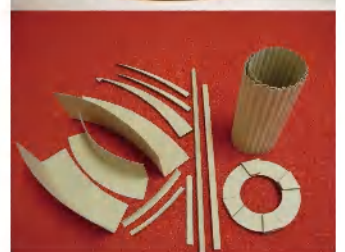
T4 grade, Thickness from 1 mm to 8 mm, maximum sizes is 6200X3200mm or multiples of this size

→ Laminated grade from 5 mm to 150mm

HIGH VOLTAGE INSULATION COMPONENTS

→ COMPLETE INSULATION PACKAGE

- SNOUT
- FLANGE TUBES
- STRIPS AND SPACERS
- SHIELDING RINGS
- CREPE TUBES
- CHIMENY
- CAPS OR ANGLES RINGS
- END RINGS (CLAMPING)
- PRESS RINGS
- ANY OTHER INSULATION COMPONENTS



RIGID LAMINATES FOR ELECTRICAL INSULATION

Widely range of applications, for examples , suitable for using as insulation structural parts of machinery and electric equipments, such as electric generators ,motors ,switch board., etc.

Phenolic Paper Laminates

Type: 3021series、PFPCseries、F820series; etc.

Phenolic Cotton Cloth Laminates

Type: 3025series、PFCCseries、F850(C)、F851(CE)、F852(L)、F853(LE),.etc.

Glass Cloth Laminates

Type:3240series、G-10、FR-4、G-11、FR-5、semiconductor、anti-static、magnetic conductivity、G-5; EPGCseries ,.etc.

Molded Tube

Type: phenolic paper tube3520、 phenolic cotton cloth tube3526、 epoxy glass cloth tube3640、 EPGC21 (G-10)、 EPGC22(G-11)、 EPGC23(FR-4),.etc.

Molded Rod

Type: phenolic cotton cloth rod3721、 3722(c)、 3723(CE)、 3724(L)、 3725(LE)、 epoxy glass cloth rod (G-10) (FR-4) ,.etc.



Nominal dimension of electrical insulation laminate:

980X1980mm2 (38.58"X77.95") 1020X2040mm2 (40.16"X80.31")
1220X2470mm2 (48.03"X97.24") 1020X1220mm2 (40.16"X48.03")
915X1220mm2 (36.02"X48.03")

Nominal thickness of electrical insulation laminate: 0.5mm ,0.6mm ,...50mm...

Nominal diameter of molded rod: 6mm,8mm,10mm,...200mm...

Nominal length of molded tube and rod: 1000mm, 1170mm

ELECTRICAL INSULATION FILMS AND NON-WOVEN

→ POLYESTER NON-WOVEN FLEECE (TNT)

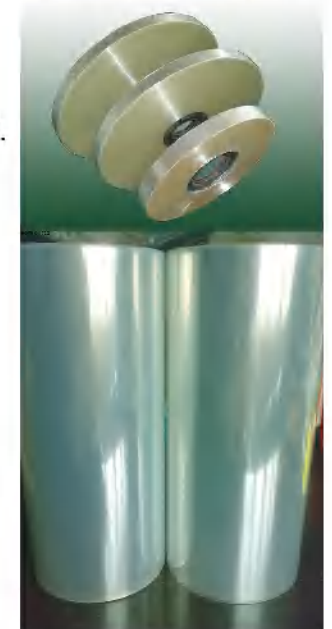
High quality polyester nonwoven Fleece, which produced by Germany imported carding and hot press machine. The tensile strength of machine direction is much higher compare to cross direction.

- Application: Widely used for producing electrical insulation flexible laminates(such as DM, DMD, DMDM), mica tape reinforced materials, coil terminal wrapping, cable wrapping etc.
- Thickness range: 0.035mm, 0.045mm, 0.05mm, 0.07mm. 20-100g/m2
- Width: Max. Width is 2040mm



→ POLYESTER FILM (PET)

- Thickness μ 25, 36, 50, 75, 100, 125, 188, 200, 250, 300, 350
- Features : Translucent, milk White, excellent electrical insulation. UL Listed.
- Under special orders we can supply in yellow, green, blue and black color.



→ POLYIMIDE FILM (PI)

- Feature: Excellent mechanical and electrical strength, temperatures resistance from -269°C to +260°C.
- Application: Space navigation, electronic, electric insulation and petrochemical industry. Has U.L. certification.

HN grade, general uses for electrical insulation in motors, transformers, and base material for adhesive tapes and wire insulation.

F grade, special type base with FEP fluorocarbon resin (F46) coated in one or two sides. Good heat sealable property, used for electrical magnet wire insulation.

CR grade, developed specifically to withstand damaging of "Corona", also has good thermal conductivity. For copper wire insulation the film can be coated with FEP fluorocarbon resin (F46) in one or two sides. Used in variable frequency motor, wind driven generator etc..

GT grade, an excellent balance of physical, chemical, and electrical properties, particularly at unusually high temperatures. Also has low shrinkage, can be used in FPC fields.

BC grade It produced by special process with black color, can be applied to special FPC field and special label.



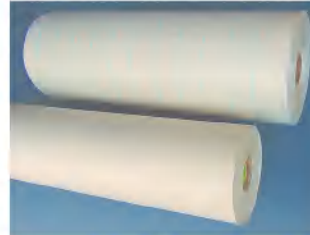
ELECTRICAL INSULATION FLEXIBLE LAMINATES

We can offer different types of FLEXIBLE LAMINATES according to customer's demands.

ARAMIDE PAPER (Ex. NOMEX™) COMBINED WITH PET FILM (NM and NMN)

- Calendered Aramide Paper (Nomex T464™) laminated with PET film in DUPLEX or TRIPLEX
- Calendered Aramide Paper (316) laminated with PET film in DUPLEX or TRIPLEX
- Thickness range from 0,075 mm to 0, 50 mm

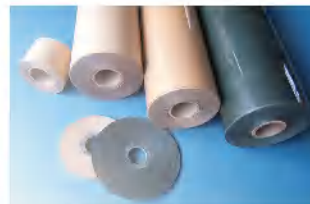
✓ Standard width 980 mm. tapes cut from 6 mm width.



CELULOSE MATERIALS COMBINED WITH PET FILM (PM AND PMP)

- Capacitor paper laminated with PET film, in DUPLEX or TRIPLEX
- Kraft Paper laminated with PET film in DUPLEX or TRIPLEX
- Calendered press paper laminated with PET film.

✓ Standard width 1000 mm. tapes cut from 6 mm width.



POLYESTER NON WOVEN FABRIC (TNT) COMBINED WITH PET FILM (DM and DMD)

- TNT laminated with PET film, in DUPLEX or TRIPLEX
- Thickness range from 0,08 mm to 0, 50 mm.
- Impregnated TNT laminated with PET film, in DUPLEX or TRIPLEX

✓ Thickness range from 0,11 mm to 0,55 mm.

✓ Standard width 1000 mm. tapes cut from 6 mm width.



ARAMID PAPER COMBINED WITH POLYIMIDE FILM (NH and NHN)

- Aramid paper laminated with polyimide Film, in DUPLEX or TRIPLEX

✓ Standard width 980 mm

✓ Tapes cut from 6 mm width.



ELECTRICAL INSULATION MICA PRODUCTS

Mica Tapes

Flame-Resistance Mica tape for cable consist of the heat resistant phlogopite mica paper or synthetic mica paper bonded to an electrical grade glass cloth or PE film as the supporting fabric, impregnated with a specially selected high temperature resistant silicon resin. For the excellent flame resisting characteristics, it has been widely used for power and control cables, instrumentation and signaling cable etc...Due to the very high flexibility and high tensile strength, these tapes can be easily applied in high speed standard taping equipment.

Tapes from 6mm to 1000mm

Standard cores 40,43,52,76 and 120mm

VPI-Mica tape consist of Muscovite paper of superior porosity bonded with a small amount of a specially formulated epoxy to a woven glass backing, which is a high performance insulating material. This product is mainly used in coil stator of middle or big motors.

Tapers as from 10mm

Standard cores 25,40 and 55mm



Rigid Mica sheets HEAT RESISTANT.

✓ Thicknesses from 0,30 mm to 100 mm

✓ Sizes 1200x1000, 1600x1000 and 2000 x 1000 mm



Commutator Mica plates in class B and F thermal insulation.

✓ Sizes 1200 x 1000 mm and thicknesses from 0,30 mm to 2 mm Special tolerances.



Flexible Mica Sheets HEAT RESISTANCE

✓ Thicknesses from 0,30 mm to 1,5 mm

✓ Sizes 1200x1000 , 1600x1000 and 2000x1000 mm



Tubes HEAT RESISTANT MICA from Ø 8 mm to 300 Ø mm and standard length 1000 mm.



Mica components

✓ According to customer's drawings.

PULTRUDED PROFILES

→ Specifications:

Dog Bone Profile of Class F and H has high mechanical strength, excellent electrical properties, superior thermal properties

→ Description:

Dog Bone Pultruded Profiles are made from glass fiber as reinforcement, synthetic resin as matrix by pultrusion process. The resin matrix can be polyester, vinyl ester or epoxy resin.

Dog Bone Pultruded Profiles have very smooth surface, high mechanical strength, excellent electrical properties, superior flame resistance, high arc and carbon track resistance, and good thermal properties. Thermal class is available for Class F and H.

→ Application:

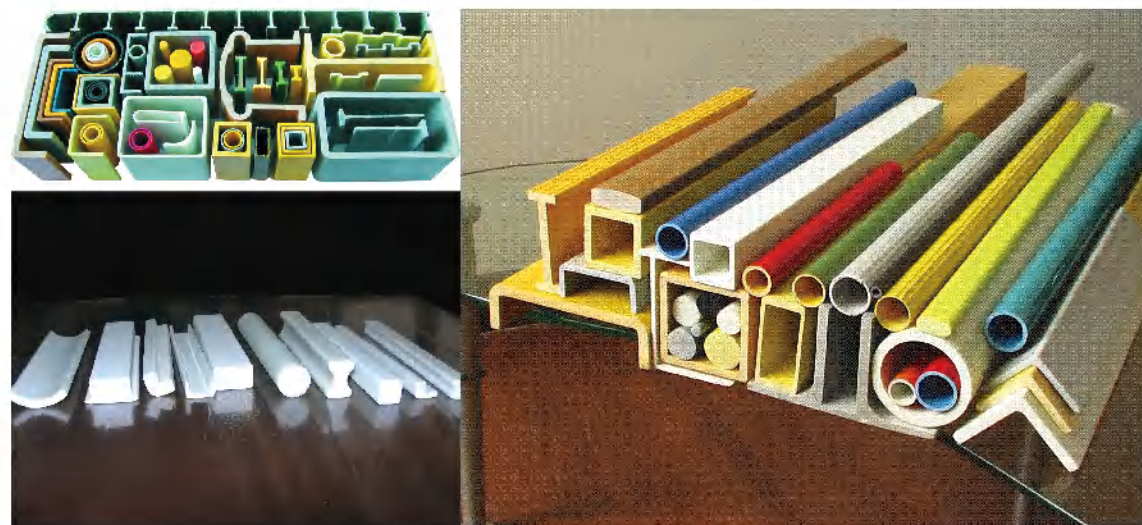
Dogbone Pultruded Profiles are used extensively as insulating supports for coil winding in transformer, switchgear and other types of electrical apparatus.

→ Range of products:

- Rectangular profiles
- Round profiles
- Dog Bones
- Corners
- Half Rounds for slot wedges
- Trapezoid ales profiles for slot wedges insulation
- U and L profiles

→ Remarks:

Customer's special requirements on specifications could be negotiated by buyer and seller case by case.

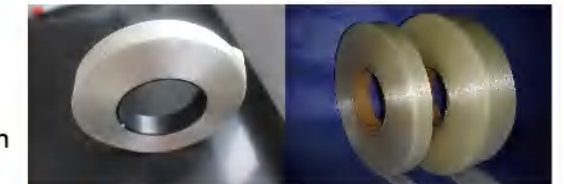


GLASS BANDING TAPES (B-Stage)

Made with parallel glass threaded glass filaments, pre-impregnated with special thermosetting polyester resins in B-stage. It is used for banding electrical machines, coils and other electronic equipment.

→ CLASS F 155°C - CLASS H 180°C

- Thickness 0,30 mm, width from 6 mm to 50 mm.
- In tapes 200 meters length.
- Universal Rolls form > 1000 meters length according width



ELECTRICAL INSULATION CLOTH TAPES

- GLASS CLOTH TAPES
Thickness 0,08 mm, 0,13 mm, 0,18 mm , 0,20 mm and 0,25 mm
- POLYESTER CLOTH TAPES
Thickness 0,10 mm, 0,13 mm, 0,18mm and 0,20 mm
- POLYESTER/GLASS CLOTH TAPES
Thickness 0,10 mm, 0,13 mm, 0,18 mm and 0,20 mm
Above products width from 10mm to 120mm
- Glass cloth coil edge insulation 10 mm to 50 mm width.



Other glass and asbestos products



glass rope and tape

glass aluminium foil tape

asbestos ropes

glass yarns

Alkyd vanished glass cloth

This product is made by electrical insulation glass fiber cloth impregnated with alkyd vanish and dry it. It can be used in coil insulation and slot liner in electrical machines, apply in class B insulation system.

Other type we can offer are silicon vanished glass cloth, polyester vanished glass cloth, also can offer silk based vanish cloth.



PTFE glass cloth

This product is made up of high performance fiberglass which coated with a PTFE resin. They are extremely resistant to high temperatures, contain outstanding electrical properties. It is used for thermo insulation, heat sealing etc.



ARAMID PAPER

The meta-aramid paper is a high temperature insulation paper made of pure meta-aramid fiber. It exhibits numerous excellent properties. Meta-aramid paper can be widely used in many applications, mostly when heat resistance properties are required, as:

- Microwave oven transformers, UPS power transformers
- Dry-transformers, cast transformers, welding transformers
- HID ballast and other transformers as interlayer electrical insulation.
- Low voltage in DC and AC electrical motors as slot and closure insulation.
- Wind Generators and in many specific areas in turbo-generators.



Type

630 High Calendered grade

Type 630 meta-aramid paper is high calendered, which offers high dielectric strength, mechanical toughness, flexibility and resilience. This type is mainly used for wire wrapping and other sheets form insulations. Also can be worked into laminates materials and various shaped products. Widely used in transformers and electrical equipment applications.

Thickness from 0.05mm to 0.76mm. In tapes from 6 mm width and punch pieces shape.

316 Lamination grade

Type 316 meta-aramid paper is a calendered insulation paper. This type has lower electrical and mechanical properties compare to 630, but the surface has better glue absorption property. It's ideal product for lamination with PET, POLYIMIDE FILMS to make flexible laminated products. The heat resistance remain the same for the two types.

611 Uncalendered grade

Type 611 meta-aramid paper is uncalendered electrical insulation paper. Type 611 offers better impregnability and saturability property compared to type 630, but lower electrical and mechanical properties. It is suitable for use in cast resin applications as turn and layer insulation. It is used such as motor phase insulation and transformer coil en filler, where high bulk and conformability are of primer importance.

UL Certification is available.



ELECTRICAL INSULATION – ADHESIVE TAPES

Polyimide Tape

- Type of adhesive: Silicone
- Application: Surface Mounting Technology (SMT), Transformer Manufacturing Industry and Lithium Battery Manufacturing Industry.



Polyester Tape

- type of adhesive: Silicone, Acrylic
- Application: For finishing process, such as powder coating, anodizing, e-coating, photo splicing etc.



Teflon Glass Cloth Tape

- Type of adhesive: Silicone
- Application: For powder coating, also used for electrical insulation, wire wrapping, thermal insulation gasket.



Glass cloth tape

- Type of adhesive: Silicone, Acrylic
- Application: The electrical industry uses the tapes for armature winding, cable wrapping, and splicing as well as spacers and slot liners.



Unidirectional Filament Glass Yarns/Pet Tape

- Type of adhesive: Syntetic Rubber, Acrylic
- Fixing moving parts in domestic appliances (Such as fridge, air-conditioner, wash machine) to avoid to be backfilled or collided in transport.

Filament Glass Yarns/ paper Tape

- Type of adhesive: Syntetic Rubber, Acrylic
- Used in oil transformer for banding the coil.

Others

- High temperature Printable PI film tape
- Protection film, Die-cutting label

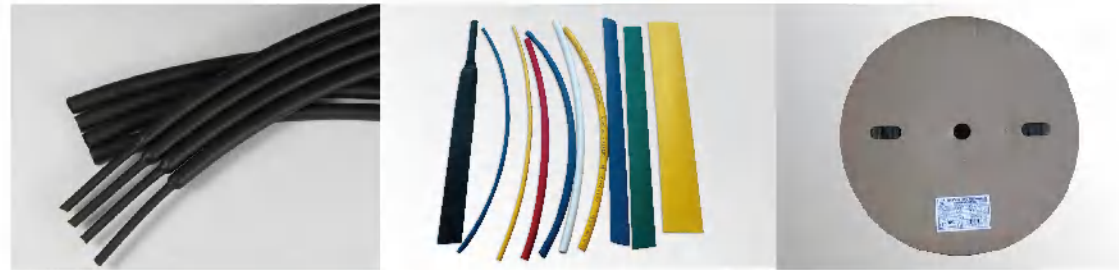
Our company can provide other kind of ADHESIVE TAPE base of costumer requirement.



HEAT SHRINKABLE TUBE

– Flame Resistant Thermal Class -45°C ~125°C

- Advantage: Zero halogen, Flame retardant, flexible, Low smoke generation if burning
- ROHS and Sony compliant. UL certification is available.
- Application: Widely used in the electronics, automotive, military & aerospace sectors in a variety of applications



INSULATION SLEEVINGS

- **Fiberglass Braid + Silicone Varnish Coating Class H – Flame Resistant.**
Size 0,50 mm to 30 mm Grades: A 1500V – B 2500V – C 4000V – D 7000V – E 10000V
- **Fiberglass braid + Silicone Rubber Extruded, Class H – Flame Resistant.**
Size 1,00 mm to 50 mm Grade : 10000V
- **Fiberglass braid + acrylic varnish coating, Class F**
Size 0,50 mm to 30 mm Grades: DAF-2:2500V – DAF-3: 4000V – DAF-4:7000V
- **Fiberglass braid + polyurethane varnish coating, Class F**
Size 0,50 mm to 30 mm Grades: DPG-2:2500V – DPG-3: 4000V – DPG-4:7000V
Above types are general used as electrical insulation and mechanical protection in motors, transformers and any other electrical engine.
- **Fiberglass braid + high temperature resistance 450°C-HEAT TREATED FIBERGLASS SLEEVING** Size 0,50 mm to 50 mm.
Widely used in mechanical and thermal protection areas.



Transformer accessories

