



TENGDE INDUSTRIAL & HOTE INSULATION MATERIAL

电力电工环氧树脂绝缘系统整合专家

EPOXY RESIN INSULATION SYSTEMS FOR ELECTRICAL & ELECTRONICS



About Tengde Group

Jiangxi Tengde Industrial Co., Ltd. is a a high-tech private-owned enterprise who has engaged in Development, Production and Sales of Electrical Epoxy Resin over 14 years. We are one of the main manufacturers in this field in China, and the annual output of epoxy materials can reach 30, 000 tons. We use the most advanced facilities which are introduced from Hedrich Germany to make the cast resins, a full automatic production line to make sure the steady quality.

The primary markets we serve include:

- Electrical & Electronics Systems
- Coatings & Construction
- Transportation & Industrial
- Wind Power

Main Products

- 1. Epoxy ResinSystem for Class F or H Dry-type Transformer, Reactors and Special transformers up to 11, 22, 33 KV.
- 2. Epoxy ResinSystem for Current Transformer & Potential Transformer used in Outdoor or Indoor.
- All sort of insulating composite materials, including DMD (0.1~1.1mm), DMDP (0.12~0.50mm), NMN (0.12~1.1mm), PET (0.05~1.1mm), NHN (0.13~0.60mm), NMNP, YMY, YMYP, DDP, PMP, GHG, GHG-P, SHS, NHN-P, YHY, YHY-P, DM, GMG, which are widely in electrical transformers/motors and electronic fields.
- 4. Production and sales of electromagnetic wire, copper bar, copper foil, copper strips products.
- 5. Full set Procurement Integration of Cast Resin Dry Transformers, CT&VT and Oil-immersed Transformers.



The advantage of Tengde Company





Comprehensive Infrastructure

- Jiangxi Tengde Group Co., Ltd. owned more than five industrial companies, the production workshops mainly located in Fuzhou, Jiangxi Province, China, the total area is about 200,000 square meters, which has been dedicating to the research, development, production, and sales of insulating materials, electrical materials and other products.
- Tengde has been committed to providing a full set of procurement solutions for most famous transformer manufacturers, including TBEA, Guangdong Siemens and Guangzhou Sunten, Chint, JST, Hainan Weite, Dalian Yihu, Zhejiang Tianji and Chaowei Battery etc..
- Our prices are more competitive than other suppliers no matter on services and prices.

We have sufficient operational installed capacity for Formulated systems. Adequate infrastructure is in place to augment capacity within a short period to meet the requirements of the growing markets.

Certificates

Tengde & HOTE have passed the quality control system ISO9001:2015, the environment control system ISD14001 and UL certificate with more than 20 invention and utility model patents.In additional, based on the market demand, Tengde has been dedicated to providing an Integrated Procurement Solutions for customers of Cast Resin Dry Transformer, Instrument Transformer and Oil-immersed Transformer, including full set projects of Technologies, Equipments and Materials.



Development History

Tengde & HOTE have certain market share and technology advantages, and therefore we have the potential to become the leader of this industry.







Epoxy Resin for Dry-Type Distribution Transformers

Main Properties ◆ _

Mixing Ratio

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Product

TD Epoxy Products have a long pot life, short gel time, low viscosity, high crack resistance, good electrical and mechanical performances, and high thermal resistance, which can meet the general requirements for Cast Resin Dry Transformers.

GTT-

Viscosity

Ø -Applications: Cast Resin Dry Transformer, Reactor, Instrument Transformers, etc.

Properties

Designation	(PBW)	Tg(℃)	Pa.s	K _{1C} (MPa·m ^½)	Unfilled	Class		
TD-6007AB /	100:100/	65 - 80	A: at 40℃ 3-3.5 / 0.6-0.8	2.0 - 2.4	Prefilled	F	Long pot life, Short Gel time at higher temperature.Excellent Mechanical and Electrical properties.Good Crack	
TD-6007AB-1	100:95:200:12	80 - 85	B: at 40℃ 1-2 / 0.17-0.23				Resistance.	
TD-6008AB-1	100:100:15:1: 410	70 - 80	at 25℃ 6 - 9	2.9 -3.1	Prefilled	н	Good mechanical and electrical end properties. Very high thermal endurance properties. Class H	
	410		at 25℃ 0.15 - 0.2				according to IEC 60085.	
			at 40℃ 0.7 -0.8 / 2.3-3					
TD-9005AB	100:100:200: 6:10:0 1	100:100:200: with filler	with filler	2.0 -2.4	Unfilled	F	Long pot life, Short Gel time at higher temperature. Excellent Mechanical and Electrical properties. Good Crack	
	0.10.0.1			Resistance				
TD-9006AB	100:80:200 or	or 75 - 90 2.5 -3.0 2.7 - 2.9 Unfilled	н	Very low initial mix viscosity, can adopt the high filler content.Excellent mechanical and curing				
	100:100						characters.Good crack resistance properties.	
TD-9612AB	100:80:334	80 - 90	at 25℃ 1.5 – 2.5	2.90 -3.10	Prefilled Unfilled	н	High filler possible due to low initial mix viscosity. Long pot-life up to 80 °C. Good mechanical and electrical properties. Good crack resistance and thermal endurance properties.	
10-9012110			at 25℃ 0.2 - 0.5					
TD-9018AB	100:100:390	50 - 60	at 25℃ 4.0 - 5.7 / 0.4 - 0.7	2.90 -3.10	Prefilled	н	Good mechanical and electrical properties. High thermal shock resistance.	
TD-9615AB	100:100:7:0.2	90 - 98	at 25℃ 9 - 14 / 0.15 - 0.22	System 3: -	Unfilled	-	Good mechanical and electrical end properties. Very high thermal endurance properties. Considerable insensitivity to atmospheric and chemicals influences.	
TD-9010AB	100:100	110 - 120	at 25℃ 0.08-0.2 / at 25℃ 0.025-0.075	2.8 - 3.0	Unfilled	Indoor	Outstanding mechanical and electrical properties combined with very high cracl and thermal shock resistance due to the low coefficient of thermal expansion. Suitable for encapsulation of large metal parts.	

Critical Stress

ntensity Factor

Filled or Thermal

Epoxy Resin for Instrument Transformer

• Main Properties

TD Epoxy Products are dedicated to provide high crack resistance and high Tg. Outstanding weather resistance and UV resistance for outdoor applications.

• Applications: Instrument Transformer, CT, PT.



Product Designation	Mixing Ratio (PBW)	GTT- Tg(℃)	Viscosity Pa.s	Critical Stress Intensity Factor K₁c (MPa⋅m ^½)	Filled or Unfilled	Appli -cation	Properties
TD-6016AB /TD-6016AB-1	100:80:270/ 100:100:	80-90 /70-80	at 25℃ 4.5 - 10.0 /1.6-3.5	2.5 -2.8	Prefilled or I Unfilled	Indoor	Good mechanical and electrical properties. Good temperature shock resistance. Excellent long-term
/1D-0010AB-1	300-350	//0-80	at 25℃ 4-6/1-1.5				breakdown resistance.
			at 25℃ 8.6 -15.1				High mechanical and electrical properties at elevated temperature;
TD-6026AB	100:80:270	105 - 125	at 25℃ 0.3 - 0.45	1.6 -2.0	Prefilled Indoc	Indoor	Very high thermal shock resistance; Excellent toughness combined with elevated glass transition temperature.
TD-6036AB	100:100 65 - 75 about 90 - Prefilled Inde at 25°C about 50	Indoor	Very high mechanical strength. Very high resistance to thermal impact				
1 <i>D</i> -0030AB		00-70		-	1 renned		strength.
TD-6066AB	100:85:0-20: 0.5-1.5: 345-385	105 - 125	at 25℃ 3.5 - 5.0 / 0.05 -0.085	2.65 - 2.85	Unfilled	Indoor	High mechanical and electrical properties. Good thermal shock resistance. High filler content.
			at 25℃ 0.08-0.2				Outstanding mechanical and electrical properties combined with very high
TD-9010AB	100:100	110 - 120	at 25℃ 0.025-0.075	2.8 - 3.0 Unfilled	filled Indoor	crack and thermal shock resistance due to the low coefficient of thermal Expansion. Suitable for encapsulation of large metal parts.	
TD-3908AB	100:80:300	about 76	at 25℃ 0.3 - 0.55 / 0.04 - 0.1	About 2.8	Prefilled	Outdoor	Good mechanical / electrical properties and good thermal shock resistance. UV Resistance. Suitable for insulators manufacturing with good weathering resistance under harsh conditions.
TD-9928AB	100:20	75 - 85	at 25℃ 0.06- 0.1 / 0.06 - 0.12	2.6 - 2.9	Prefilled	Outdoor	Very good mechanical and electrical properties.Good temperature shock resistance. Excellent UV resistance



Epoxy Resin for Insulators, Bushings and Other insulating parts

Main Properties

TD Epoxy Products are dedicated to provide good crack resistance and high Tg. Outstanding weather resistance and UV resistance for outdoor applications.

• Applications: Pin and Post Insulators, Bushings, other insulating parts.



Product Designation	Mixing Ratio (PBW)	GTT- Tg(℃)	Viscosity Pa.s	Critical Stress Intensity Factor K₁c(MPa⋅m ^½)	Filled or Unfilled	Appli -cation	Properties
TD-6016AB	100:80:270/ 100:100:	80-90	at 25℃ 4.5 - 10.0 /1.6-3.5	Prefilled 2.5 -2.8 or Ind	Indoor	Good mechanical and electrical properties. Good temperature shock resistance.	
/TD-6016AB-1	300-350	/70-80	at 25℃ 4-6/1-1.5		Unfilled		Excellent long-term breakdown resistance.
			at 25℃ 8.6 -15.1		Prefilled Indoor	High mechanical and electrical properties at elevated temperature;	
TD-6026AB	100:80:270	105 - 125	at 25℃ 0.3 - 0.45	1.6 -2.0		Indoor	Very high thermal shock resistance; Excellent toughness combined with elevated glass transition temperature.
TD-6066AB	100:85:0-20: 0.5-1.5: 345-385	105 - 125	at 25℃ 3.5 - 5.0 / 0.05 -0.085	2.1-2.2/ 2.65 - 2.85	Unfilled	Indoor	High mechanical and electrical properties. Good thermal shock resistance. High filler content.
TD-9010AB	100:100	110 - 120	at 25℃ 0.08-0.2	2.8 -3.0	Unfilled	d Indoor	Outstanding mechanical and electrical properties combined with very high crack and thermal shock resistance due to
			at 25℃ 0.025-0.075			the low coefficient of thermal Expansion. Suitable for encapsulation of large metal parts.	
TD-3968AB	100:90:0-20: 0.6: 370-410	105 - 115 75 - 85	at 25℃ 0.7- 0.9 / 0.07 - 0.09	2.4 - 2.8 2.8 - 3.2	Unfilled	Outdoor	Good mechanical and electrical properties. Good thermal shock resistance. High UV resistance. High tracking and arc. Resistance. Silanised filler ensures stable dielectrical properties under outdoor humid conditions.



Epoxy Resin for Circuit Breaker & Solid Switchgear, Embedded Pole and High Voltage GIS Spacer

Main Properties

TD Epoxy Products are dedicated to provide medium and high Tg and high resistance to mechanical creeping because of gas pressure in gas insulated GIS parts, as well as good crack resistance. Outstanding weather resistance, reduce current leakage and extend the pot life due to hydrophobic properties for outdoor applications.

• Applications:

Vacuum Circuit Breaker, Solid Switchgear, Embedded Pole, Medium and High Voltage GIS Spacer.

Product Designation	Mixing Ratio (PBW)	GTT- Tg(℃)	Viscosity Pa.s	Critical Stress Intensity Factor K₁c (MPa⋅m ^½)	Filled or Unfilled	Appli -cation	Properties
TD-6016AB	8.5 -		at 25℃ 8.5 - 10.0	2.5 -2.8	Prefilled / Unfilled	Indoor	Good mechanical and electrical properties. Good temperature shock resistance. Excellent long-term
			at 25℃ 5.0 - 7.0		/ Onnieu		breakdown resistance.
TD-6026AB	100:80:270	105 - 125	at 25℃ 8.6 -15.1	1.6 -2.0 Fille	Filled	Indoor	Good mechanical and electrical properties at elevated temperature. Very high thermal shock resistance; High glass transition temperature.
1 <i>D-</i> 0020AD	100:80:270	105 - 125	at 25°C 0.3 - 0.45		Filled		
TD-6066AB	100:85:0-20: 0.5-1.5: 345-385	105 - 125	at 25℃ 3.5 - 5.0 / 0.05 -0.085	2.65 - 2.85	Unfilled	Indoor	High mechanical and electrical properties. Good thermal shock resistance. High filler content.
	100:100	110 - 120	at 25°C 0.08-0.2			Indoor	Outstanding mechanical and electrical properties combined with very high crack and thermal shock resistance
TD-9010AB			at 25℃ 2.0 -3 0.025-0.075	2.8 -3.0	Unfilled		due to the low coefficient of thermal Expansion. Suitable for encapsulation of large metal parts.
TD-9020AB	100:30-40: 210-330	105 - 115	resin at 40℃ about 0.45	-	Unfilled	·	Solid thermal-cured epoxy casting resin with high mechanical strength, alumina or silica powder as the filler, excellent thermal shock resistance. Applied in GIS insulation parts, switchgear and bushing.
TD-3968AB	100:90: 0-20:0.6 :370-410	105 - 115 75 - 85	at 25℃ 0.7- 0.9 / 0.07 - 0.09	2.4 - 2.8 2.8 - 3.2	Unfilled	Outdoor	Good mechanical and electrical properties. Good thermal shock resistance. High UV resistance. High tracking and arc. Resistance. Silanised filler ensures stable dielectrical properties under outdoor humid conditions.





Epoxy Resin for Electronic Encapsulation

Main Properties

TD Epoxy Products are dedicated to provide long pot life with low viscosity, smooth surface after curing, good insulation properties.

• Applications:

Power Transformer, LED, Capacitor, Ignition Coil, Regulator, etc.

Product Designation	Mixing Ratio (PBW)	Viscosity Pa.s	Properties			
TD-7018AB	100:25	at 40℃ 0.11-0.13	Room temperature curing epoxy resin with excellent process properties, long shelf life, easy to operate. Good electrical			
	100120	at 40°C 0.03	and mechanical properties, bright surface.			
TY ODED AD	58AB 100:50	at 25℃ 2.6 - 3.0	Storage Battery: Low viscosity, good flowability, easy to penetrate into gaps of the products. Curing at room temp. or			
TY-2058AB		at 25℃ 0.08- 0.1	at 60 °C, fast curing speed. Good adhesion, thermal resistance, low acid absorption, resistance to wet heat ar atmospheric aging, good insulation, etc.			
ТҮ-2059АВ	100:50	at 25℃ 3.5 - 4.5 / 0.03 - 0.05	Storage Battery Pole Resin: Low viscosity, good flowability, easy to penetrate into gaps of the products. Curing at room temp. or at 60 $^{\circ}$ C, fast curing speed. Good adhesion, thermal resistance, low acid absorption, resistance to wet heat and atmospheric aging, good insulation, etc.			
TY-601AB		at 25°C 7 - 9	Low mixing viscosity, good fluidity, good defoaming ability; Long use period, medium temperature curing speed;			
(Including Mould Releasing Agent)	100:100	at 25℃ 0.2 - 0.25	Excellent mechanical and electrical performance after curing;Small shrinkage; The solidified material has good light transmittance.			



Epoxy Resin for Wind Power Blade

Main Properties

TD Epoxy Products are dedicated to provide low viscosity and high-elasticity laminated system, to extend the pot life.

• Applications:

Industrial Composite Materials including wind power blade



Product Designation	Mixing Ratio (PBW)	Viscosity Pa.s	Properties
TD-3356AB	100:34	at 25℃ 1.2 -1.6 at 25℃ 0.012- 0.02	Transparent liquid. Low-viscosity and high-∉ asticity laminated system. The pot life is extended. I particularly suitable for production of large industrial components.
TD-3358AB	100:34	at 25℃ 1.3 -1.5 at 25℃ 0.035- 0.068	Transparent liquid. Low-viscosity and high-elasticity laminated system. The pot life is extended. It is particularly suitable for production of large industrial components.

Epoxy Color Paste

Main Properties

High gloss, high temperature resistance, different bright color as per

the request, acid and alkali resistance.

• Applications: Cast Resin Dry Transformer, Instrument Transformer, Insulator, Bushing, Switchgear, Reactor etc.

Product Designation	Color	Product Designation	Color	
TD-01	Bright Red	TD-07	Sapphire Blue	
TD-02	Red Brown	TD-08	Wine Red	
TD-03	Blackish Green	TD-09	Yellow	
TD-04	Coffee	TD-10	Light Gray	
TD-05	Iron Oxide Red	TD-11	Dark Gray	
TD-06	Sky Blue	TD-12	Black	

Other products

Product Designation	Mixing Ratio (PBW)	Applications	Properties
TD-8028AB	100:25	Coil Repair and LV End Sealing	Fast curing at Room Temperature. Good insulation and thermal resistance.
TD-7025AB(-1)	100:25	Iron-Core Coating	Room Temperature curing epoxy resin can be used for the iron core of dry transformers. Good insulation and excellent process performance and excellent surface gloss.
TD-6810	-	Mould Releasing Agent	Solvent-free liquid, fast-drying release agent with good thermal stability.
Flexibilizer Y-8-2	-	Epoxy resin	Transparent Liquid, Solvent-free polyglycol, can increase toughness and improve bearing strength in anhydride-cured epoxy resin.
Accelerator H-30-1		Hardener	Solvent-free tertiary amine suitable for epoxy-based used in electrical composite applications

TD Group has been committed to R&D, Production and Sales of Insulating Materials, including DMD (0.1~1.1mm), DMDP (0.12~0.50mm), NMN (0.12~1.1mm), PET (0.05~1.1mm), NHN (0.13~0.60mm), NMNP, YMY, YMYP, DDP, PMP, GHG, GHG-P, SHS, NHN-P, YHY, YHY-P, DM, GMG, all sorts of Crepe Paper and other Insulating Paper.







电力电工环氧绝缘系统 EPOXY INSULATION SYSTEMS FOR ELECTRICAL & ELECTRONICS

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