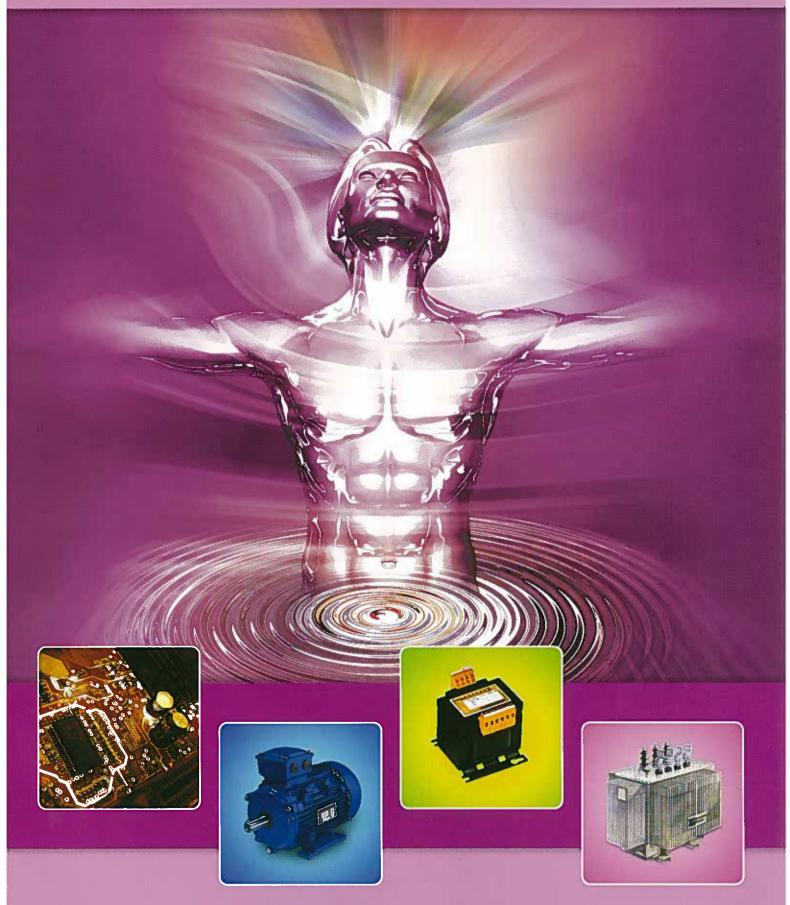


FINE FINISH ORGANICS PVT. LTD.





Fine Finish Electrical insulating Systems.

ELECTRICAL INSULATING RESINS

SR.NO.	PRODUCT DESIGNATION	RESIN	HARDENER	ACCELERATOR	MIVING PATIO	CHRING CYCLE	CLASS	DISTINCTIVE DOODEDTIES	CHCCECTED ADDI ICATIONS
Sh.Hu.	PRODUCT DESIGNATION	nesii	HANDENEN	ACCELERATOR	MIXING RATIO	CURING CYCLE	CLASS	DISTINCTIVE PROPERTIES	SUGGESTED APPLICATIONS
1	INSUFINE® - 3040 (based on epoxy - polyesterimide resin system)	INSUFINE® - 3040	Р	Nil	100:2 (W/W)	2 hr @ 160°C	н	Good penetration in to winding wire, tough elastic bonding, good dielectric and mechanical properties, excellent water resistance, very good chemical resistance and electrical insulation	Impregnation system by simple dipping, VPI, roll or by trickle. For insulation of motors and transformers for almost all applications. For all rotating and static electrical machines. For HT machines
2	INSUFINE®- FT1052 (based on polyesterimide resin system)	INSUFINE®-FT1052	y . P	Nil	100:2 (W/W)	2 hr@ 160°C	н	Good penetration in to winding wire, tough elastic bonding, good dielectric and mechanical properties, excellent water resistance, very good chemical resistance and electrical insulation	Impregnation system by VPI. For insulation of motors and transformers for almost all applications.
3	INSUFINE® - TR1002 (based on modified polyester resin system)	INSUFINE®-TR1002	к	Nil	100:2 (W/W)	2-5 min @ 120°C	F	Short gelling, suitable for trickle process.	Impregnation system by trickle. For insulation of motors and transformers for almost all applications. Also for high speed electrical machines like grinders, drilling machines etc
4	INSUFINE® - FT2005 (based on polyesterimide resin system)	INSUFINE®-FT2005	P	Nil	100:2 (W/W)	4 hr@ 160°C	Н	Good penetration in to winding wire, tough elastic bonding, good dielectric and mechanical properties, excellent water resistance, very good chemical resistance and electrical insulation	Impregnation of electrical coils which faces high G-value. Suitable for insulation in motors and transformers.
5	EPOFINE® 1937X/ FINEHARD™ 1937X (Epoxy system)	EPOFINE®-1937X	FINEHARD™ -1937X	Nil	3:1 (W/W)	30 min @ 140°C 10 min @ 180°C	н	Resin system for impregnating FPF, simple mixing ratio, slight odour, Tg up to 140 C, good chemical resistance and electrical insulation.	suitable for polyester fleece, ceramic paper and glass yarns for application in electric motors. Used for slot insulation in HT machines.
6	EPOFINE®- 1556/ FINEHARD™- 951 (Epoxy system)	EPOFINE®-1556	FINEHARD - 951	Nil	100:10-12(W/W)	4 hr@ 60°C	В	simple mixing, low viscosity, excellent water resistance, good chemical resistance and electrical insulation.	Recommended for room temperature or low bake composite manufacture
7	EPOFINE®- 5052/ FINEHARD™- 5052 (Epoxy system)	EPOFINE®-5052	FINEHARD™ - 5052	Nil	100:38 (W/W)	8 hr @ 80°C	н	curing temperature could be varied between 25°C to 140°C, High Tg	For Wet-lay and resin transfer moulding(RTM, SCRIMP). Typical applications are aerospace, tooling and aircraft repairs
8	EPOFINE®- 230 / FINEHARD™- 951 & Silica flour (Epoxy system)	EPOFINE®-230	FINEHARD™ - 951	Ni	100:10 (W/W)	4-8 hr @ 70-80°C 5-7 hr @ 60°C	E	simple mixing, low viscosity, excellent water resistance, good chemical resistance and electrical insulation.	For indoor electrical insulators, bushings, switchgears, current transformers. For low and medium voltage applications
9	EPOFINE® - 205 / FINEHARD™ - 905 & silica flour (Epoxy system)	EPOFINE®-205	FINEHARD™ - 905	Flexibiliser 40 Accelerator-62	100:100:10:1	4 hr @ 80°C 10 hr @ 130°C	F	simple mixing, low viscosity, excellent water resistance, good chemical resistance and electrical insulation.	For indoor electrical insulators, bushings, switchgears, current transformers. For low and medium voltage applications
10	FINESET™- AE933 (Epoxy system)	FINESET™-AE933 (single component)		Nil		10 hr @ 130°C 2.5hr @ 150°C 30 min @ 180°C	F	single- pack composition, excellent heat resistance upto 180°C	polyester fleece for application in electric motors, coating nomex sheets, slot insulation in HT machines, consolidating resin for HT coils.
11	FINESET™- FA909 (Epoxy system)	COMPONENT A	COMPONENT B	Nil	100:18 (W/W)	10 hr @ 30°C 20 min @ 100°C	В	neglig ble shrinkage, low viscosity	For repairing aluminium and its alloy castings, by filling in the surface irregularities.
12	FINESET [™] - BC901 (Epoxy system)	COMPONENT A	COMPONENT B	Nil	100:100 (W/W)	10 hr @ 30°C 20 min @ 100°C	Н	Short term temperature resistance upto 250°C	Balancing compound for armatures.
13	FINELUBE-Si-01 (Release agent)	FINELUBE-Si-01	Nil	Nil		148	-	Medium viscosity grease with consistency temperature from - 50°C to +200°C, reistant to acids, alkalies other inorganic salt	lubricant for switches cable, cable connectors, heat sinks, electrical insulators and bushings, as mould release agent, for high temperature applications, coating for electrical contacts.
14	EPOFINE®- 106 / FINEHARD™- 953 (Epoxy system)	EPOFINE 106	FINEHARD 953	Ni	100:80 (W/W) &100:100 (V/V)	24 hr @ 20°C 5hr @ 60°C 30 min @ 100°C	В	Easy to mix, odourless, good chemical resistance and electrical insulation	Jointing of ferrous and non-ferrous metals, glass, wood, FRP components etc.
15	FINESET™ - 2011 (Epoxy system)	COMPONENT A	COMPONENT B	Nil	100:80 (W/W) &100:100 (V/V)	24 hr @ 20°C 5hr @ 60°C 30 min @ 100°C	В	Higher viscosity, Easy to mix,odourless,good chemical resistance and electrical insulation	Jointing of ferrous and non-ferrous metals, glass, wood, FRP components etc. Higher gap-filling capability
16	EPOFINE® - 792 (Epoxy system)	EPOFINE 792 (single component)		HZ-15		2 hr @ 150°C	Н	use as a binder for mica paper tapes and unidirectional polyester band	can be used as an insulating material in motors and transformers.
17	FINESET™ - AE930 (Epoxy system)	FINESET™ - AE930 (single component)		Nil		2.5hr @ 150°C 30 min @ 180°C	F/H	excellent heat resistance upto 180°C	bonding of any combination of metals, ceramic materials and heat resistance plastics.
18	FINESET™ - AE933 (Epoxy system)	FINESET™- AE 933 (single component)		Nil		10 hr @ 130°C 2.5hr @ 150°C 30 min @ 180°C	F/H	B-staging epoxy compound	used for polyester fleece, nomex sheet and as an consolidating resin for HT coils
19	FINESET™ - 4435 (Epoxy system)	FINESET™ - 4435 (single component)		Nil		30 min @ 130°C 3 hr @ 150°C	Н	high build, single component and solvent free. Excellent bond strength. Shelf life of at least 1 year @25°C	impregnation by trickling process for motors and armature of all size and for machine with large windings.
20	FINESET™ - GC916 (Epoxy system)	COMPONENT A	COMPONENT B			24 hr @ 30°C 4 hr @ 130°C	F	excellent electrical and mechanical properties	finishing coat over varnish impregnated coils, transformers, strators and armature etc. Protective coating for capacitors, thermistors
21	EPOFINE® - FFER337 / FINEHARD™ - CA404 (Epoxy system)	EPOFINE® - FFER337	FINEHARD™ - CA404	CATALYST - IOZ	100:100:0.05	24 hr @ 160°C	F/H	very low vapour pressure. Excellent electrical, mechanical & thermal properties	Impregnation (VPI) of HT machines (upto 11KV)

ELECTRICAL INSULATING VARNISHES

SR. NO	PRODUCT DESIGNATION	THINNER	CURING CYCLE	CLASS	DISTINCTIVE PROPERTIES	SUGGESTED APPLICATIONS
1	FINECOAT*- HR703	703	30 min @ 130°C	С	Black in colour, Heat resistance upto 200°C	insulating paint for core packs,stacks, boiler pipes and furnace structures
2	FINECOAT®- HR704	704	30 min @ 130°C	F	Red in colour, Heat resistance upto 155°C, electrical insulating and anti tracking properties	finishing varnish for core packs of class F machines and on overhangs.
3	FINECOAT®- TVA1410	1410	30 min-12 hrs @ 130°C	Н	Red in colour,ensure protection from moisture and chemical attack, anti tracking properties	ideal finishing varnish for all class H machines especially traction machines, provides good adhesion and bonding to the winding
4	INSUFINE® - VI640	640	4 hr @ 140°C	н	Pale brown colour, insulating varnish for H-motors	used for impregnation of all wire wound motors and resin rich motors
5	INSUFINE® - VI615	615	4 hr @ 120°C	8	Pale yellow colour, insulating varnish of Class B	impregnation for all wire wound motors
6	INSUFINE® - VI607	607	6-8 hr @ 35°C	E	Dark brown colour, insulating varnish of Class E	impregnation for all wire wound motors
7	INSUFINE" - VI660	660	5 hr @ 120°C	F	white in colour, filled with heat resistant binder, good mechanical and electrical properties	pigmented varnish for impregnation of chokes
8	FINECOAT® - C654	654	12 hr @ RT	F	Black in colour, resistant to oil, white spirit, water and alcohol and good resistance to humidity	used as a conducting paint/varnish
9	FINECOAT® - SC656	656	24 hr@35C + 1 hr/160°C	Н	light grey colour, thixotropic, semi- conducting	used on coils insulated with mica based insulation, as semi- conducting varnish
10	INSUFINE® - VI620	620	6-8 hr @ 35°C	F	Pale yellow colour, air drying insulating varnish for F-class	used for impregnation of all wire wound motors and resin rich motors
11	INSUFINE® - VI630	630	4 hr @ 120°C	F	Pale yellow colour, impregnating insulating varnish for Class F motors	used for impregnation of all wire wound motors and resin rich motors
12	FINECOAT [®] - VI645	645	6 hr @ 180°C	С	Pale yellow, glossy and can pass UL94 - V0 Test	used for impregnation of all wire wound motors and resin rich motors

ELECTRICAL COMPOSITE RESIN SYSTEMS

SR. NO	PRODUCT DESCRIPTION	RESIN	HARDENER	Accelerator	MIXING RATIO	CURING CYCLE		TIVE PROPE ELECTRICAL	RTIES MECHANICAL	SUGGESTED APPLICATIONS
1	Medium Viscosity modified Epoxy Resin and Low Viscosity anhydride Hardener	Epofine 3556	Finehard [™] 3918	Nil	100: 90 By Weight	4 hrs @180°C + 4 hrs @120°C.	Mix viscosity @ 25°C: 600 - 900 mPas	BDV: 40-50 KV/mm H.V. Arc Resistance: 185 -195 sec, ε,: 4	UTS: 75 - 91 MPa, Impact Strength: 10- 12 KJ/m²	Tough and impact resistance composite parts for high strength applications like membrane housing Suitable for RTM (infusion/ SCRIMP) wet lay up, filament winding.
2	Composite Grade Liquid Epoxy Casting Resin and Polyamine Hardener	Epofine 1556	Finehard [™] 951	Nil	100: 10-12 By Weight	24 hrs @ 30°C	Mix viscosity @ 25°C: 800 - 1000 mPas	BDV: 23 -25 KV/mm ε,: 4 - 4.2 tan δ : 1.2 - 1.3 %	UTS: 70 -80 N/mm³ Elongation at Break: 2.0 - 2.2 %, Flexural Strength: 90- 100 N/mm²	For Room Temperature or Low Baked Composite Manufacturing.
3	An electrical Grade Epoxy Casting Resin and Modified Anhydride Hardener	Epofine 1205	Finehard [™] 1905	Accelerator 062, Flexibisizer 040	100:100:10:0.5 By Weight	4hrs @ 90°C + 4 hrs 140°C	Mix viscosity @ 25°C: 700 - 900 mPas	BDV: 20 -22 KV/mm, H.V. Arc Resistance: 185 -195 sec., ε,: 4	UTS: 75 -85 N/mm², Impact Strength: 10- 12 KJ/mm²	Suitable for APG, RAPG Manufacturing Processes of Indoor Electrical Insulators, Post Insulators, bushings and Switch gears, instruments Used for Medium and high Voltage Applications,
4	An Electrical Grade Novalac Based Multifunctional Epoxy Resin and BF, Amine Complex Based Hardener	Epofine 1180	Finehard [™] 5933	Nil	100: 6 By Weight	120°C 4 hrs + 60°C for 6 hrs	Gel Time @100°C: 4 - 8 Hrs Long Prepreg Life, Boiling Water Resistance	BDV : 40-50 KV/mm. Very Good Electrical Resistance	Very Good Chemical Resistance	Mica Tapes and High Temperature resistant Composites for Structural Applications
5	Bisphenol A based, Solvent free Liquid Epoxy Resin and High Viscosity Polyamidoamine Hardener	Epofine 880	Finehard [™] 880	Nil	100:100 By Weight	Room Temperatu re Cure	Viscosity (Resin) @ 25°C: 16000 - 22000 mPas & (Hardener); 45000 - 100,000 mPas	BDV : 23 - 25 KV/mm	Very good Chemical Resistance, Excellent Water resistance	Room temperature Cure suitable for wide variety of applications such as Bonding of Rubber Sheets to Steel High Build Coatings, Etc.
6	Medium viscosity Electrical grade Liquid Epoxy Resin and Modified Anhydnde Hardener	Epofine 740	Finehard™ 918	Accelerator 062	100:90:1 By Weight	4 hrs @ 80°C. + 8 hrs.@ 140°C.	Mix Viscosity @ 25°C: 600 - 900 mPas, Class F Application.	BDV: 30 -32 KV/mm H.V. Arc Resistance: 180-190 S, ε:4	UTS: 75 - 85 N/mm², Impact Strength: 10 - 12 KJ/m²	Composites for electrical Applications By Pultrusion, Pressure Molding or by Filament winding FRP Composite Rods
7	Medium viscosity Electrical grade Liquid Epoxy Resin and Anhydride Hardener	Epofine 740	Finehard [™] 906	Accelerator 062	100:95:1 By Weight	2hrs @120°C. + 8 hrs @ 160°C.	Mix Viscosity @ 25°C: 1900 - 2100 mPas. Class H Application	BDV: 30 -35, H.V. Arc Resistance: 190-200 S ε,: 4	UTS: 80 -95 N/mm², impact Strength: 10 - 12 KJ/mm²	Composite for Electrical Applications. FRP composite Rods, Suitable for high Voltage Applications
8	Bisphenol A based unmodified Liquid Epoxy Resin and Medium Viscosity, Modified amine Hardener	Epofine 556	Finehard [™] 1972	Nil	100:60 By Weight	2 hrs @ 120°C. + 4hrs. @160°C.	Mix Viscosity@ 25°C: 3000 - 3200 mPas.	BDV: @ 30°C: > 80 KV/mm, Temperature Index: > 180°C	UTS: 35 - 38 Kg/mm² (for Laminate), Impact Strength: 115 - 125 KgCm/Cm²	Recommended for trickle impregnation of Class H machines of Low and Medium Voltage. FRP strps for HT machine overhangs.
9	Medium Viscosity Electrical Grade Liquid Epoxy Resin and Cycloaliphatic Anhydride Hardener	Epofine 556	Finehard [™] 907	Accelerator 70	100:85:1 By Weight	2hrs @ 80°C.+ 2hrs @ 150°C.	Mix Viscosity : @ 25°C: 500 - 800 mPas.	BDV: 30 - 32 KV/mm , H.V. Arc Resistance: 185 -195 S, ε,: 4	UTS: 75 -85 N/mm ¹ Impact Strength: 10 - 12KJ/m ²	Composite For Electrical Applications by Pultrusion, Pressure Molding or By Filament Winding, Suitable for Medium and High Voltage Applications.
10	Medium viscosity Cycloaliphatic Liquid Epoxy Resin and Cycloaliphatic Anhydride Hardener	Epofine 184	Finehard [™] 907	Accelerator 70	100:90:1 By Weight	4 Hrs @ 100°C + 4 Hrs @ 140°C	Mix Viscosity @ 25°C: 200 - 300 mPas.	BDV: 30 -32 KV/mm H.V. Arc Resistance: 185 -195 S, ε,: 4.	UTS: 75 - 85 N/mm ¹ , Impact Strength: 10 - 12 KJ/mm ²	Composite For Electrical Applications by Pultrusion, Pressure Molding or By Filament Winding, Suitable for High Voltage Applications.

