

ELAN-Tron® and ELAN-Cast® resins for  
**Transformers & Inductive  
Components**

# Transformer & Inductive Components

## Product Summary

**ELAN-Tron®** and **ELAN-Cast®** resins are used for potting or casting of low voltage transformers. They provide environmental protection, minimize vibration and improve heat dissipation.

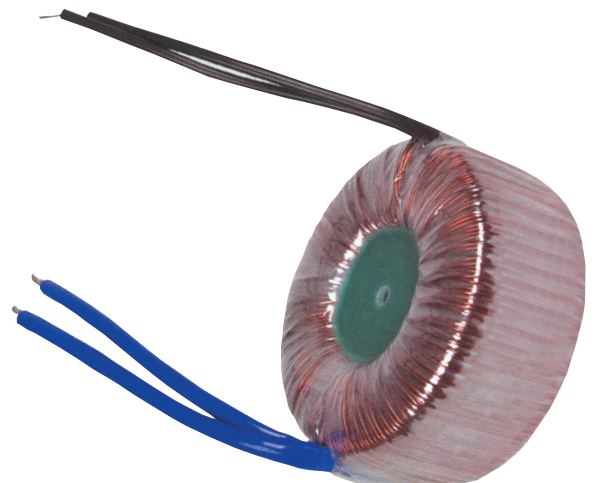
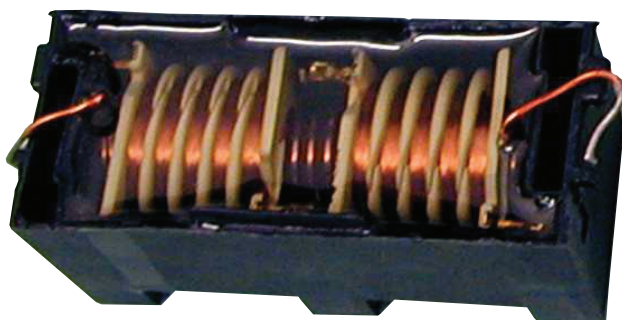
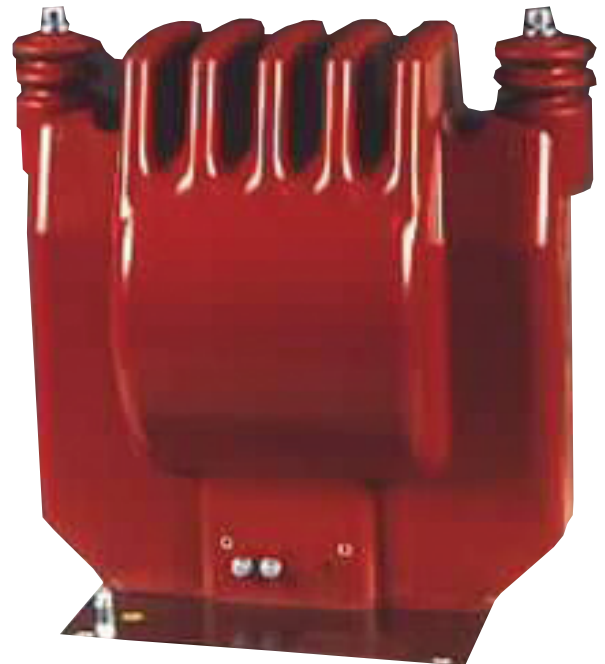
**ELAN-Cast® E** resins offer the superior environmental protection of an epoxy.

**ELAN-Tron® U** polyurethane resins cure at room temperature and provide low temperature flexibility.

**ELAN-Cast® P** polyester resins offer thermal ratings up to 180°C.

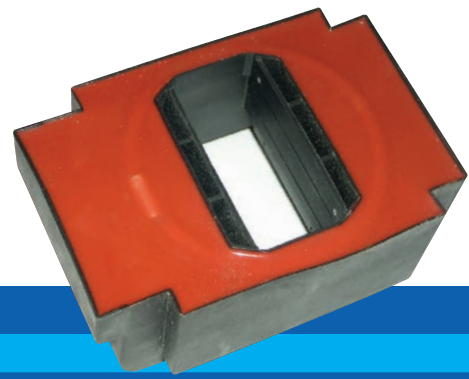
## Product Uses

- Low Voltage Transformers
- Chokes
- Toroids
- Ballasts
- Power Supplies
- Electromagnetic Devices
- Lifting Magnets



## Application Methods

- Vacuum Potting
- Meter-Mixing
- Atmospheric Potting



## Product Characteristics at a Glance

		Mixed Viscosity cP at 25°C	Mix Ratio (by weight)	Glass Transition Temp (Tg)	Gel Time 25°C (minutes)	Cure Schedule for Optimum Properties	Thermal Conductivity W/m.K	Maximum Service Temp (IEC 60085)
ELAN-Cast® E 023 FR Black Resin ELAN-Cast® E 023-1 FR Black Resin ELAN-Cast® C 023 FR Hardener	Two-component, highly filled, semi-rigid epoxy resin system. Room temperature / low heat cure. UL 94 V0 listed. Convenient 1:1 mix ratio by volume. 023-1 is more flexible.	15000 - 20000 15000 - 20000	100:106 100:106	50 - 55°C 27 - 33°C	30 - 65 40 - 90	24 h at 25°C + 15 at at 60°C	0.67 - 0.77 0.67 - 0.77	155°C 155°C
ELAN-Cast® E 297 Resin ELAN-Cast® C 85 Hardener ELAN-Cast® C 110 Hardener ELAN-Cast® C 46 Hardener	Two-component, filled, rigid epoxy resin system. Room temperature / low heat cure. Available in natural and black. Low pouring viscosity. Range of gel times available depending on choice of hardener.	1500 - 2500 1500 - 2500 1500 - 2500	100:20 100:20 100:20	47 - 53°C 45 - 50°C 53 - 57°C	10 - 15 35 - 45 270 - 330	24 h at 25°C + 15 h at 60°C	0.40 - 0.50 0.40 - 0.50 0.40 - 0.50	155°C 155°C 155°C
ELAN-Cast® E 471-5LL FR Black Resin ELAN-Cast® C 471-5LL Hardener	Two-component, filled epoxy resin system. Enhanced chemical resistance with low stress, room temperature / low heat cure. UL System listed. Flame retardant, UL 94 V0 listed.	2000 - 3000	100:15	48 - 53°C	450-500	168 h at 25°C or 4 h at 80°C	0.50 - 0.60	130°C
ELAN-Cast® E 617 FR Resin ELAN-Cast® C 161 FR Hardener	Two-component, semi-rigid, filled epoxy resin system. Heat cure. High viscosity (pre-heat to 70°C before mixing). Flame retardant. UL 94 V0 listed.	50000 - 70000 4600-6600 at 55°C	100:100	35 - 40°C	22 - 32 at 125°C	4 h at 80°C + 4 h at 120°C + 4 h at 150°C	0.37 - 0.43	155°C
ELAN-Cast® E 805 Black Resin ELAN-Cast® C 383 Hardener	Two-component, semi-rigid epoxy resin system. Low density, reinforcing filler system. Room temperature / low heat cure. Low temperature flexibility, service temperature -55°C to 130°C.	600 - 1000	100:17	40 - 45°C	70 - 90	24 h at 25°C + 15 h at 60°C	0.30 - 0.35	155°C
ELAN-Tron® U 4106 Black Resin ELAN-Tron® UH 510S Hardener	Two-component, general-purpose, flexible, filled polyurethane resin system. Room temperature / low heat cure.	2000 - 3000	100:33.3	5 - 10°C	30 - 50	168 h at 25°C or 4 h at 80°C	0.20 - 0.25	130°C
ELAN-Tron® U 6592 Black Resin ELAN-Tron® UH 6592 Hardener	Two-component, filled, polyurethane resin system. Room temperature / low heat cure. Flexible to -40°C. Thermal shock resistant (>10 cycles -55 to 155°C).	5000 - 10000	100:12.5	< -60°C	45 - 80	168 h at 25°C or 4 h at 80°C	0.15 - 0.20	130°C
ELAN-Tron® U 6752 FR White Resin ELAN-Tron® UH 510S Hardener	Two-component, filled, semi-flexible polyurethane resin system. Room temperature / low heat cure. Low shrinkage. Excellent thermal conductivity. Flame retardant per UL 94 V0. Flexible to -20°C.	3000 - 5000	100:15	< -20°C	3 - 7	72 h at 25°C or 2 h at 80°C	0.53 - 0.63	130°C
ELAN-Cast® P 300 S RTC ELAN-Plus™ MEKP-9 Red Catalyst	Two-component, unfilled, very flexible polyester resin system. Room temperature / low heat cure. Moisture-resistant. Ideal for sand-filled transformers. UL system listed.	100-200	100:1	20 - 30°C	35 - 50	24 h at 25°C or 2 h at 80°C	0.15 - 0.20	180°C
ELAN-Cast® P 300 S-65F-45 ELAN-Plus™ MEKP-9 Red Catalyst	Two-component, filled, polyester resin system. Room temperature / low heat cure. Moisture-resistant. Excellent thermal conductivity.	3000 - 9000	100:0.35	35 - 40°C	40 - 50	24 h at 25°C or 2 h at 80°C	0.65 - 0.75	180°C
ELAN-Cast® P 400 VT RTC ELAN-Plus™ MEKP-9 Red Catalyst	Two-component, unfilled polyester resin system. Room temperature / low heat cure. UL system listed.	1500 - 2500	100:2	20 - 30°C	9 - 13	24 h at 25°C or 2 h at 80°C	0.15 - 0.20	180°C
ELAN-Cast® E 8181 Resin ELAN-Cast® C 8181 Hardener	Two-component, filled, flexible, epoxy resin system. Room temperature / low heat cure. Convenient 1:1 mixing ratio (by volume). 1-2 day room temperature cure. For filling and sealing lifting magnets, clutch coils and magnetic chucks.	20000 - 30000	100:100	< -20°C	4 - 8 at 125°C	120 h at 25°C or 4 h at 80°C	0.65 - 0.75	180°C
ELAN-Cast® Y-363A Resin ELAN-Cast® Y-363B Catalyst	Two-component, unfilled, flexible resin system. Room temperature / low heat cure. Low viscosity, for filling and sealing lifting magnets and small transformer coils.	700 - 1300	100:20	<10°C	28 - 38	120 h at 25°C or 4 h at 80°C	0.15 - 0.20	180°C

Alternate cure schedule may be possible for your application. Consult with your ELANTAS PDG representative.

For More Information Ask For Our Technical Data Sheets.

# ELANTAS PDG, Inc.

## ELANTAS Electrical Insulation

Around the world, ELANTAS Electrical Insulation companies are respected as market leaders in the development and manufacturing of impregnating resins (varnishes), wire enamel, potting compounds and casting resins for a number of electrical, industrial, aerospace and civil applications. No matter what your challenge, be assured that ELANTAS Electrical Insulation products will meet your most demanding needs.

## ELANTAS PDG, Inc.

Today, ELANTAS PDG, Inc. is recognized as the premier global supplier of specialty polymers for the electrical and electronic industries. ELANTAS PDG, Inc. is a member of ALTANA's ELANTAS Electrical Insulation Division based in Wesel, Germany.

With the support of ALTANA and by working with other ALTANA divisions, we offer a unique global approach to research, manufacturing and service that translates into more creative solutions, dependable supply and consistently high quality.

Many ELANTAS PDG, Inc. products are recognized as components of electrical insulation systems in accordance with UL 1446. ELANTAS PDG, Inc. is registered to ISO 9001 and ISO/TS 16949.

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ELANTAS PDG, Inc. headquarters in St. Louis, Missouri

ELANTAS Electrical Insulation companies are strategically located throughout the world to meet the primary insulation, secondary insulation and electronic and engineering materials needs of our customers.

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