



产 品 说 明 书
Product Instruction

产品名称：
无溶剂绝缘漆
Product Name:
Solventless Insulating Varnish

产品型号：
E57-160F
Product Model:
E57-160F

厂商名称：珠海长先新材料科技股份有限公司
Manufacturer: Zhuhai Changxian New Material Technology Co., Ltd.
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E57-160F 无溶剂绝缘漆

E57-160F Solventless Insulating Varnish

产品描述:

Product Overview:

E57-160F 由改性不饱和聚酯树脂、活性稀释剂苯乙烯和引发剂组成，是 F 级无溶剂绝缘漆。

E57-160F is a Class F solventless insulating varnish formulated from modified unsaturated polyester resin, styrene reactive thinner and initiator.

产品特性:

Features:

- 对变压器部件粘附力高，可降低电磁振动和电噪声。
- 快速固化，可在短时间内完全固化；无溶剂挥发，降低环境污染。
- 耐热等级 F 级（155℃）；符合 RoHS、REACH 及无卤要求。
- Strong adhesion to transformer components, helping reduce electromagnetic vibration and electrical noise.
- Rapidly cures to completion and has no solvent evaporation, reducing environmental impact.
- Class F thermal rating (155℃); RoHS/REACH compliant and halogen-free.

产品应用:

Product Applications:

- 适用于 EI-35~EI-105 各种变压器的浸渍。
- Suitable for impregnation of transformers from EI-35 to EI-105.

性能指标:

Performance Specifications:

序号 No.	指标名称 Property	试验条件 Test Conditions	指标值 Specification
1	外观 Appearance	目测 Visual	黄色透明液体 Yellow transparent liquid
2	粘度 Viscosity	涂-4 杯, 25℃ Tu-4 cup, 25℃	18~22 s
3	比重 Specific gravity	25℃	0.99±0.02
4	凝胶化时间 Gel time	100℃	≥5.0 min
5	有效寿命 Pot life	40℃	≥5 天
6	干燥时间 Drying time	镀锌铁板, 100~120℃ Galvanized steel sheet, 100-120℃	≤20 min
7	体积电阻率 Volume resistivity	常态 As received	$4 \times 10^{13} \Omega \cdot m$

序号 No.	指标名称 Property	试验条件 Test Conditions	指标值 Specification
8	绝缘破坏强度 Dielectric breakdown strength	常态 As received	20.5 kV/mm
9	剪断接着力 Shear bond strength	φ2.0mm PEW, 23°C	≥300 N
10	固化条件 Curing conditions	—	110°C/3h 或 120°C/2h
11	配套稀释剂 Recommended thinner	—	X-58
12	配套固化剂 Recommended hardener	—	G160F、G160F-2
13	推荐配比 Recommended ratio	漆:稀释剂:固化剂 Varnish:thinner:hardener	100:0~200:2

使用工艺:

Application Procedure:

自动浸渍参考: 预热 110°C/10~20min; 空冷 5~10min; 含浸 2~5min; 除滴 5~20min; 硬化 120°C/60min。

实际应用时, 应根据变压器形状、尺寸和工艺, 通过试验确定稀释比例、浸渍时间和固化时间。

Automatic impregnation reference: preheat at 110°C for 10–20 min; air-cool 5–10 min; impregnate 2–5 min; drain 5–20 min; cure at 120°C for 60 min.

Determine dilution ratio, impregnation time and curing time by testing according to transformer shape, size and process.

注意事项:

Precautions:

严禁混入水分, 严禁烟火, 远离火源和热源。

避免接触皮肤和眼睛, 并在通风良好处使用。

本品对温度和湿度敏感, 应遵循先进先出并在使用期内用完。粘度或比重变化较大时, 用新漆加固化剂或专用稀释剂调整。

长期使用可能反应放热, 不得置于密闭容器中, 以免散热不良引发爆聚。

Prevent any water contamination. No smoking or open flames; keep away from ignition sources and heat.

Avoid skin and eye contact and use in a well-ventilated area.

The product is temperature- and humidity-sensitive. Follow first-in, first-out and use within its service life. If viscosity or specific gravity changes significantly, adjust with fresh varnish plus hardener or designated thinner. Prolonged use may generate reaction heat. Do not place in a sealed container, as insufficient heat dissipation may cause runaway polymerization.

包装、储运及保质期:

Packaging, Storage, Transportation and Shelf Life:

- **包装:**

20L/桶、200L/桶

- **储运:**

请远离火源、热源，按法规搬运。

本产品存储和使用过程中，禁止太阳光、紫外光照射漆液，存放于阴凉通风处，存储温度应低于 40℃。

使用过程中产品不宜长时间密闭静置，适当流动搅拌有利于延长存储时间。

本产品在存放过程中，粘度会发生轻微增长，使用时用专用稀释剂兑稀到使用粘度，使用即可。

- **保质期:**

密闭保存，存储温度应低于 40℃，保质期为 6 个月

- **Packaging:**

20 L/pail; 200 L/drum.

- **Storage and Transportation:**

Keep away from ignition sources and heat. Handle and transport in accordance with applicable regulations.

Protect the varnish from sunlight and ultraviolet light during storage and use. Store in a cool, well-ventilated area below 40°C.

During use, avoid leaving the product sealed and undisturbed for prolonged periods. Gentle circulation or stirring helps extend storage life.

Viscosity may increase slightly during storage. Before use, adjust to the required application viscosity with the designated thinner.

- **Shelf Life:**

Six months when stored in sealed containers below 40°C.

安全操作须知:

Safe Handling Instructions:

安全使用须知不在此列出，操作前请阅读本产品的化学品安全说明书（MSDS），可从本公司业务专员处获得。

Safety instructions are not listed in this document. Before operation, please read the Material Safety Data Sheet (MSDS) of this product, which can be obtained from our sales representative.

温馨提示:

Please Note:

- 由于我们的产品会持续优化和改进，本手册中的相关信息可能会根据实际情况进行调整，不另行通知。如需获取最新版本或了解更多信息，欢迎随时联系我们的销售团队。

- 本公司严格按相关产品标准控制质量和提供产品（特制品按双方约定）。产品应用条件的多样性和多变性，且均非我们所能控制，因此用户应对本产品之说明书与施工参考工艺所介绍的信息和产品预先进行试验和评估，自行确定对其特定用途的适用性。

- As our products are continuously improved, the information in this manual may be updated from time to time without prior notice. Please feel free to contact our sales team for the latest version.

- Do not mix this product with other products.

- We strictly control product quality and supply products in accordance with applicable product standards.

Custom products are supplied according to mutually agreed specifications. Application conditions vary and are beyond our control. Users should therefore test and evaluate the product and the information provided in this manual and the recommended application procedures to determine suitability for their specific use.