



产 品 说 明 书

Product Instruction

产品名称:

环保型耐热改性不饱和聚酯树脂

Product Name:

Environmentally Friendly Heat-Resistant
Modified Unsaturated Polyester Resin

产品型号:

E57-81H

Product Model:

E57-81H

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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E57-81H 环保型耐热改性不饱和聚酯树脂

E57-81H Environmentally Friendly Heat-Resistant

Modified Unsaturated Polyester Resin

产品描述:

Product Overview:

E57-81H 由环保型改性耐高温不饱和聚酯树脂、活性稀释剂、稳定剂和助剂精制而成，是单组分 H 级无溶剂耐高温聚酯绝缘树脂。

E57-81H is a single-component, Class H, solventless, high-temperature-resistant polyester insulating resin formulated from environmentally friendly modified high-temperature unsaturated polyester resin, reactive thinner, stabilizer and additives.

产品特性:

Features:

- 粘结力强、渗透性好、绝缘性能优异、机械强度高，抗潮防霉，烘烤固化快。
- 材料兼容性优异，耐高低温冲击，使用简单方便。
- 耐热等级为 H 级（180℃ 以上），耐冷媒，膜层具有一定柔软性。
- Strong adhesion, good penetration, excellent insulation, high mechanical strength, moisture and mildew resistance, and rapid baking cure.
- Excellent material compatibility, thermal-shock resistance and ease of use.
- Class H thermal rating (above 180°C), refrigerant resistance and a flexible film.

产品应用:

Product Applications:

- 适用于 B、F、H、C 级干式电力变压器和电抗器。
- 适用于新能源汽车电机、大型发电机及起重、变频、耐冷媒电机和电器。
- 适用于真空和常压浸渍绝缘处理。
- Suitable for Class B, F, H and C dry-type power transformers and reactors.
- Suitable for new-energy vehicle motors, large generators, hoisting and variable-frequency motors, refrigerant-resistant motors and electrical equipment.
- Suitable for vacuum and atmospheric-pressure impregnation insulation.

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 inspection	淡黄至淡棕色透明液体，无机械杂质 Light yellow to light brown transparent liquid, free of mechanical impurities

序号 No.	指标名称 Property	试验条件 Test Conditions	指标值 Specification
2	粘度 Viscosity	涂-4 粘度计, 23±2°C Tu-4 viscometer, 23±2°C	45±15 s
3	密度 Density	25°C	1.05±0.03 g/cm ³
4	胶凝时间 Gel time	试管法, 140±2°C Test-tube method, 140±2°C	6±3 min
5	厚层固化能力 Thick-layer curing capability	140±5°C, ≥2h	S1、U1、I2.1
6	击穿强度 Breakdown strength	常态; 140±5°C固化 6h As received; cured at 140±5°C for 6 h	≥22 MV/m
7	击穿强度 Breakdown strength	浸水 24h 后; 140±5°C固化 6h After 24 h water immersion; cured at 140±5°C for 6 h	≥20 MV/m
8	体积电阻率 Volume resistivity	常态 As received	≥1×10 ¹³ Ω·m
9	体积电阻率 Volume resistivity	浸水 24h 后 After 24 h water immersion	≥1×10 ¹² Ω·m
10	耐冷媒 Refrigerant resistance	96h	优 Excellent
11	储存稳定性 Storage stability	闭口法, 75±2°C, 24h (不凝胶) Closed-container method, 75±2°C, 24 h (no gelation)	合格 Pass
12	储存期 Shelf life	—	6 个月 6 months
13	活性稀释剂 Reactive thinner	—	X-88

使用工艺:

Application Procedure:

配制: 一般产品工作液粘度为 20~40s; 要求较高的产品建议 45±15s; 小型电器建议 12~18s。正常情况下, 每月添加 10%以上的新绝缘树脂; 长期连续使用时应定期过滤。

参考工艺: 工件在 110~120°C 预热 2~4h; 40~50°C 含浸 15~30min; 滴漆 20~40min; 145~150°C 烘烤 4~8h。要求较高时可增加 2~10h, 或在 160°C 烘烤 8h。

Preparation: Recommended working viscosity is 20–40 s for general products, 45±15 s for demanding products and 12–18 s for small appliances. Add more than 10% fresh resin monthly under normal use and filter periodically during continuous operation.

Reference process: Preheat at 110–120°C for 2–4 h; impregnate at 40–50°C for 15–30 min; drain for 20–40 min; bake at 145–150°C for 4–8 h. For demanding products, add 2–10 h or bake at 160°C for 8 h.

注意事项:**Precautions:**

以上工艺仅供参考，以客户实际使用条件为准。

The above process is for reference; actual customer conditions govern.

包装、储运及保质期:**Packaging, Storage, Transportation and Shelf Life:**

- 包装:

20KG/桶、200KG/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 KG/pail; 200 KG/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.