



产 品 说 明 书
Product Instruction

产品名称：
耐高温环保型浸渍树脂

Product Name:
Environmentally Friendly High-Temperature
Impregnating Resin

产品型号：

W2168H

Product Model:

W2168H

厂商名称：珠海长先新材料科技股份有限公司

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W2168H 耐高温环保型浸渍树脂

W2168H Environmentally Friendly High-Temperature Impregnating Resin

产品描述:

Product Overview:

W2168H 由耐高温环氧树脂、改性耐高温不饱和聚酯树脂、高纯度环保型活性稀释剂、特种固化剂和助剂精制而成，是高品质 C 级环保型浸渍绝缘树脂。

W2168H is a high-quality, environmentally friendly Class C impregnating insulating resin formulated from high-temperature-resistant epoxy resin, modified high-temperature-resistant unsaturated polyester resin, high-purity environmentally friendly reactive thinner, special curing agent and additives.

产品特性:

Features:

- 具有低粘度、低挥发和低气味特点；与中胶和少胶绝缘材料相容性好，固化过程中 VOC 挥发少。
- 固化后机械强度高、吸水率极低，耐湿热、盐雾、霉菌和潮湿，低温可达-45℃，并具有优异的耐氟里昂（冷媒）性能。
- 饱和蒸汽压较低、闪点较高，有利于提高 VPI 浸渍真空度，并提升设备和环境安全性；贮存稳定性好。
- Features low viscosity, low volatility and low odor; compatible with medium-resin and low-resin insulation systems, with low VOC release during curing.
- After curing, it provides high mechanical strength and extremely low water absorption, with resistance to damp heat, salt spray, mildew and moisture, low temperatures down to -45°C, and excellent Freon/refrigerant resistance.
- Its low saturated vapor pressure and high flash point support higher vacuum levels during VPI impregnation and improve equipment and environmental safety; it also offers good storage stability.

产品应用:

Product Applications:

- 特别适用于风力发电机的 VPI 绝缘浸渍工艺。
- 适用于 H 级和 C 级大中型高压电机及电器绕组的绝缘浸渍。
- 适用于特殊耐高温电机的绝缘浸渍处理。
- Especially suitable for VPI insulation impregnation of wind turbine generators.
- Suitable for impregnation insulation of Class H and Class C medium and large high-voltage motors and electrical windings.
- Suitable for insulation impregnation of special high-temperature-resistant motors.

性能指标:

Performance Specifications:

以下项目参照 GB/T 15022.2-2017 标准试验方法:

The following items are tested in accordance with GB/T 15022.2-2017:

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	淡黄色透明液体，无机械杂质 Pale yellow transparent liquid, free of mechanical impurities
2	粘度 Viscosity	涂-4 粘度计，25±2℃ Tu-4 viscometer, 25±2℃	50-150
3	密度 Density	—	1.05±0.03 g/cm ³
4	胶凝时间 Gel time	试管法，135±2℃ Test-tube method, 135±2℃	3~12 min
5	厚层固化能力 Thick-layer curing capability	140±5℃，≥2h	S1、U1、I2.1
6	击穿强度 Breakdown strength	常态；漆饼 140±5℃固化 10h As received; resin casting cured at 140±5℃ for 10 h	≥23 MV/m
7	击穿强度 Breakdown strength	浸水后；漆饼 140±5℃固化 10h After water immersion; resin casting cured at 140±5℃ for 10 h	≥22 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	浸水后 After water immersion	≥1×10 ¹² Ω·m
10	介质损耗因数 Dielectric dissipation factor	常态 As received	≤1%
11	介质损耗因数 Dielectric dissipation factor	热态 At elevated temperature	≤3%
12	挥发份 Volatile content	155±2℃，2h 155±2℃, 2 h	≤5%
13	耐漏电痕迹 Comparative tracking index	CTI CTI	550 V 550 V
14	耐冷媒 Refrigerant resistance	96h 96 h	优 Excellent
15	贮存稳定性（粘度增长倍数） Storage stability (viscosity increase factor)	闭口法，50±2℃，96h Closed-container method, 50±2℃, 96 h	≤1
16	产品贮存期 Product shelf life	—	6 个月 6 months

序号 No.	指标名称 Property	试验条件 Test Conditions	指标值 Specification
17	配套活性稀释剂 Recommended reactive thinner	贮存期 3 个月 Shelf life: 3 months	X-78 X-78

使用工艺:

Application Procedure:

配制：一般产品工作液粘度为 20~40s；要求较高时建议 45 ± 15 s；小型电器建议 12~18s。正常情况下，每月按实际使用情况添加 10%以上新树脂，可长期连续使用。

参考工艺：工件在 115~130℃ 预热 2~6h；在 45~50℃ 含浸 15~30min；滴漆 20~40min；在 145~150℃ 烘烤 4~8h。要求较高时建议增加 2~10h，或在 160℃ 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 electrical equipment. Under normal conditions, add more than 10% fresh resin monthly according to actual use to support continuous operation.

Reference process: Preheat the workpiece at 115–130℃ for 2–6 h; impregnate at 45–50℃ for 15–30 min; drain for 20–40 min; bake at 145–150℃ for 4–8 h. For demanding products, add 2–10 h or bake at 160℃ for 8 h.

注意事项:

Precautions:

以上工艺仅供参考，实际条件应根据客户产品和现场工艺确定。

The above process is for reference. Actual conditions should be determined according to the customer product and on-site process.

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℃.

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。
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- As our products are continuously improved, the information in this manual may be updated from time to time

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- 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.