



产 品 说 明 书

Product Instruction

产品名称：
三防漆

Product Name:
Conformal Coating

产品型号：
M78H-41

Product Model:
M78H-41

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M78H-41 三防漆

M78H-41 Conformal Coating

产品描述:

Product Overview:

M78H-41 是由改性聚氨酯、防水添加剂、助剂组成，单组份固化配方。M78H-41 形成的保护膜透明、光泽度好、附着力强，保护膜绝缘阻抗高。对高低压设备均适用。M78H-41 耐酸、碱和各种杂质水，本剂使用干燥快，可常温干燥，操作十分方便。

主要用于 PCB 板、电子元件和金属表面的防水、防潮处理。经本剂封闭的表面有很强的疏水性，在潮湿和较大温差的环境中，表面也不会形成水珠。

M78H-41 is a single-component conformal coating formulated with modified polyurethane, waterproofing additives, and auxiliary agents. It forms a transparent, glossy protective film with strong adhesion and high insulation resistance, making it suitable for both high- and low-voltage equipment. The coating is resistant to acids, alkalis, and water containing various impurities. It dries quickly at room temperature, allowing for easy and convenient application.

M78H-41 is primarily used to protect PCBs, electronic components, and metal surfaces against water and moisture. Treated surfaces exhibit strong hydrophobicity, preventing water droplets from forming even in humid environments with substantial temperature variations.

性能指标:

Performance Specifications:

- 外观: 黄色透明液体.
- 粘度: 20-50 mPa·s
- 固含量: 40±2%
- 成膜时间: 常温, 55%RH 表干: ≤30 分钟 全干: 24 小时
- 80℃ 表干: 5-10 分钟 全干: 2 小时
- 膜层厚度: 30-50μm
- 介质电压: >1500V
- 绝缘阻抗: >2.5*10¹² Ω
- 防潮测试: ≥5*10⁹ Ω
- 使用范围: -40-120℃
- 抗硫化性能: PASS
- Appearance: Transparent yellow liquid
- Viscosity: 20-50 mPa·s
- Solids Content: 40 ± 2%
- Drying Time at Room Temperature, 55% RH: Touch dry: ≤30 minutes; Fully dry: 24 hours
- Drying Time at 80°C: Touch dry: 5-10 minutes; Fully dry: 2 hours
- Film Thickness: 30-50 μm
- Dielectric Withstand Voltage: >1,500 V
- Insulation Resistance: >2.5 × 10¹² Ω
- Insulation Resistance After Moisture Resistance Testing: ≥5 × 10⁹ Ω
- Service Temperature Range: -40°C to +120°C
- Sulfidation Resistance: PASS

使用工艺:

Application Procedure:

1、使用时可原液使用，可加入专用稀释剂 X-4H 调整工作粘度及膜层厚度。敞口使用，由于稀释剂的成份会挥发，导致比重、粘度增大，不易操作，而且成膜不均匀，反而会影响防潮效果及电性能，故应定期补充 X-4H 稀释剂。手刷使用，建议少量多次。以免吸收空气中水份引起凝胶结块，影响使用。

2、M78H-41 三防漆，必须配套专用稀释剂，以免可能会出现沉淀、分层或自聚的不良反应。

3、长时间不用时最好从敞开容器中倒出密封保存，以免挥发过快或凝聚

4、M78H-41 可用作线路板焊接残留物不良时的后补救程序。使用不良的不含松香或低固量助焊剂时，线路板可能会出现一些不良现象，当如下现象出现时，可用 M78H-41 补救。具体如下：

a：当焊后线路板残留物变白色或有阴影状时，可使用 M78H-41 涂刷于表面，M78H-41 会将残留物吸收变成膜物质，在表面形成一层薄且透明的膜。

b：当焊后线路板残留物阻值太低，出现漏电现象时，以前的补救措施是清洗（但有一些助焊剂很难清洗，容易出现白色残留物）。

本功能的使用必须是低松香含量，如残留物太高，应先清洗再涂覆，以免产生涂覆不均匀现象。

1. M78H-41 can be used as supplied or diluted with the dedicated X-4H thinner to adjust the working viscosity and film thickness. During use in an open container, evaporation of the thinner increases the specific gravity and viscosity, making application more difficult and resulting in an uneven film, which may impair moisture protection and electrical performance. Replenish X-4H thinner periodically as needed. For brush application, dispense small quantities at a time and replenish frequently to minimize moisture absorption from the air, which may cause gelation and lump formation.

2. Use only the dedicated thinner with M78H-41 conformal coating. Other thinners may cause adverse reactions such as precipitation, phase separation, or self-polymerization.

3. If the coating will not be used for an extended period, transfer it from the open container into a tightly sealed container to prevent excessive evaporation or coagulation.

4. M78H-41 can be used as a remedial treatment for certain problems associated with soldering residues on PCBs.

Unsuitable rosin-free or low-solids fluxes may cause the following issues after soldering:

a. If soldering residues appear white or leave shadow-like marks, brush M78H-41 onto the affected surface.

The coating incorporates the residues into the film, forming a thin, transparent protective layer.

b. If soldering residues have excessively low insulation resistance and cause electrical leakage, M78H-41 may be used as a remedial treatment. The conventional remedy is cleaning; however, some flux residues are difficult to remove and may leave white deposits after cleaning.

This remedial application is limited to residues with low rosin content. If excessive residues are present, clean the surface before coating to avoid uneven coverage.

包装、储运及保质期:

Packaging, Storage, Transportation and Shelf Life:

● 包装:

4L/桶、20L/桶

● 储运:

本产品为易燃化学品，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 25℃。

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。

● 保质期:

密闭保存，存储温度应低于 25℃，保质期为 6 个月

- **Packaging:**

4 L/pail; 20 L/drum.

- **Storage and Transportation:**

This product is flammable. Keep away from ignition sources and heat. Handle in accordance with applicable regulations.

During storage and use, protect the coating from sunlight and ultraviolet light. Store in a cool, well-ventilated area at temperatures below 25°C.

During use, avoid leaving the product sealed and undisturbed for extended periods. Periodic circulation or stirring can help extend its storage life.

- **Shelf Life:**

Six months when stored in sealed containers below 25°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.