U-Cure 9570

聚氨酯丙烯酸酯 / Polyurethane Acrylate

聚氨酯丙烯酸酯 *UV* 树脂 / *Polyurethane Acrylate UV Resin*

KASTER

Innovation in Polymer Chemistry

昆山卡斯特高分子材料有限公司

技术资料表　Technical Data Sheet (TDS)

1　产品介绍 Product Introduction

U-Cure 9570 为高强度三官能聚氨酯丙烯酸酯 *UV* 树脂。该产品具有低放热量、高强度、坚韧性好及耐黄变性佳等特性。其固化膜展现出优异的机械性能平衡，特别适用于对抗刮擦和物理抗性有严格要求的涂层系统。

U-Cure 9570 is a high-strength trifunctional polyurethane acrylate UV resin. It features low heat exotherm, high strength, excellent toughness, and good yellowing resistance. Its cured film exhibits an excellent balance of mechanical properties, making it particularly suitable for coating systems with strict requirements for scratch and physical resistance.

2　物理及力学特性 Physical & Mechanical Properties

性能参数 Properties	典型指标 Typical Value	测试标准 Standard
外观 Appearance	透明澄清液体 / Clear Liquid	Visual
粘度 Viscosity (cps @ 60°C)	7,000 - 15,000	ASTM D2196
固含量 Solid Content (%)	100%	GB/T 1725
官能度 Functionality	3	Theoretical
NCO 残存 (%)	＜ 0.2%	-
绍氏硬度 Shore Hardness	85D	ASTM D2240
拉伸强度 Tensile Strength	50 MPa	ASTM D638
断裂伸长率 Elongation	9%	ASTM D638

3　核心特性 Key Product Features

- **低放热量 (Low Heat Exotherm)**
  固化过程中产生的热量较低，显著减少薄型或热敏感底材的热变形风险。
  Produces low heat during the curing process, reducing the risk of thermal deformation of thin or heat-sensitive substrates.
- **高强度与机械韧性 (High Strength & Toughness)**
  该树脂展现出极佳的力学平衡，在维持高硬度的同时依然具备良好的抗冲击与抗折裂能力。
  Exhibits excellent mechanical balance, ensuring the coating maintains impact and crack resistance even at high hardness levels.
- **耐黄变性佳 (Excellent Yellowing Resistance)**
  特殊分子结构确保在长期紫外线照射下仍能保持优异的色彩稳定性。
  The special molecular structure ensures excellent color stability even under long-term UV exposure.

4 建议应用 Product Applications

- **UV 甲油胶 (UV Nail Polish)**
  利用其低放热和良好的坚韧性，提供舒适的涂敷体验，固化后展现出优异的抗划伤性能。
  Utilizes its low heat exotherm and good toughness to provide a comfortable application experience and excellent scratch resistance after curing.

- **UV 金属涂料 (UV Metal Coatings)**
  用于金属表面的装饰与防护，提供高强度的涂层保护，在保持高硬度的同时耐受物理冲击。
  Used for decoration and protection of metal surfaces, providing a high-strength protective coating that resists physical impact while maintaining high hardness.

- **UV 玻璃涂料 (UV Glass Coatings)**
  作为主体树脂，提供极佳的透明度与机械强度，确保涂层在玻璃表面具有稳固的附着力。
  As a main resin, it provides excellent transparency and mechanical strength, ensuring stable adhesion on glass surfaces.

5 常见问题解答 Q&A

Q: U-Cure 9570 的力学性能表现如何? (How is the mechanical performance of U-Cure 9570?)

A: *U-Cure 9570* 具有出色的综合力学表现。它在确保极高表面硬度的同时，通过分子设计优化了韧性表现。这使得涂层在维持刚性的同时，具备了普通高硬度树脂所欠缺的柔韧性，能有效防止涂层在受到外力撞击时发生脆裂。
U-Cure 9570 has outstanding comprehensive mechanical performance. It ensures high surface hardness while optimizing toughness through molecular design. This allows the coating to maintain rigidity while possessing the flexibility that ordinary high-hardness resins lack.

6 储存与安全 Storage and Safety

- **储存 (Storage)***: 应存放在合适的密封容器中，并置于温度在 -10°C 至 35°C 的阴暗环境中。在此条件下，本品可保持稳定至少 12 个月。*
  Should be stored in suitable sealed containers in a dark environment with temperature between -10°C and 35°C. Under these conditions, the product remains stable for at least 12 months.

- **包装 (Packaging)***: 200kg/桶。*
  200kg/drum.

- **安全 (Safety)***: 本品对眼睛有刺激性；对水生生物有毒。操作时请仔细阅读安全数据表 (SDS)。*
  This product is irritating to eyes and toxic to aquatic organisms. Please read the Safety Data Sheet (SDS) carefully.

联系方式 Contact Information

昆山卡斯特高分子材料有限公司 Kunshan Kaster Polymer Co., Ltd.
地址：江苏省昆山市玉山镇祖冲之路 1666 号清华科技园
Tel: 0512-50137234 Web: www.kasterchem.com