U-Cure 9589

二官能聚氨酯丙烯酸酯 / PUA Resin

Difunctional 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 9589 是一款高性能二官能聚氨酯丙烯酸酯 *UV* 树脂。该产品经过特殊分子设计，在保持极高伸长率和卓越柔韧性的同时，专门用于攻克低表面能基材的粘结难题，具备优异的耐候性与长期使用可靠性。

U-Cure 9589 is a high-performance difunctional polyurethane acrylate UV resin. Specially engineered to maintain high elongation and flexibility, it is designed to overcome bonding challenges on low-surface-energy substrates while offering excellent weatherability and long-term reliability.

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)	15,000 - 25,000	ASTM D2196
固含量 Solid Content (%)	100%	GB/T 1725
官能度 Functionality	2	Theoretical
NCO残存 NCO Content (%)	< 0.2%	Titration
绍氏硬度 Shore Hardness	65A	ASTM D2240
拉伸强度 Tensile Strength	8.5 MPa	ASTM D638
断裂伸长率 Elongation	410%	ASTM D638

3　核心特性 Key Product Features

- **卓越的低表面能附着力 (Superior Adhesion to LSE Substrates)**
  通过优化分子极性，该树脂对 *PP*、*PI*、*PA* 及 *PET* 等极难粘结的低表面能材料表现出卓越的界面润湿性与锚固力。
  Optimized molecular polarity ensures exceptional wetting and anchoring on difficult-to-bond substrates like PP, PI, PA, and PET.

- **极致的柔韧性与高伸长率 (Extreme Flexibility and Elongation)**
  具备极高的断裂伸长率与极佳的柔韧平衡，固化膜表现出类似于弹性体的性能，能够轻松应对基材的剧烈弯折或冷热形变。
  Features extreme elongation at break and flexible balance. The cured film exhibits elastomer-like properties, withstanding severe bending or thermal deformation.

- **优异的耐环境可靠性 (Excellent Environmental Reliability)**
  特殊的脂肪族结构使其具备极佳的耐黄变性。在双 *85* 高温高湿老化测试中，仍能保持稳定的粘结强度。
  Its aliphatic structure provides excellent non-yellowing. It maintains stable bond strength even after rigorous 85/85 heat and humidity aging tests.

4 建议应用 Product Applications

- **柔性与弹性体涂料 (Flexible Coatings)**
  用于可穿戴设备、柔性电路板（*FPC*）及汽车软质内饰的表面防护。
  Protective coatings for wearables, FPCs, and soft automotive interiors.
- **高性能结构胶 (UV Adhesives)**
  解决 *PP*、*PET* 等塑料件的结构粘接，特别适用于需要抗冲击的电子组装。
  Structural bonding of PP/PET parts, ideal for electronics requiring shock resistance.

5 常见问题解答 Q&A

Q: U-Cure 9589 是否可以在不使用底漆的情况下直接用于 PP 材料?
(Can 9589 be used directly on PP without primers?)

A: 是的，其核心优势即在于“免底涂”附着。建议批量生产前进行交叉划格测试。
Yes, its core advantage is ”primerless” adhesion. Testing on specific grades is recommended.

6 储存与安全 Storage and Safety

- **储存 (Storage)***:* 密封避光存放于 *-10°C* 至 *35°C*。保质期至少为 *12* 个月。
  Store in sealed, light-proof containers at -10 to 35°C. Shelf life is at least 12 months.
- **安全 (Safety)***:* 本品对眼睛有刺激性。操作请佩戴个人防护装备，详见 *SDS*。
  Irritating to eyes. Wear personal protective equipment. Refer to SDS for details.

联系方式 Contact Information

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