U-Cure 9396

六官能团聚氨酯丙烯酸酯 / Hexafunctional Urethane Acrylate

高性能抗氧阻聚 *LED* 固化树脂 / *High Performance LED Curable 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 9396 是一款高性能的六官能团聚氨酯丙烯酸酯树脂。其设计旨在提供极高的固化效率以及卓越的表面物理性能，特别是在低能量和 *LED* 固化条件下表现出色，适用于对耐磨性和硬度有严格要求的工业涂层领域。

U-Cure 9396 is a high-performance hexafunctional urethane acrylate resin designed for high curing efficiency and excellent surface properties, especially under low-energy and LED conditions. It is ideal for industrial coatings requiring high abrasion resistance and hardness.

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)	2,000 – 5,000	ASTM D2196
固含量 Solid Content (%)	100%	GB/T 1725
官能度 Functionality	6	Theoretical
NCO 残存 NCO Content (%)	< 0.2	Internal Method

3　核心特性 Key Product Features

- **优异的抗氧阻聚能力 (Excellent Oxygen Inhibition Resistance)**
  通过特殊的分子骨架设计，显著降低自由基固化过程中氧气对表面的抑制作用，解决薄涂施工时的“表面发粘”难题。
  Significantly mitigates oxygen inhibition during free-radical curing, ensuring a tack-free surface even in thin-film applications.
- **LED 及低能量高效固化 (Efficient LED & Low Energy Curing)**
  针对 *365–395nm LED* 光源优化，在较低 *UV* 剂量下即可实现快速交联。
  Optimized for 365-395nm LED sources, enabling rapid cross-linking even under low UV dosages.
- **高硬度与高耐磨 (High Hardness & Abrasion Resistance)**
  六官能团的高交联密度赋予涂层极佳的机械强度与抗划伤性。
  High cross-linking density provides superior mechanical strength and scratch resistance.

4　建议应用 Product Applications

- **LED 固化体系 (LED Curing Systems)**
  开发高效 *LED* 固化涂料及油墨，解决传统树脂表干困难的问题。
  High-efficiency LED coatings and inks to address surface-drying challenges.

- **塑胶与电子罩光 (Plastic & Electronics Topcoats)**
  为手机、平板电脑及家电面板提供高光泽与耐刮擦保护层。
  Protective coatings for consumer electronics requiring high gloss and scratch resistance.

5 常见问题解答 Q&A

Q: 为什么 U-Cure 9396 特别适合 LED 固化？ (Why is it suitable for LED?)

A: *LED* 能量通常低于传统汞灯。*9396* 通过高官能度与抗氧阻聚设计的结合，使其在弱能量环境下也能迅速实现表面彻底固化。
Due to the combination of hexafunctionality and oxygen resistance, it achieves thorough surface cure even under low-energy LED conditions.

6 储存与安全 Storage and Safety

- **储存 (Storage)***:* 密封存放于 *-10°C* 至 *35°C* 阴暗干燥处。保质期 *12* 个月。
  Store in sealed containers in a dark, dry place at -10 to 35°C. Shelf life: 12 months.
- **安全 (Safety)***:* 对眼睛有刺激性，对水生生物有毒。操作请佩戴个人防护装备，详见 *SDS*。
  Irritating to eyes and toxic to aquatic life. Wear PPE and refer to SDS for details.

联系方式 Contact Information

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