KASTER

Innovation in Polymer Chemistry
昆山卡斯特高分子材料有限公司

U-Cure 9390

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

高反应活性、高硬度、耐黄变聚氨酯丙烯酸酯 */ High Reactivity, High Hardness & Yellowing Resistant Urethane Acrylate*

技术资料表　Technical Data Sheet (TDS)

1　产品介绍 Product Introduction

U-Cure 9390 是一款高反应活性的六官能团聚氨酯丙烯酸酯树脂。其设计目的主要是为光固化体系提供卓越的物理强化性能，特别适用于对表面硬度、抗划伤性以及色彩持久性有极高要求的工业涂层环境。
U-Cure 9390 is a high-reactivity hexafunctional urethane acrylate resin. It is primarily designed to provide superior physical reinforcement for photocurable systems, particularly suitable for industrial coatings with stringent requirements for surface hardness, scratch resistance, and color durability.

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)	1,000 – 3,000	ASTM D2196
固含量 Solid Content (%)	100%	GB/T 1725
官能度 Functionality	6	Theoretical
NCO 残存 (%)	$<$ 0.2%	Internal Method
色数 Color (Gardner)	$\leq$ 1	ASTM D1544

3　核心特性 Key Product Features

- **极高反应活性 (High Reactivity)**
  六官能团结构提供了极高的交联密度，确保涂层在光固化体系中表现出优异的化学稳定性。
  The hexafunctional structure provides extremely high cross-linking density, ensuring the coating demonstrates excellent chemical stability in photocurable systems.
- **高硬度与耐磨性 (High Hardness & Wear Resistance)**
  固化膜具有极佳的机械强度，表现出卓越的抗刮伤性能。
  The cured film possesses excellent mechanical strength and demonstrates outstanding scratch resistance.
- **优异的耐黄变性 (Excellent Yellowing Resistance)**
  特殊的聚氨酯结构确保了涂层在紫外线照射或高温环境下具有极佳的保色性，不易发黄。
  The specific urethane structure ensures the coating has excellent color retention and resists yellowing under UV exposure or high-temperature environments.

4 建议应用 Product Applications

- **UV 涂料 (UV Coatings)**
  用于各类塑料（如 *ABS*、*PC*）、金属及木材表面的高硬度罩光，特别适用于浅色或透明涂层，提供长效防护与保色效果。
  Used for high-hardness topcoats on plastics, metals, and wood surfaces, especially suitable for light-colored or transparent coatings, providing long-term protection and color retention.

- **UV 油墨与真空电镀 (UV Inks & Vacuum Plating)**
  作为主体树脂提升印刷表面的耐磨性及化学稳定性；在电镀工艺中用作底面漆以防止黄变并提升丰满度。
  Used as a main resin to enhance abrasion resistance and chemical stability; or as a primer/topcoat in plating to prevent yellowing.

5 常见问题解答 Q&A

Q: 为什么选择六官能团的 U-Cure 9390？ (Why choose hexafunctional U-Cure 9390?)

A: 其高官能度确保了涂膜能够形成极致致密的网状结构。此外，它兼顾了高硬度与优异的耐黄变性能，有效解决了高硬度树脂容易变色、脆裂的技术难点。
High functionality ensures an extremely dense network. It balances high hardness with excellent yellowing resistance, addressing the typical issues of discoloration and brittleness.

6 储存与安全 Storage and Safety

- **储存 (Storage)***:* 密封存于阴暗、通风环境，建议温度 *-10°C* 至 *35°C*。有效期 *12* 个月。
  Store in sealed containers in a dark, ventilated environment at -10°C to 35°C. Shelf life is 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 organisms. Wear personal protective equipment. Refer to SDS for details.

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