U-Cure 9341

高硬度耐黄变二官能聚氨酯丙烯酸酯

High-Hardness & Anti-Yellowing Difunctional UA 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 9341 是一款采用特殊分子架构设计的高性能聚氨酯丙烯酸酯树脂。固化后具备极高的玻璃化转变温度 *(110°C)*，在提供 $90D$ 极端表面硬度的同时，展现出卓越的抗紫外线老化及耐黄变性能。

U-Cure 9341 is a modified UA resin designed for extreme surface hardness (90D) and optical stability. With a high Tg of 110°C, it offers superior physical protection and exceptional UV 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)	8,000 – 15,000	ASTM D2196
固含量 Solid Content (%)	100%	GB/T 1725
官能度 Functionality	2	Theoretical
NCO 残存 NCO Content (%)	无 / None	FT-IR
绍氏硬度 Shore Hardness (D)	87D	ASTM D2240
拉伸强度 Tensile Strength (MPa)	45 MPa	ASTM D638
断裂伸长率 Elongation (%)	9%	ASTM D638

3　核心特性 Key Product Features

- **优异的耐候与耐黄变 (Superior Aging Resistance)**
  高键能结构确保涂层在长期紫外线或高温环境下保持透明清亮。
  High bond energy ensures long-term clarity and prevents yellowing under UV or heat.
- **高硬度与低收缩平衡 (High Hardness & Low Shrinkage)**
  提供类玻璃的表面质感，同时兼顾低体积收缩率，有效缓解固化内应力。
  Provides a glass-like texture with low volumetric shrinkage to alleviate internal stress.
- **光学透明与化学抗性 (Optical Clarity & Chemical Resistance)**
  固化膜透光率极佳，且对溶剂、酸碱具备优良的耐受性。
  Excellent light transmittance with superior resistance to solvents, acids, and bases.

4　建议应用 Product Applications

- **光学与电子防护 (Optical & Electronics)**
  屏幕保护贴、触摸屏盖板及高透、耐划伤的透明电子外壳涂层。
  Optical screen protectors and cover coatings requiring high clarity.

- **高性能美甲封层 (Premium Nail Top Coats)**
  专业级抗划伤、高亮不黄变封层的核心组分。
  A core component for professional anti-scratch and non-yellowing top coats.
- **高端塑胶与内饰 (Automotive & High-end Plastics)**
  汽车内饰及化妆品包装，提供长效漆面防护与保色效果。
  Long-term protection and color retention for luxury packaging and interiors.

5 常见问题解答 Q&A

Q: 如此高的硬度是否会影响其柔韧性？ (Does high hardness affect flexibility?)

A: 作为二官能团树脂，其分子链仍保留了必要的韧性平衡，可通过调节单体配比进一步优化应力。
The difunctional nature maintains a balance of toughness; flexibility can be further optimized by adjusting diluents.

Q: U-Cure 9341 是否可以作为常规二官能聚氨酯树脂使用？ (Can it be used as a regular difunctional UA?)

A: 在配方中不应将其视作普通二官，而应作为“功能性树脂”使用，主要用于提升体系的 *Tg*、硬度及耐黄变极限。
It should be used as a "functional resin" to enhance Tg, hardness, and aging limits, rather than a general-purpose component.

6 储存与安全 Storage and Safety

- **储存 (Storage)**: 避光密封存放于 *-10°C* 至 *35°C*。保质期 *12* 个月。
  Store in dark, dry conditions at -10 to 35°C for 12 months.
- **安全 (Safety)**: 避免接触皮肤眼睛，操作环境需通风。操作请佩戴个人防护装备，详见 *SDS*。
  Avoid contact with skin/eyes. Ensure ventilation. Wear personal protective equipment. Refer to SDS.

联系方式 Contact Information

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