

U-Cure 9306

聚氨酯丙烯酸酯 / Polyurethane Acrylate (PUA)

High-Performance Hexafunctional Resin / 六官能高性能树脂

技术资料表 Technical Data Sheet (TDS)

1 产品介绍 Product Introduction

U-Cure 9306为六官能聚氨酯丙烯酸酯树脂。该产品具有极高的交联密度，专为需要极高硬度、卓越耐磨性以及快速生产周期的工业光固化涂层而设计。其分子结构经优化，在保持高硬度的同时兼顾了良好的耐黄变性能。

U-Cure 9306 is a hexafunctional polyurethane acrylate resin. Designed for industrial UV-curable coatings requiring extreme hardness, superior abrasion resistance, and rapid production cycles. Its molecular structure is optimized to provide high crosslinking density while maintaining excellent non-yellowing properties.

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	澄清透明液体/Clear Liquid	Visual
粘度 Viscosity (cps @ 60°C)	600 - 1,300	ASTM D2196
固含量 Solid Content (%)	100%	GB/T 1725
官能度 Functionality	6	Theoretical
NCO 残存(%)	< 0.2	Titration
邵氏硬度 Shore Hardness	93D	ASTM D2240
拉伸强度 Tensile Strength	-	ASTM D638
断裂伸长率 Elongation	-	ASTM D638

3 核心特性 Key Product Features

• 极速固化 (Ultra-fast Curing)

高官能度确保了在低能量UV辐射下仍能实现表面及深层的快速干燥,显著提升生产效率。

High functionality ensures rapid surface and through-cure even under low UV energy.

• 卓越耐磨与抗刮性 (Excellent Abrasion & Scratch Resistance)

形成的漆膜极度坚韧,能够有效抵御物理划伤和长期磨损,延长成品使用寿命。

The resulting film is extremely tough, providing effective resistance to physical scratches.

• 优异耐候与耐黄变性 (Weatherability & Non-yellowing)

精选脂肪族结构,确保涂层在长期光照环境下仍能保持清晰透明,不易脆化或变色。

Aliphatic structure ensures clarity and prevents discoloration under long-term light exposure.

4 建议应用 Product Applications

- **光学薄膜 (Optical Films)**

用于显示器保护膜或各类功能性薄膜的硬化层。

Used for hardened layers of display protection films or other functional films.

- **塑胶硬质涂料 (Plastic Hard Coatings)**

适用于手机壳、化妆品包材及消费电子。

Suitable for mobile phone cases, cosmetic packaging, and consumer electronics.

- **真空电镀面漆 (Vacuum Metallization Topcoat)**

作为电镀层罩光面漆,提供极佳防护。

Used as a protective topcoat for vacuum metallization layers.

5 常见问题解答 Q&A

Q: U-Cure 9306是否可以用于户外产品? (Can U-Cure 9306 be used for outdoor products?)

A: 可以。由于其良好的耐候性和耐黄变特性,它非常适合需要长期暴露在光照环境下的户外电子产品或装饰件。

Yes. Its weatherability and non-yellowing properties make it ideal for outdoor applications exposed to light.

Q: U-Cure 9306 如何在保持高硬度的同时兼顾韧性? (How does it balance hardness and toughness?)

A: 其分子链中引入了柔性氨酯键片段,有效缓冲了固化收缩带来的内应力。漆膜在达到2H以上硬度的同时,仍具有优异的柔韧性,不易爆裂。

Flexible urethane segments in the chain buffer internal stress, allowing 2H+ hardness without cracking.

6 储存与安全 Storage and Safety

- **储存 (Storage):** 密封存放于 -10°C 至 35°C 的阴暗通风环境,保质期12个月。

Store sealed between -10°C and 35°C in a dark, ventilated area. Shelf life: 12 months.

- **安全 (Safety):** 刺激眼睛,对水生生物有毒。操作请佩戴个人防护装备,详见 SDS。

Eye irritant; toxic to aquatic life. Wear personal protective equipment. Refer to SDS for details.

联系方式 Contact Information

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