

U-Cure 9347

高模量三官能聚氨酯丙烯酸酯

High-Modulus 3-Functional Polyurethane Acrylate

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 9347 是一款专为极端物理性能要求设计的结构型三官能聚氨酯丙烯酸酯 (PUA)。该产品具有极高的交联密度和机械强度，能够在固化后形成极高硬度且具备出色尺寸稳定性的涂层，是要求高刚性和超强耐磨损材料的核心组分。

U-Cure 9347 is a structural 3-functional polyurethane acrylate (PUA) specifically designed for extreme physical performance requirements. It features high cross-linking density and mechanical strength, forming a cured film with exceptional hardness and dimensional stability.

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)	3,000 - 10,000	ASTM D2196
固含量 Solid Content (%)	100%	GB/T 1725
官能度 Functionality	3	Theoretical
NCO 残存 NCO Content (%)	< 0.2%	Internal Method
绍氏硬度 Shore Hardness	86D	ASTM D2240
拉伸强度 Tensile Strength	65 MPa	ASTM D638
断裂伸长率 Elongation	6%	ASTM D638

3 核心特性 Key Product Features

- 超高硬度与结构刚性 (Ultra-High Hardness & Structural Rigidity)**

固化膜具有极高的表面硬度和抗压强度，能承受高载荷而不产生永久变形。

The cured film provides superior surface hardness and compressive strength, capable of withstanding high loads.

- 优异的拉伸断裂强度 (Excellent Tensile Strength)**

分子链段高度紧密，提供极佳的抗拉拔力，有效防止涂层在应力作用下产生裂纹。

Highly dense molecular segments provide excellent tensile strength, preventing cracks under stress.

- 卓越抗开裂性 (Superior Crack Resistance)**

涂层致密且坚韧，能够有效抑制加工过程或温度交变引起的微裂纹扩展。

The dense and tough coating effectively inhibits micro-crack propagation caused by processing or thermal cycling.

4 建议应用 Product Applications

- **高耐磨光固化涂料 (High-Abrasion Energy Curable Coatings)**
用于电子产品外壳、工业地板或耐磨体系的顶涂。
Used as topcoats for electronic housings, industrial flooring, or wear-resistant systems.
- **结构型光固化粘合剂 (Structural Energy Curable Adhesives)**
适用于需要高剪切强度与低收缩率的精密粘接。
Suitable for precision bonding requiring high shear strength and low shrinkage.
- **硬化保护涂层 (Hard Protective Coatings)**
在塑料基材（如 PC/PMMA）表面形成超硬保护层。
Forms an ultra-hard protective layer on plastic substrates (PC/PMMA).

5 常见问题解答 Q&A

Q: 为什么 9347 的硬度如此高，却依然称其具有“加工性”？ (Why is 9347 both hard and processable?)

A: 9347 在具备 86D 级硬度和 65MPa 强度的同时，仍保留了约 6% 的伸长率，这种“刚中带柔”的特性使其在受力加工时不易碎裂。
9347 combines 86D hardness and 65MPa strength while retaining about 6% elongation, a "rigid yet flexible" nature that prevents shattering.

6 储存与安全 Storage and Safety

- **储存 (Storage):** 密封避光存放于 -10°C 至 35°C 环境。在此条件下，保质期至少为 12 个月。
Store in sealed, light-proof containers between -10°C and 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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