

U-Cure 9346

四官能团聚氨酯丙烯酸酯树脂

Tetra-functional Polyurethane Acrylate Resin

KAISTER

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 9346 是一款高效能四官能团聚氨酯丙烯酸酯树脂。其设计在光固化体系中追求极高的固化效率,旨在为涂层提供卓越的物理交联网络,特别适用于对表面耐磨性、抗刮伤性及柔韧性有综合性能要求的应用场景。

U-Cure 9346 is a high-performance tetra-functional polyurethane acrylate resin. Designed for maximum curing efficiency in UV systems, it aims to provide an exceptional physical cross-linking network, particularly for applications requiring a balance of abrasion resistance, scratch resistance, and flexibility.

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 (25°C)
粘度 Viscosity (cps @ 60°C)	3,000 - 6,000	ASTM D2196
固含量 Solid Content (%)	100%	GB/T 1725
官能度 Functionality	4	Theoretical
NCO 残存 NCO Content (%)	< 0.2%	Titration
绍氏硬度 Shore Hardness	68D	ASTM D2240
拉伸强度 Tensile Strength	21 MPa	ASTM D638
断裂伸长率 Elongation	55%	ASTM D638

3 核心特性 Key Product Features

• 高效固化能力 (High-Efficiency Curing)

具备优异的感光活性,支持高速流水线生产,能在极短时间内完成交联反应。

Possesses excellent photo-activity, supporting rapid cross-linking reactions for high-speed production.

• 优异的耐磨抗刮性 (Excellent Wear & Scratch Resistance)

四官能团结构提供了密集的分子交联网络,显著增强了固化涂层的表面硬度。

The tetra-functional structure provides a dense network, significantly enhancing surface hardness.

• 平衡的柔韧性与附着力 (Balanced Flexibility & Adhesion)

在保持较高硬度的前提下,赋予涂层良好的延展性,改善对薄膜的附着性能。

Maintains hardness while imparting ductility, improving adhesion to various functional films.

4 建议应用 Product Applications

- 功能性软质涂层 (Functional Soft Coatings)**
用于塑料外壳、皮革及软性基材,提供耐磨损且防裂的表面保护层。
Used for plastic housings, leather, and soft substrates to provide a wear-resistant and crack-proof protective layer.
- UV 甲油胶 (UV Nail Gels)**
作为一步胶、三合一胶配方核心,提供快速干率与高光泽。
Core component for one-step or 3-in-1 nail gels, offering fast drying and high gloss.
- 光学薄膜处理 (Optical Film Treatment)**
在要求高透明度和抗刮伤性能的薄膜涂层配方中作为关键树脂。
Used as a key resin in film coating formulations requiring high transparency and scratch resistance.

5 系列产品对比与选型 Product Selection Guide

为了协助您选择最合适的型号,下表展示了系列产品的性能定位梯度:

产品型号 Model	特性定位 Characteristic	主要优势 Key Advantages
U-Cure 9319	高端柔韧型 / Ultra-Flexible	极佳的延伸率与耐折叠性能
U-Cure 9339	通用平衡型 / Balanced	平衡的柔韧性与 LED 快速固化
U-Cure 9348	强韧增硬型 / Tough & Hard	兼具韧性与优秀的表面干性
U-Cure 9346	高效型 / High Performance	高交联密度, 优异的抗刮性能
U-Cure 9336	极速固化型 / Ultra-Fast Curing	极高反应活性, 适合极速作业

性能趋势图 Performance Trends

- 柔韧性 (Flexibility): 9319 > 9339 > 9348 > 9346 > 9336
- 固化速度 (Curing Speed): 9319 < 9339 < 9348 < 9346 < 9336

6 常见问题解答 Q&A

Q: 该树脂是否含有溶剂? (Does this resin contain solvents?)
A: U-Cure 9346 为 100% 固含量树脂,不添加任何挥发性有机溶剂,符合环保要求。
U-Cure 9346 is a 100% solid content resin with no added volatile organic solvents.

7 储存与安全 Storage and Safety

- 储存 (Storage):** 存放在密封容器中,避光置于 -10°C 至 35°C 环境下。有效期 12 个月。
Store in sealed containers, protected from light, at -10°C to 35°C. Shelf life is 12 months.
- 安全 (Safety):** 对眼睛有刺激性,使用前请仔细参阅 SDS。操作请佩戴个人防护装备。
Irritating to eyes. Read SDS carefully before use. Wear personal protective equipment.

联系方式 Contact Information

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