

U-Cure 9318

三官能团聚氨酯丙烯酸酯 / Trifunctional Urethane Acrylate

Trifunctional Urethane Acrylate 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 9318 是一款高性能三官能团聚氨酯丙烯酸酯树脂。其分子设计专注于提供极高的交联密度与物理韧性，赋予涂层卓越的表面硬度与机械保护性能。该产品在各类真空电镀体系中表现优异，特别是在作为面漆使用时，能显著提升镀层的耐磨损能力。

U-Cure 9318 is a high-performance trifunctional urethane acrylate resin. Its molecular design focuses on providing high cross-linking density and physical toughness, imparting superior surface hardness and mechanical protection. It performs excellently in vacuum plating systems, significantly enhancing the abrasion resistance when used as a topcoat.

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)	15,000 - 30,000	ASTM D2196
固含量 Solid Content (%)	100%	GB/T 1725
官能度 Functionality	3	Theoretical
NCO 残存 (%)	< 0.2%	-
邵氏硬度 Shore Hardness	84D	ASTM D2240
拉伸强度 Tensile Strength	70 MPa	ASTM D638
断裂伸长率 Elongation	5%	ASTM D638

3 核心特性 Key Product Features

卓越耐磨性 (Superior Abrasion Resistance)

具备极佳的表面光滑度与交联强度，显著提升漆膜的耐磨擦与抗刮伤能力。

Provides excellent surface smoothness and cross-linking strength, significantly improving the abrasion and scratch resistance of the coating film.

优异的漆膜坚韧性 (Excellent Film Toughness)

在保持高硬度的同时兼顾韧性，防止面漆在高负载环境下发生开裂。

Maintains high hardness while ensuring toughness, preventing topcoat cracking under heavy-load environments.

耐高温与化学稳定性 (High Temp & Chemical Stability)

耐高温性能突出，能够承受电镀工艺中的热挑战，并具备优异的耐化学介质性能。

Outstanding high-temperature resistance and chemical stability, capable of enduring thermal challenges in plating processes.

4 建议应用 Product Applications

- **真空电镀面漆 (Vacuum Plating Topcoat)**

专用于真空电镀工艺的保护面漆，为电镀层提供强效的耐磨保护与高光泽外观。

Specially designed as a protective topcoat for vacuum plating processes, providing strong abrasion protection and a high-gloss appearance.

- **高耐磨塑胶涂料 (High Wear-Resistant Plastic Coatings)**

适用于手机、穿戴设备等对表面耐磨性要求严苛的消费电子产品。

Suitable for consumer electronics like smartphones and wearables that require stringent surface wear resistance.

5 常见问题解答 Q&A

Q: 如何通过 U-Cure 9318 提升面漆的耐磨次数? (How to increase abrasion cycles using U-Cure 9318?)

A: U-Cure 9318 的三官能结构提供了致密的交联网络，建议通过调整引发剂比例以确保完全固化，从而达到最佳的物理耐磨指标。

The trifunctional structure of U-Cure 9318 provides a dense cross-linking network. It is recommended to optimize the initiator ratio to ensure full curing for the best abrasion resistance.

6 储存与安全 Storage and Safety

- **储存 (Storage):** 建议存放在密封容器中，置于阴暗环境（温度控制在 -10°C 至 35°C ）。保质期 12 个月。

Store in sealed containers in a dark environment (temp: -10°C to 35°C). Shelf life: 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，详见安全数据表 (SDS)。

Irritating to eyes. Wear personal protective equipment. Refer to SDS for detailed safety guidance.

联系方式 Contact Information

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