

# U-Cure 9301

聚氨酯丙烯酸酯 / Polyurethane Acrylate  
Difunctional Polyurethane 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 9301 是一款二官能团聚氨酯丙烯酸酯树脂。该产品旨在平衡高附着力与优异的机械强度。其分子结构赋予了涂层极佳的坚韧性与柔韧性，同时保持了较快的反应速度，是工业精密涂料与特种油墨体系中的理想选择。

U-Cure 9301 is a difunctional polyurethane acrylate resin. It features excellent adhesion, superior flexibility, rapid curing speed, and high strength, making it an ideal choice for industrial precision coatings and special ink systems.

### 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)	60,000 - 90,000	ASTM D2196
固含量 Solid Content (%)	100%	GB/T 1725
官能度 Functionality	2	Theoretical
NCO 残存 (%)	< 0.2	Titration
绍氏硬度 Shore Hardness	65D	ASTM D2240
拉伸强度 Tensile Strength	16 MPa	ASTM D638
断裂伸长率 Elongation	73%	ASTM D638

### 3 核心特性 Key Product Features

- 优异的附着力 (Superior Adhesion)**  
在金属及多种难附着塑胶基材上表现出卓越的锚固力。  
*Exhibits excellent anchoring force on metals and various difficult-to-adhere plastic substrates.*
- 坚韧性与柔韧性平衡 (Toughness & Flexibility Balance)**  
通过精确的链段结构设计，使固化膜在具备高拉伸强度的同时，展现出卓越的弯曲柔韧性与抗冲击性，能够承受大幅度的形变而不产生微裂纹。  
*The cured film exhibits excellent bending flexibility and impact resistance alongside high tensile strength, capable of withstanding large deformations without micro-cracking.*
- 高固化速度 (High Curing Speed)**  
具有极高的光感应灵敏度，能够在极低能量下完全固化，有效提升生产效率。  
*High photosensitivity, capable of full curing at very low energy levels, effectively improving production efficiency.*

## 4 建议应用 Product Applications

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- **金属及难附着基材涂料 (Metal & Difficult Substrate Coatings)**  
用于电子电器部件、汽车内饰件的金属保护漆。  
*Used for metal protective coatings for electronic parts and automotive interiors.*
- **软质涂层及油墨 (Soft-touch Coatings & Inks)**  
适用于需要高柔韧性和耐弯折性的印刷油墨。  
*Suitable for printing inks requiring high flexibility and folding resistance.*
- **胶粘剂 (Adhesives)**  
作为 UV 结构胶的主体树脂，提供高强度的韧性粘接。  
*Serves as a base resin for UV structural adhesives, providing high-strength tough bonding.*

## 5 常见问题解答 Q&A

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**Q:** U-Cure 9301 如何改善涂层的冷热循环性能? (How to improve thermal cycling?)

**A:** 该树脂通过其二官能团的长链柔性骨架，能够有效吸收冷热交替时产生的内应力，防止涂层在温差剧烈变化时产生龟裂或脱落。

*Its flexible long-chain backbone absorbs internal stress during thermal cycling, preventing cracking or peeling.*

## 6 储存与安全 Storage and Safety

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- **储存 (Storage):** 应存放于密封容器中，避光置于  $-10^{\circ}\text{C}$  至  $35^{\circ}\text{C}$  的阴暗环境中。保质期至少 12 个月。  
*Store in sealed containers, protected from light in a dark environment at  $-10^{\circ}\text{C}$  to  $35^{\circ}\text{C}$ . Shelf life is at least 12 months.*
- **安全 (Safety):** 对眼睛有刺激性；对水生生物有毒。操作请佩戴个人防护装备，详见 SDS。  
*Irritating to eyes; toxic to aquatic life. Wear personal protective equipment. Refer to SDS for details.*

## 联系方式 Contact Information

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