

# U-Cure 9530

## 三官能团脂肪族聚氨酯丙烯酸树脂

Trifunctional Aliphatic Urethane Acrylate Oligomer

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 9530 是一款高性能三官能团脂肪族聚氨酯丙烯酸酯树脂。该产品旨在提供卓越的力学强度，固化膜具有极高的表面硬度和机械刚性，同时兼顾优异的抗张强度。得益于其分子结构中的韧性基因，该树脂在保持高强度的同时具备良好的应力缓冲能力，可有效防止涂层脆裂。

U-Cure 9530 is a high-performance trifunctional aliphatic urethane acrylate. It is engineered to provide superior mechanical strength, featuring high surface hardness, rigidity, and excellent tensile properties. The molecular design balances strength with toughness, offering stress buffering to prevent brittleness.

## 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) | 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                 | Internal Method |
| 邵氏硬度 Shore Hardness       | 83D                   | ASTM D2240      |
| 拉伸强度 Tensile Strength     | 43 MPa                | ASTM D638       |
| 断裂伸长率 Elongation          | 10%                   | ASTM D638       |

## 3 核心特性 Key Product Features

- 高强韧平衡 (High Strength & Toughness Balance)**  
兼具高等级的表面硬度与显著的抗张强度，固化膜坚硬而不失柔韧。  
Combines high surface hardness with significant tensile strength for a hard yet resilient film.
- 卓越的机械稳定性 (Superior Mechanical Stability)**  
在受到拉伸或冲击时表现出良好的尺寸稳定性，具有适度的延伸缓冲能力。  
Exhibits excellent dimensional stability and moderate elongation buffering under stress.
- 极佳的耐候性 (Excellent Weathering Resistance)**  
纯脂肪族结构提供长效的抗紫外线黄变性能，确保物理性能长期稳定。  
Aliphatic backbone ensures long-term UV resistance and stable physical properties.

## 4 建议应用 Product Applications

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- **高性能甲油胶 (High-Performance Nail Polish)**  
提供极致的表面耐刮擦性与持久附着力。  
*Provides extreme scratch resistance and durability for nail applications.*
- **UV 结构胶粘剂 (UV Structural Adhesives)**  
在需要高内聚强度和一定延展性的场景中提供可靠的结构连接。  
*Provides reliable structural bonding requiring high cohesive strength.*
- **工程塑胶涂料 (Engineering Plastic Coatings)**  
为 3C 电子及汽车内饰件提供高硬度、抗冲击的保护层。  
*Provides hard, impact-resistant protection for electronics and automotive interiors.*

## 5 常见问题解答 Q&A

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**Q:** U-Cure 9530 相比普通三官能树脂有何力学优势? (Mechanical advantages over regular resins?)

**A:** U-Cure 9530 不仅提供了极高的硬度等级，更提升了抗张强度和断裂伸长率。这意味着它在保护基材时，既能抵抗划伤，又能承受形变而不开裂。

*It offers improved tensile strength and elongation, resisting scratches while enduring deformation without cracking.*

## 6 储存与安全 Storage and Safety

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- **储存 (Storage):** 应存放在密封容器中，避光置于 -10 至 35°C 环境。保质期至少 12 个月。  
*Store in sealed containers, protected from light at -10 to 35°C. Shelf life  $\geq$  12 months.*
- **安全 (Safety):** 对眼睛有刺激性；对水生生物有毒。使用前请仔细阅读 SDS。  
*Irritating to eyes; toxic to aquatic life. Read SDS carefully before use.*

## 联系方式 Contact Information

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