U-Cure 9303

聚氨酯丙烯酸酯 / Polyurethane Acrylate

High Molecular Weight 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 9303 是一款大分子量二官能团聚氨酯丙烯酸酯树脂。作为 *9300* 系列的优化型号，它在保持了优异柔韧性、耐黄变性和附着力的基础上，显著降低了粘度并提升了反应速度，更适应高效自动化的涂装工艺需求。

U-Cure 9303 is a high molecular weight, difunctional polyurethane acrylate resin. It offers excellent flexibility, yellowing resistance, and adhesion. Compared to U-Cure 9300, it features lower viscosity and faster reaction speed.

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)	35,000 - 45,000	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	55A	ASTM D2240
拉伸强度 Tensile Strength	2 MPa	ASTM D638
断裂伸长率 Elongation	180%	ASTM D638

3　核心特性 Key Product Features

- **极佳的柔韧性 (Excellent Flexibility)**
  大分子量线性结构赋予涂层极高的延伸率，能够适应基材的各种形变。
  High molecular weight linear structure provides exceptional elongation.
- **优异的上镀性 (Superior Plateability)**
  在真空电镀工艺中，对各种金属镀材具有极佳的润湿性和结合力。
  Excellent wetting and bonding strength to various vacuum metallization materials.
- **耐水煮性能优异 (Excellent Boiling Water Resistance)**
  固化膜致密且疏水性强，在严苛的水煮测试后仍能保持良好的附着力。
  The cured film remains highly adhesive even after rigorous boiling water tests.
- **反应速度快 (Fast Curing Speed)**
  相比 *U-Cure 9300*，具有更高效的光固化响应。
  Faster photo-curing response compared to U-Cure 9300.

4 建议应用 Product Applications

- **真空电镀底漆 (Vacuum Metallization Basecoat)**
  作为底漆提供卓越的流平性和层间附着力。
  Provides superior leveling and inter-layer adhesion as a basecoat.
- **软质涂层 (Soft Coatings)**
  应用于皮革、软质塑料等需要高柔韧性的表面装饰。
  Used for surface decoration on leather and soft plastics.
- **胶粘剂 (Adhesives)**
  适用于对柔韧性和耐候性有特殊要求的 *UV* 胶水体系。
  Suitable for UV adhesive systems with specific flexibility requirements.

5 常见问题解答 Q&A

Q: 树脂粘度过高，如何调整施工性? (How to handle high viscosity?)

A: 树脂粘度较高时，可以通过 $50-80°C$ 加温烘烤降低其稠度，之后根据需要用单体或有机溶剂进行稀释后使用。
The resin can be heated at $50-80°C$ to reduce consistency, then diluted with monomers or solvents.

Q: 9303 与 9300 的核心区别是什么? (9303 vs. 9300?)

A: *9303* 在保留 *9300* 优异柔韧性的前提下，优化了操作性（粘度更低）和生产效率（固化更快）。
9303 optimizes workability and curing efficiency while maintaining 9300's flexibility.

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，保质期 *12* 个月。
  Stored in sealed containers away from light at $-10°C$ to $35°C$, shelf life 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

昆山卡斯特高分子材料有限公司　Kunshan Kaster Polymer Co., Ltd.
地址：江苏省昆山市玉山镇祖冲之路 1666 号清华科技园
Tel: 0512-50137234　Web: www.kasterchem.com