U-Cure 9331

聚氨酯丙烯酸酯 / Polyurethane Acrylate

Bifunctional 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 9331 是一款高分子量、二官能团的聚氨酯丙烯酸酯树脂。该产品具有卓越的柔韧性和高延伸率，是高性能紫外光固化（*UV*）涂料的理想选择。
U-Cure 9331 is a high molecular weight, bifunctional urethane acrylate oligomer. It offers exceptional flexibility and high elongation, making it ideal for high-performance UV-curable coatings.

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)	30,000 - 80,000	ASTM D2196
固含量 Solid Content (%)	100%	GB/T 1725
官能度 Functionality	2	Theoretical
NCO 残存 Residual NCO (%)	< 0.2%	Titration
绍氏硬度 Shore Hardness	63A	ASTM D2240
拉伸强度 Tensile Strength	2 MPa	ASTM D638
断裂伸长率 Elongation at Break	68%	ASTM D638

3　核心特性 Key Product Features

- **优异的弹性和高延伸率 (High Elasticity and Elongation)**
  分子量高达 *14,000*，提供极佳的拉伸强度和回弹力。
  Molecular weight of 14,000 provides excellent tensile strength and resilience.
- **卓越的低温韧性 (Excellent Low-Temperature Toughness)**
  在低温条件下仍能保持优异的机械性能，防止涂层脆裂。
  Maintains outstanding mechanical properties at low temperatures to prevent coating embrittlement.

4　建议应用 Product Applications

- **真空电镀底漆 (Vacuum Metallization Primer)**
  利用其大分子量特性，提供卓越的基材润湿与填充性，确保电镀层极佳的平整度与稳定性。
  Utilizing its high molecular weight characteristics, it provides excellent substrate wetting and filling properties, ensuring superior flatness and stability for metallized layers.
- **高性能 UV 涂料 (High-Performance UV Coatings)**
  适用于需要极高韧性的各类基材表面保护涂料。
  Suitable for various substrate surface protection coatings requiring extremely high toughness.

5 常见问题解答 Q&A

Q: 为什么 9331 在低温下表现更好？ (Why does 9331 perform better at low temperatures?)

A: 由于其极高的分子量和聚氨酯链段的设计，其玻璃化转变温度较低，在严寒环境下仍能保持柔韧。
Due to its high molecular weight and urethane segment design, it has a low Tg, maintaining flexibility in cold environments.

Q: 树脂粘度较大，如何进行稀释使用？ (How to dilute the resin?)

A: 建议在 *50-80°C* 环境下烘烤预热，待流动性增强后，使用有机溶剂或活性单体进行稀释。
Recommended to preheat at 50-80°C to improve fluidity, then dilute with solvents or monomers.

6 储存与安全 Storage and Safety

- **储存 (Storage)***:* 应存放在密封容器中，置于阴暗环境（*-10*至*35°C*）。有效期为 *12* 个月。
  Store in sealed containers in a dark place (-10 to 35°C). Shelf life is 12 months.
- **包装 (Packaging)***: 200kg/*桶。
  200kg per drum.
- **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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