U-Cure 9314

四官能团聚氨酯丙烯酸树脂 / Aliphatic Urethane Acrylate

4-Functional 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 9314 为四官能团聚氨酯丙烯酯树脂。该产品专门设计用于提供极佳的柔韧性与物理弹性，不仅具有高延伸率，更在成膜后展现出卓越的坚韧性，是高性能弹性涂料中平衡强韧度与触感反馈的核心原材料。

U-Cure 9314 is a 4-functional urethane acrylate resin. It is specifically designed to provide superior flexibility and physical elasticity, featuring high elongation. It exhibits excellent toughness after film formation and serves as a core material for high-performance elastic coatings that balance structural strength with tactile feedback.

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 - 20,000	ASTM D2196
固含量 Solid Content (%)	100%	GB/T 1725
官能度 Functionality	4	Theoretical
NCO 残存 NCO Content (%)	＜ 0.2%	Internal Method
绍氏硬度 Shore Hardness	82A	ASTM D2240
拉伸强度 Tensile Strength	6 MPa	ASTM D638
断裂伸长率 Elongation	52%	ASTM D638

3　核心特性 Key Product Features

- **高延伸率 (High Elongation)**
  具有出色的拉伸性能，能够适应基材的剧烈形变而不开裂。
  Features outstanding tensile performance, capable of adapting to severe substrate deformation without cracking.
- **优异坚韧性 (Excellent Toughness)**
  具备极佳的抗撕裂强度和耐疲劳性能，漆膜坚韧，不易受外力破坏。
  Possesses excellent tear strength and fatigue resistance; the coating film is tough and resistant to external damage.
- **弹性肉感手感 (Elastic & Fleshy Touch)**
  固化后漆膜具有明显的厚实肉感与弹性反馈，触感饱满且富有结构支撑感。
  Delivers a distinct fleshy feel and elastic feedback after curing, providing a full-bodied touch with structural support.

4 建议应用 Product Applications

- **UV 高坚韧性弹性涂料 (UV High Toughness Elastic Coatings)**
  用于承受频繁接触或机械摩擦的电子产品外壳和汽车内饰，提供持久的保护。
  Used for electronic device housings and automotive interiors subject to frequent contact or mechanical friction, providing long-lasting protection.
- **强韧性软质涂料 (Tough Soft Coatings)**
  用于皮革、软胶、薄膜等需要高动态抗开裂及优异物理机械性能的基材。
  Applied on leather, soft rubber, and films requiring high dynamic crack resistance and superior physical mechanical properties.

5 常见问题解答 Q&A

Q: U-Cure 9314 的“坚韧性”在实际应用中如何体现？ (How is the ”toughness” of U-Cure 9314 reflected in practical applications?)

A: 该树脂通过特殊的聚氨酯链段设计，在保持极高弹性的同时，赋予涂层极强的抗撕裂力和耐刮擦性能，使其在受压或弯折后不仅能回弹，更能保持漆膜的完整性。
Through special polyurethane segment design, this resin grants the coating strong tear and scratch resistance while maintaining high elasticity, ensuring the film's integrity after compression or bending.

6 储存与安全 Storage and Safety

- **储存 (Storage)***: 存放在密封容器中，置于 -10 至 35°C 的阴暗干燥环境。有效期 12 个月。*
  Store in sealed containers in a dark, dry environment between -10 to 35°C. Shelf life is 12 months.
- **包装 (Packaging)***: 标准包装为 200kg/桶。*
  Standard packaging is 200kg/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 and toxic to aquatic organisms. Wear personal protective equipment. Refer to SDS for details.

联系方式 Contact Information

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