

U-Cure 9300

聚氨酯丙烯酸酯 / Polyurethane Acrylate

High Molecular Weight Difunctional Aliphatic Polyurethane Acrylate

技术资料表 Technical Data Sheet (TDS)

1 产品介绍 Product Introduction

U-Cure 9300 是一款脂肪族、大分子量、二官能团的聚氨酯丙烯酸酯树脂。该树脂分子链设计中引入了特殊的长链结构，旨在赋予涂层极佳的耐黄变性、极高的柔韧性和卓越的延伸率。本产品是针对高性能弹性涂料与精密胶粘剂体系的核心组分。

U-Cure 9300 is an aliphatic, high molecular weight, difunctional polyurethane acrylate engineered with long-chain segments for exceptional yellowing resistance and extreme flexibility. It is a core component for high-performance elastic coatings and precision adhesive systems.

2 核心特性 Key Product Features

• 极致的柔韧性与断裂伸长率 (Extreme Flexibility & Elongation)

特殊的大分子线性骨架赋予其卓越的抗拉伸性能与回弹性，可承受剧烈的基材形变而不产生脆裂、起皱或脱层，为皮革、软胶等柔性基材提供长效物理保护。

The specialized linear macro-molecular backbone delivers exceptional tensile strength and resilience, accommodating severe substrate deformation without cracking, wrinkling, or delamination for long-term protection on flexible substrates.

• 优异的低温耐受性与动态抗冲击强度 (Low-temp Resilience & Dynamic Impact Resistance)

具备极低的玻璃化转变温度，确保涂层在 -40°C 以下的极寒环境中仍能保持理想的弹性和能量吸收能力，有效防止漆膜冷脆破损。

Featuring an ultra-low T_g , the coating maintains ideal elasticity and energy absorption capacity even in extreme environments below -40°C , effectively preventing film failure due to cold embrittlement.

• 卓越的耐黄变性 (Non-yellowing)

纯脂肪族结构确保长期 UV 照射环境下依然保持清晰透明，不发生黄变。

Aliphatic structure ensures long-term clarity and non-yellowing under UV exposure.

3 物理特性 Physical 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
色数 Color (Gardner)	< 1	ASTM D1544
粘度 Viscosity (cps @ 60°C)	60,000 - 95,000	ASTM D2196
官能度 Functionality	2	Theoretical
固含量 Solid Content (%)	100%	GB/T 1725
NCO 残存 (%)	< 0.2	Titration

4 建议应用 Product Applications

- **真空电镀底漆 (Vacuum Metallization Basecoat)**

独特的大分子结构，消除注塑纹路，并为电镀层提供强韧锚固点。

Unique high molecular weight structure eliminates molding marks and provides strong anchorage for metal layers.

- **软质触感涂料 (Soft-touch / Elastic Coatings)**

应用于皮革、硅橡胶、TPU 等软质基材，提供优异的柔韧性与耐弯折性能。

Used on leather, silicone rubber, and TPU for excellent flexibility and bending resistance.

5 常见问题解答 Q&A

Q: 如何改善其高粘度带来的施工困难? (How to improve workability?)

A: 建议施工前在 50 – 80°C 下预热。稀释可配合 IBOA 或 TPGDA 等单体，亦可加入常用有机溶剂。
Preheat to 50 – 80°C. Dilute with monomers or solvents as required.

Q: 该产品能否用于户外长期暴露? (For outdoor use?)

A: 可以。脂肪族结构具有天然耐紫外线性能，不会发生严重光降解。
Yes, aliphatic structure provides inherent UV resistance.

Q: U-Cure 9300 在胶粘剂配方中主要解决什么问题? (Applications in adhesives?)

A: 凭借其独特的大分子结构，它能显著降低胶层的内应力，防止在温度剧烈波动时产生脱胶或冷脆断裂。

With unique high MW structure, it minimizes internal stress in adhesive layers, preventing debonding or brittle failure during thermal cycling.

6 储存与安全 Storage and Safety

- **储存 (Storage):** 密封避光存放于 -10°C 至 35°C。保质期 12 个月。

Store in sealed, light-proof containers at -10°C to 35°C. Shelf life: 12 months.

- **安全 (Safety):** 本品对眼睛有刺激性。操作请佩戴个人防护装备，详见 SDS。

Irritating to eyes. Wear personal protective equipment. Refer to SDS for details.

联系方式 Contact Information

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