

U-Cure 9542

二官能团聚氨酯丙烯酸酯 / Difunctional Polyurethane Acrylate

低模量高柔韧性 PUA / Low Modulus & High Flexibility PUA

技术资料表 Technical Data Sheet (TDS)

1 产品介绍 Product Introduction

U-Cure 9542 是一款二官能团聚氨酯丙烯酸酯树脂。该产品具有典型的低模量和高柔韧性，极低的玻璃化转变温度使其在宽温范围内保持优异的弹性。其良好的粘结力和抗油性，使其成为高性能 UV 压敏胶及柔性电子涂层的理想选择。

U-Cure 9542 is a difunctional polyurethane acrylate resin characterized by low modulus and high flexibility. Its extremely low T_g ensures excellent elasticity over a wide temperature range, making it ideal for high-performance UV PSAs and flexible electronic 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	1.5	Theoretical
NCO 残存 NCO Content (%)	< 0.2	Internal Method
绍氏硬度 Shore Hardness	17A	ASTM D2240
拉伸强度 Tensile Strength (MPa)	0.6	ASTM D638
断裂伸长率 Elongation (%)	235	ASTM D638

3 核心特性 Key Product Features

• 低模量与高柔韧性 (Low Modulus & High Flexibility)

材料表现出极低的应力水平和极佳的缓冲性能，能够有效吸收外界机械冲击。

Exhibits very low stress levels and excellent cushioning, effectively absorbing mechanical impacts.

• 超高延伸率 (Ultra-high Elongation)

玻璃化温度 T_g 为 -60°C ，提供优异的拉伸能力，适应基材的形变。

With a T_g of -60°C , it provides superior stretchability to accommodate substrate deformation.

• 持久粘结力 (Durable Adhesion)

在各种金属基材和塑料表面表现出卓越的持粘力。

Demonstrates outstanding persistent adhesion on various metal and plastic surfaces.

4 建议应用 Product Applications

- **UV 压敏胶 (UV Pressure Sensitive Adhesives)**

适用于对柔韧性和初粘力要求极高的电子胶带和保护膜。

Suitable for electronic tapes and protective films requiring high flexibility and initial tack.

- **UV 金属涂料 (UV Metal Coatings)**

为金属涂层提供卓越的抗弯折能力。

Provides exceptional bending resistance for metal coatings.

- **柔性电子 (Flexible Electronics)**

作为柔性显示屏或电路的保护涂层。

Used as a protective coating for flexible displays or circuits.

5 常见问题解答 Q&A

Q: 该产品如何实现低模量特性? (How to achieve low modulus?)

A: 通过特殊的分子链段设计, 使其在固化后具有极高的内部分子运动能力, 从而在受力时保持极低的弹性模量。

Through special molecular segment design, it maintains high segmental mobility after curing, resulting in a very low elastic modulus.

6 储存与安全 Storage and Safety

- **储存 (Storage):** 应该存放合适的密封容器中, 并置于温度在 -10°C 至 35°C 的阴暗环境中储存。保质期至少 12 个月。

Store in suitable sealed containers in a dark environment between -10°C to 35°C . Shelf life is at least 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 and 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: 江苏省昆山市祖冲之南路 1666 号清华科技园 1 号

Tel: 0512-50137234 Web: www.kasterchem.com