

**PRELIMINARY
DATA SHEET****SECURE CP-7244**

urethane based ultraviolet cure adhesive
high strength
excellent clarity

fotopolymer
speciality adhesives

PRODUCT DESCRIPTION

FOTOPOLYMER SECURE Customised Product CP-7244 is a single component, modified urethane based adhesive with excellent adhesion on various substrates as glass, metals, plastics and ceramics when cured upon exposure to ultraviolet light and heat. **SECURE CP-7244** cured with excellent optical clarity that remains stable even under repeated ultraviolet or thermal exposure. **SECURE CP-7244**'s versatility permits the curing of adhesives at areas are shaded from ultraviolet exposure.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Base	Urethane
Appearance	Clear self levelling fluorescent liquid
Viscosity @ 25°C	200-300
Solids content, %	100
Specific gravity	1.10-1.15
Flash point, °C	>200
Vapour Pressure @ 20°C, mmHg	<0.25
Odour	Mild

TYPICAL CURING PERFORMANCE**UV CURE**

SECURE CP-7244 cures in 10-30 seconds to form a tough resilient bond in seconds upon exposure to a UV light with a 365 nanometre wavelength. Cure speed by UV is a function of UV light source, UV intensity, and bondline thickness.

Recommended Curing Condition

Type of radiation	UV-A
Energy, mJ/cm ²	2,500

HEAT CURE

Heat can be used to effect or accelerate curing in shadowed areas not reached by the ultraviolet light. Typical heat cure conditions consist of heating and maintaining bondline at a temperature given below for the corresponding time specified. Optimum conditions for heat cure should be determined on the actual assemblies.

Recommended Curing Condition

Bondline temperature, °C	125
Heating duration, minutes	5.0

TYPICAL PROPERTIES OF CURED MATERIAL**PHYSICAL PROPERTIES**

Appearance	Clear fluorescent polymer
Hardness, Shore D	75
Shrinkage, %	<1.0
Refractive index, n _D ²⁰	1.47
Tensile strength @ break, MPa (PSI)	24.1 (3,500)
Modulus, MPa (PSI)	827.4 (120,000)

PERFORMANCE PROPERTIES

Shear strength (Glass/Steel), MPa (PSI)	6.9 (1,000)
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THERMAL PROPERTIES

Glass transition temperature (T _g), °C	40
Coefficient of thermal expansion (CTE), ppm/°C	50
Thermal conductivity, mW/K	0.75
Temperature range, °C	-40 to 120

HANDLING

This product is UV sensitive. Exposure to daylight, UV light and artificial lighting should be kept to a minimum during storage and handling. Product should be dispensed from applicators with black feed lines. For best performance bond surfaces should be clean and free from grease. UV cure rate is dependent on lamp intensity, distance from light source, depth of cure needed or bondline gap and light transmittance of the substrate through which the radiation must pass.

Excess adhesive can be wiped away with organic solvent. Bonds should be allowed to cool before subjecting to any service loads.

For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

STORAGE

Product shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8°C to 28°C unless otherwise labelled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container.

CAUTION

- 1) Exposure to short wave ultraviolet light can cause a burning of the skin and eyes. Care should be taken to avoid exposure of the operator to direct or reflected radiation. User should wear eye protection.
- 2) Avoid prolonged breathing of fumes. Use in well ventilated rooms.
- 3) The uncured resin may irritate skin and eyes for sensitive users. Minimize skin contact. In case of eye contact, flush with water for at least 15 minutes and seek medical attention. In case of skin contact, wash with soap and water.

FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.

The data contained herein may be reported as a typical value and/or range. Values based on actual test data are verified on periodic basis. These suggestions and data are based on information we believe to be reliable and accurate, but no guarantee of their accuracy is made. HERNON ASIA PTE LTD. shall not be liable for any damage, loss or injury, direct or consequential arising out of the use or the inability to use the product. In every case, we urge and recommend that purchasers, before using any product in full scale production, make their own tests to determine whether the product is of satisfactory quality and suitability for their operations, and the user assumes all risk and liability whatsoever, in connection therewith.

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