

Technical Data Sheet

Ultrabond[®] 74542

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Product Description

Hernon[®] Ultrabond[®] 74542 is a one component adhesive, which cures when exposed to ultraviolet radiation and/or visible light of sufficient intensity.

Typical Applications

Ultrabond[®] 74542 is primarily used for bonding rigid and flexible PVC to polycarbonate where large gap filling capabilities (0.25mm) and a flexible joint are desired. Its flexibility enhances the load bearing and shock absorbing characteristics of the bond area. It has also shown excellent adhesion to a wide variety of substrates including glass, many plastics and most metals.

Properties Of Uncured Material

Property	Value
Chemical Type	Acrylated Urethane
Appearance	Pale, yellow liquid
Specific Gravity @ 25°C	1.23
Viscosity @ 25°C, cP	200 - 500
Flash Point	See MSDS

Typical Curing Performance

Ultrabond[®] 74542 can be cured through irradiation with ultraviolet and/or visible light of sufficient intensity. To obtain full cure on surfaces exposed to air, the intensity of energy at 260 nm is particularly important. The cure rate and ultimate depth of cure will depend on light intensity, the spectral distribution of the light source, the exposure time and the light transmittance of the substrates.

Fixture Time

Substrate	Fixture Time, seconds
Polycarbonate Blocks	≤ 5

Typical Cured Performance

Lap shear assemblies were cured for 30 seconds @ 15W/cm² using a UV light source. Exposed to conditions indicated and tested at 22°C according to ASTM D3163.

Substrates Bonded	Shear Strength, (psi)
Polycarb to Polycarbonate	≥ 1000
Glass to Steel	≥ 150

General Information

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

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

Directions for Use

Ultrabond[®] 74542 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.

Recommended irradiance at the bondline for curing is 5mW/cm² minimum with an exposure time of 4-5 times the fixture time at this same irradiance. For dry curing of exposed surfaces higher UV irradiance is required (100 mW/cm² minimum).

Cooling should be provided for temperature sensitive substrates such as thermoplastics. Crystalline and semicrystalline thermoplastics should be checked for risk of stress cracking when exposed to liquid adhesive. Excess adhesive can be wiped away with organic solvent. Bonds should be allowed to cool before subjecting to any service loads.

Storage

Ultrabond® 74542 should be stored in a cool, dry location in unopened containers at a temperature between 46°F to 82°F (8°C to 28°C) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused material, do not return any material to its original container.

Dispensing Equipment

Hernon® offers a complete line of semi and fully automated dispensing equipment. Contact **Hernon® Sales** for additional information.

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