Light Lock LV

LOW-ODOR, LIGHT-CURING CYANOACRYLATE

TECHNICAL DATA SHEET

Revised 03/02/2023

PRODUCT DESCRIPTION

Born2Bond™ Light Lock LV is a low-odor, low-blooming, dual curing (contact and lightcuring), cyanoacrylate adhesives. They are designed for bonding applications that require fast fixturing, coating or surface cure. The UV- and visible-light cure sensitivity allows rapid bonding through transparent parts and quick curing of light-exposed bulk or surface-coated areas, while the instant bonding capability ensures cure between opaque substrates (contact cure).

KEY FEATURES

- → Dual cure formulation: instant and photo-cure
- → Fixture time in 30 s (without light exposure)*
- → Can be cured with visible and UV-LED** light <5 sec
- → Long open time without activation
- → Dry to touch, tack free surface cure
- → Cure-on-demand of excess material released from bondlines
- → Bonds, wicks, reconstructs and coats
- → Low odor, low blooming
- → Available in a range of viscosities: LV, MV, HV and Gel

DIRECTIONS FOR USE

1. Before applying Born2Bond Light Lock HV, make sure the surface is clean, dry and grease-free.
2. Apply adhesive to one surface. Do not use items like tissues or a brush to spread the adhesive.
3. Assemble the parts within a few seconds. The parts should be accurately positioned, as the short fixture time leaves little opportunity for adjustment.
4. Bonds should be fixed or clamped until the adhesive has reached fixture.
    - → The product should be allowed to develop to full strength before subjecting it to any service loads (typically 24 to 72 hours after assembly, depending on bond gap, materials and ambient conditions).

APPLICATIONS

Typical applications for this product are conformal coating, encapsulation, needle bonding, perfume and liquor bottle metal bonding, electronics assembly, Plastic to metal bonding for hearing aids, and glass to metal bonding for jewelry and watches.

STORAGE/SHELF LIFE

Optimal Storage: 2°C to 8°C (35.6°F to 46.4°F). Storage below 2°C (35.6°F) or greater than 8°C (46.4°F) can adversely affect the product's properties. If stored properly, this product has a shelf life of 12 months from the packaging date.

HEALTH/SAFETY

The Safety Data Sheet is available on the Bostik website and should be consulted for proper handling, cleanup and spill containment before use. Keep containers covered to minimize contamination.

LIMITATIONS

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. Material removed from containers may be contaminated during use. Do not return product to the original container. Bostik will not assume responsibility for product that has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or customer service representative.

*Depending on substrates. ** UV LED 405 nm UV Visible LED (28mW/cm2)

Always use glasses and gloves when applying adhesives.

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PRODUCT CHARACTERISTICS

Base Technology	Methoxyethyl Cyanoacrylate
Components 1k - 2k	1k
Appearance/Color	Transparent/yellowish*
Temperature Use Range	-40°C to 80°C (-40°F to 176°F)

*before curing

UNCURED PHYSICAL PROPERTIES

Viscosity at 23°C (73.4°F)*	10 - 30 cP
Specific Gravity (ASTM D1875: 23°C / 73.4°F)	1.13 g/mL

*based on Brookfield viscometer

FIXTURE TIME

Contact Cure* (0.1N/mm²)

ABS	15 - 20 seconds
Acrylic	30 - 45 seconds
Polycarbonate	15 - 30 seconds
PVC	150 - 180 seconds

Tack free time under UV Light (28 mW/cm², 405 nm, 1cm distance)

< 5 seconds

BONDING PERFORMANCE

Lap shear strength (ISO 4587) @ 23°C (73.4°F) (MPa)

After 10s curing under UV

ABS	12-13*	+/- 1
Acrylic	6 -7*	+/- 1
Polycarbonate	11-12*	+/- 1
PVC	6-7*	+/- 1

*Substrate Failures

After 24 curing in dark conditions at 22°C

Acrylic	6 -7*	+/- 1
Polycarbonate	6-7*	+/- 1

*Substrate Failures

CONVERSIONS

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = in
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm^2 x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·mm x 0.142 = oz·in
mPa·s = cP

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