Technical Data Sheet
MXBON® 41132

Revision: EN001
Revision Date: July. 2022

PRODUCT DESCRIPTION

MXBON® 41132 is a medium-viscosity、fast-curing、single component UV curing acrylic based product. The adhesive suitable applies to large gap filling and flexibility and impact resistance of the adhesive layer. Moreover, this product shows excellent adhesion to wide variety of substrates.

Chemical Type	Acrylated urethane
Appearance (uncured)	Light yellow
Components	One component – requires no mixing
Viscosity	Medium, thixotropic
Cure	Ultraviolet (UV) light and/or Visible light
Application	Bonding
Specific Gravity @25 °C	1.08
Viscosity, mPa·s (cP) Brookfield-RVT (@25 °C)	
Spindle 4, 20 rpm	3,500 to 7,500
Shelf life	Storage in 8 ℃ to 21 ℃ , 12 months (Unopened condition)

TYPICAL CURING PERFORMANCE

MXBON® 41132 can be cured by UV light and/or visible light of 365nm、395nm and 460nm. To obtain full cure on surfaces exposed to air, radiation 220 to 260 nm is also required. Fixture time and cure speed achieved depend on substrate used, bonding gap, UV intensity, exposure time and spectrum distribution of light source.

Fixture time

Fixture time is defined as the time to develop the shear strength of 0.1 N/mm^2.

UV Fixture Time, ISO 4587, Glass microscope slides, seconds:

6 mW/cm^2 @365nm, ≤ 15

UV Fixture Time, ISO 4587, Polycarbonate, seconds:

30 mW/cm^2 @365nm, ≤ 10

100 mW/cm^2 @365nm, ≤ 5

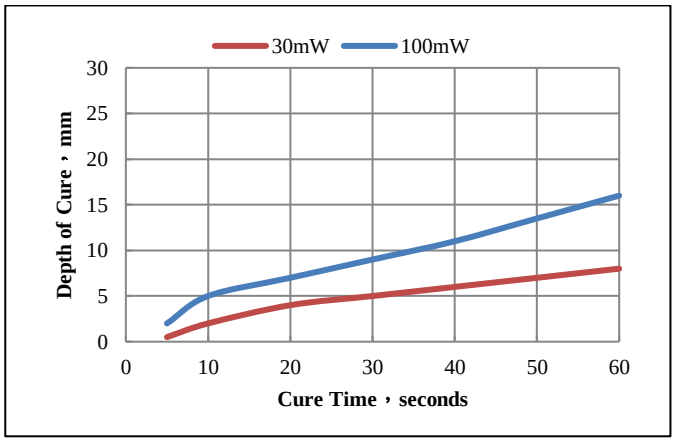
Tack free time :100 mW/cm^2 @365nm, ≤ 20

Deep (1-3 mm) Fixture time : 100 mW/cm^2, ≤ 60

Depth of Cure vs. Irradiance (365 nm)

The graph below shows the increase in depth of cure with time at 50mW/cm² - 100mW/cm² as measured from the thickness of the cured pellet formed in a 15mm diameter PTFE die.

Curing System: Metal Halide (Doped)



TYPICAL PROPERTIES OF CURED MATERIAL

Cured @ 30 mW/cm², measured @ 365 nm, for 80 seconds using a glass filtered metal halide light source

Physical properties

Durometer (Shore D), ISO 868	62
Max. Operating Temperature (°C)	-54 to 149
Refractive index (%)	1.48

Electrical characteristics

Dielectric strength, IEC 60250 (kv/mm)	25
Volume resistivity, IEC 60093 (Ω • cm)	8.9 x 10^{14}
Dielectric constant, IEC 60250 @1-kHz	4.87
Dielectric dissipation factor, IEC 60093 @ 1-kHz	0.02

TYPICAL PERFORMANCE OF CURE MATERIAL

Adhesive properties

Cured @ 30 mW/cm², measured @ 365 nm, for 80 seconds using a glass filtered metal halide light source (samples with 0.5 mm gap).

Lap shear strength , ISO 4587

Polycarbonate

Substrate	N/mm^2	psi
PC / PC	11.5*	1668*

* substrate failure

TYPICAL ENVIRONMENTAL RESISTANCE

Cured @ 30 mW/cm², measured @ 365 nm, for 80 seconds using a metal halide light source, (samples with 0.5 mm gap).

Lap Shear Strength, ISO 4587:

Polycarbonate

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UK +44(0)1536-264222
India +91-83800-71214
Thailand +66-2-1706998
For more details, consult Cartell Chemical Co., Ltd.: www.mxbon.com

Adhesives Expert

Chemical/Solvent Resistance

Aged under conditions indicated and tested @ 22 °C.

		% of initial strength		
Environment	℃	2H	24H	170H
Boiling water	100	*100	------	------
Water immersion	49	*100	------	------
Water immersion	87	*100	------	
Isopropanol immersion	22	------	95	------
Heat/humidity	38	------	------	*100

* substrate failure

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be use with chlorine or other strong oxidizing materials. Where washing systems are used to clean the surfaces before bonding, it is important to check the compatibility of the washing solution with the adhesive. In some cases, these solutions can affect the cure and performance of the adhesive. Users are recommended to confirm compatibility of the product with such substrates.

Storage & Handling precaution

Keep adhesive in a cool and dry place. The storage temperature is recommended at 8 °C to 21 °C. For details, consult the Safety Data Sheet, (SDS). Shelf life is one years from the date of manufacture in the original container under the optimal conditions.

1. Avoid contact with skin and eyes.
2. If contact with skin, rinse with water.
3. If adhesive gets into eye, keep eye open and rinse with water thoroughly. Seek medical attention immediately.
4. Keep the material out of children's reach.

Note

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