TECHNICAL DATA SHEET

KEOL

CYANOACRYLATE ADHESIVE

K-CYAN UV LL HV

- ODORLESS, NON IRRITANT
- MEDICAL STANDARD 10993-5
- FIXING <5 SECONDS WITH UV

UV LL HV adhesive from the K-CYAN range is a low odor UV light curing contact cyanoacrylate adhesive. It is designed for bonding applications that require rapid surface fixing, coating or curing. UV and visible light sensitivity allows for rapid bonding through transparent parts and rapid curing of areas exposed to light, while the instant bonding ability ensures curing between opaque substrates (contact cure).

ELONGATION	**1.5%**
DENSITY	**1.10 g / ml**
COLOR	**Transparent**
HARDNESS	**76 D**
VISCOSITY	**600-900 cps**

PROPERTIES	K-CYAN UV LL HV
Chemical basis	Methoxyethyl cyanoacrylate
Appearance	Transparent / yellowish
Temperature range of use	-40 ° C to 80 ° C
VOC content (ISO 11890-2)	27g / L
Soft point - HDT (ASTM E2092-18a)	60 ° C
Tensile strength	29.2 Mpa
Elasticity module	2600 Mpa
Glass transition temperature (ISO 6721)	92 ° C
Linear thermal coefficient expansion (ISO 10545-8)	47 x 10^{-6}
Water absorption (after 24 hours) ASTM D542	3.3%
Impact resistance after 24 hours (ISO 9653)	13.0 KJ / m^2
Surface resistivity DC 500V (Ohm)	3.9 x10^{14}
Volume resistivity DC 1kV (Ohm.m)	1.8 x 10^{14}
Electrical properties of resistivity IEC 60250	
D @ 1kHz	0.0284
K '@ 1 kHz	2.90
D @ 1MHz	0.0310
K '@ 1MHz	2.58
Continuous breaking voltage DC according to standard IEC 60243-2	59.3 kV / mm

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FIXING TIME	K-CYAN UV LL HV
Contact treatment * (0.1N / mm²)	
Stainless steel (A316)	40-70 seconds
Soft steel)	10-30 seconds
Aluminum (A5754)	10-40 seconds
Neoprene	20-50 seconds
EPDM	10-30 seconds
Rubber, nitrile	10-30 seconds
ABS	20-60 seconds
PVC	40-90 seconds
Polycarbonate	30-70 seconds
Phenolic	30-70 seconds
Wood (oak)	> 15 seconds
Particle board	70-100 seconds
Leather	15-30 seconds
PC / ABS	25-70 seconds
Paper	20-40 seconds
UV light drying speed * - 405nm UV visible LED (28mW / cm²)	
PMMA	<5 seconds
* If stored in good conditions	

APPLICATION OF THE PRODUCT

1. Before applying **K-CYAN UV LL HV**, make sure the surface is clean and free of grease.
2. Apply the adhesive to a surface. Do not use objects such as tissues or a brush to spread the adhesive.
3. Assemble the parts in seconds. The parts must be positioned precisely, as the short fixing time leaves little room for adjustment.
4. Ties should be fastened or tightened until the adhesive has reached the point of attachment.

→ The product should be allowed to cure to full strength before subjecting it to service loads (typically 24-72 hours after assembly, depending on bond space, materials and ambient conditions) .

Typical applications of this product are conformal coating, encapsulation, needle bonding, metallic bonding of perfume and liquor bottles, electronic assembly, plastic / metal bonding for hearing aids and bonding. glass / metal for jewelry and watches.

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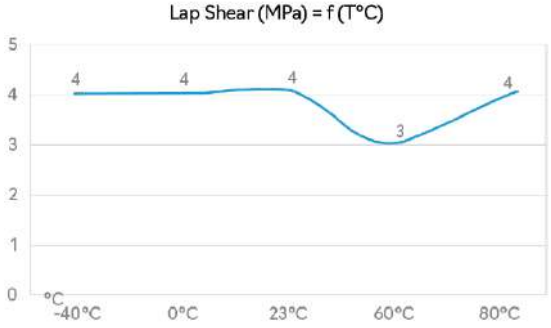
BONDING PERFORMANCE

Shear strength (ISO 4587) at 23 Mpa

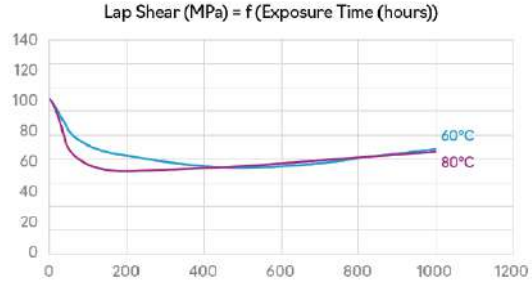
@ 2mm / min after 10s UV LED treatment		
PC / Steel	6	+/- 1
PC / Aluminum (A5754)	4	+/- 1
PC / Polycarbonate	2	+/- 1 SF
@ 2 mm / min after 24 hours of treatment @RT		
ABS	6	+/- 1 SF
PVC	4	+/- 2 SF
Phenolic	7	+/- 1
@ 2 mm / min after 1 week of treatment @RT		
Polycarbonate	4	+/- 1 SF

Heat strength and thermal aging

The graph below shows the bond performance on shot blasted mild steel (GBMS) at various temperatures. The adhesive was cured for one week at 22 ° C (71.6 ° F). Lap shear strength was tested according to ISO 4587. The strength test was performed in a climatic chamber which was installed for 30 minutes prior to testing at the indicated temperatures..



The graph below shows the results of thermal aging. The adhesive was aged at the indicated temperature, tested at 22 ° C (71.6 ° F) and cured for one week. Lap shear strength has been tested in accordance with ISO 4587 on shot blasted mild steel (GBMS).



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RESISTANCE TO CHEMICALS AND SOLVENTS

Aged under stated conditions and tested on GMBS

% of the initial force in relation to the duration of exposure (hours) and in relation to the type of contaminant

Polycarbonate tests		% of initial force		
Environment	T °	100H	500H	1000H
Windex (window cleaner)	23 ° C	43	51	56
Oleic acid	23 ° C	83	93	61
Solar cream	23 ° C	58	53	64
IPA (70%)	23 ° C	58	55	64
Environment	T °	72H		168H
Sebum	67 ° C	65		65
	85 ° C	61		n / A

HEAT AND HUMIDITY RESISTANCE

Aged under the conditions indicated and tested at 40 ° C

% of initial force over exposure time (hours)

	% of initial force		
Environment	100H	500H	1000H
GBMS	75	50	0
Polycarbonate	56	58	47

NOTE

The information, and particularly the recommendations regarding the application and the KEOL products, are given to you in good faith and are based on current knowledge and experience of the products having been properly stored, handled and applied under normal conditions. KEOL cannot take responsibility for the results obtained by others since we have no control over their method. It is up to the user to determine the suitability of the products for the specific application for any method. Production costs mentioned in this document. Also, it is up to the user to adopt the necessary precautions as recommended for the protection of the establishment and the people against any kind of risks which could arise during the handling and the use of the products. KEOL cannot assume all the guarantees mentioned or implied, including guarantees of market value or of conformity for a specific reason, arising from the sale or use of KEOL products. KEOL cannot assume responsibility for any incidental consequences or damages of any kind, including lost profits. Users should always refer to the most recent edition of the technical data sheet for the product concerned. Copies of this document will be provided upon request.