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PRODUCT TECHNICAL DATA SHEET

MXBON® C681

Peel and Impact Resistance

1. PRODUCT DESCRIPTION

MXBON® C681 is a specially formulated grade of Cyanoacrylate adhesive for applications requiring high viscosity and resistance to peel and impact. **MXBON® C681** develops strong bonds on most metals, plastics or rubbers. **MXBON® C681** is a one-component, solvent-free system and does not require the use of a catalyst, heat or clamps. When a thin layer of **MXBON® C681** applied between two surfaces comes into contact with atmospheric moisture, a rapid polymerization occurs producing the ultimate bond.

2. TYPICAL PROPERTIES OF UNCURED MATERIAL

Base	Ethyl Cyanoacrylate
Color	Colorless to yellowish colored liquid
Specific Gravity @ 25℃	1.10
Refractive Index (n D ^{20})	1.439
Flash Point	See MSDS
Vapor Pressure (hPa)	< 1
Viscosity (cP) ，25℃	800 – 1500

3. CURING PERFORMANCE

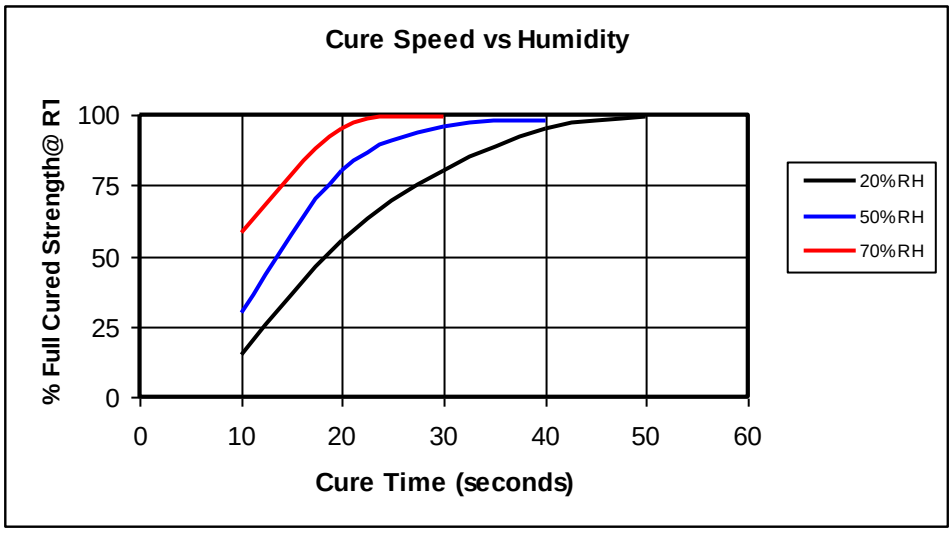
There are many factors that can influence the rate of cure. These include: the types of substrate used, the condition of the surface to be bonded, the smoothness of the surface, the closeness of the surfaces, the atmospheric conditions etc.

Cure Speed / substrate

Steel to Steel	10 – 20 seconds
Stainless Steel	60 – 120 seconds
Aluminum	5 – 10 seconds
Zinc plated	30 – 90 seconds
ABS to ABS	15 – 40 seconds
ABS to NBR	10 – 20 seconds
NBR to NBR	5 – 20 seconds
Polycarbonate	20 – 50 seconds

Cure Speed / Humidity

The following graph shows the tensile strength developed at different levels of humidity.



Cure Speed / Bond Gap

The rate of cure depends on the bond-gap. A smaller bond-gap results in faster cure speeds.

4. TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties	
Coefficient of Thermal Expansion (K^{-1})	21 x 10^{-5}
Coefficient of Thermal Conductivity (W/m.K)	0.21
Working Temperature	-50℃ ~ 100 ℃
Electrical Properties	
Volume Resistivity (Ω.cm)	2.5 x 10^{15}
Surface Resistivity (Ω)	1.5 x 10^{15}
Dielectric Constant @ 10 kHz	3.5
Dielectric Dissipation Factor @ 10 kHz	<0.04
Dielectric Breakdown Strength (kV/mm)	30

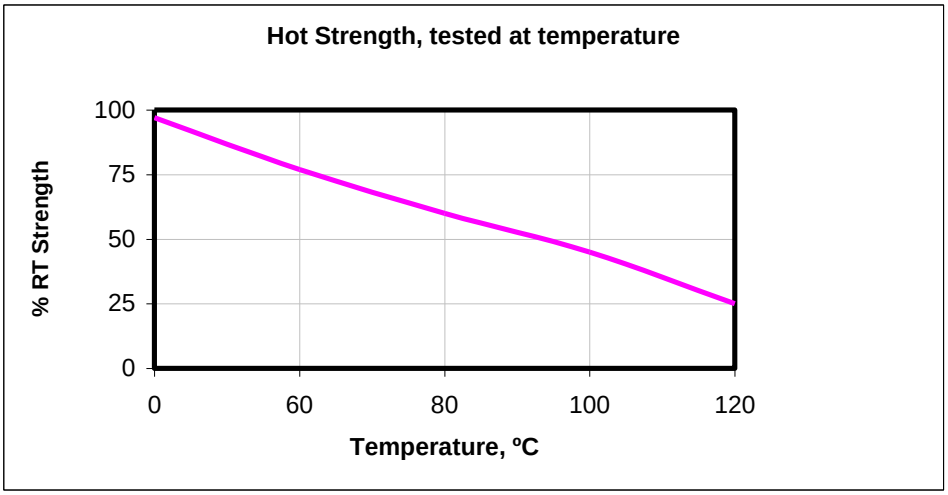
5. ADHESIVE PERFORMANCE

After 24 hours at 25℃.

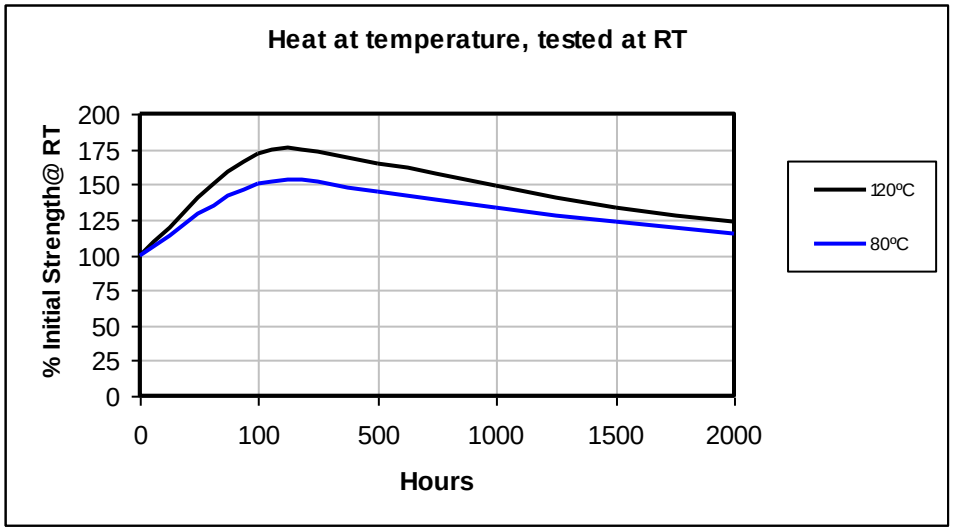
Tensile Strength	
Steel	140 – 170 Kg/ cm^2
Stainless Steel	120 – 150 Kg/ cm^2
Aluminum	50 – 100 Kg/ cm^2
Copper	50 – 100 Kg/ cm^2
PVC	40 – 60 Kg/ cm^2
ABS	30 – 40 Kg/ cm^2
Polycarbonate	80 – 90 Kg/ cm^2
Polystyrene	30 – 45 Kg/ cm^2
NBR	5 – 10 Kg/ cm^2
SBR	5 – 10 Kg/ cm^2

TYPICAL ENVIRONMENTAL RESISTANCE

Hot Strength:



Heat Aging:



6. DIRECTIONS FOR USE

1. Make sure the surfaces to be bonded are clean and dry (preferable to solvent-wipe plastics, glass, and rubber, and to acid-treat metals).
2. Dispense a drop or drops to one surface only. Apply only enough to leave a thin film after compression.
3. Press parts together and hold firmly for a few seconds. Good contact is essential. An adequate bond develops in less than one minute. (Maximum strength is achieved in 24 to 48 hours).
4. Wipe off excess adhesive from the top of the container and recap **MXBON® C681** if left uncapped, may deteriorate by contamination from moisture in the air.
5. Because **MXBON® C681** condenses by polymerization, sometimes whitening will occur on the surface of the container or the bonded materials. Should this happen, wipe surfaces well with acetone.

7. HANDLING AND STORAGE

Storage: Keep products in the unopened container in a cool and dry location. Best when stored at 2 to 8℃. Temperatures less than 2℃ can adversely affect product properties. Do Not Freeze. Keep container tightly closed until ready for use.

Handling: Material removed from containers may be contaminated during use. Do not pour back any product to the original container. Misuse of product will void all warrantees.

8. PRECAUTIONS

Use with proper ventilation. Avoid contact with skin and eyes.
If contact with skin occurs, rinse with warm water or dissolve gradually with solvent such as acetone, or nitromethane. Do not try to remove forcibly.
If adhesive gets into eye, keep eye open and rinse thoroughly. Seek medical attention immediately.
Keep well out of reach of children.
Keep adhesive in a cool, dry place 20-25℃ (68-77°F). For long-term storage, refrigeration (2°C or 35°F) is recommended.

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