

TECHNICAL DATA SHEET

1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

NAME OF THE PRODUCT	Universal fast fix gel adhesive high viscosity, 20 g
CODE	080201
DISTRIBUTOR	BOSSAUTO INNOVA, S.A.
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2. DESCRIPTION

Universal instant adhesive gel is a high viscosity (1100cps) Ethyl-cyanoacrylate. This adhesive is designed for a high resistance bonding that polymerize very fast a wide range of materials as metals, plastics, rubber and other materials. Recommended for mounting smooth, flat surfaces.

Technology	Cyanocrylate Activator
Chemical type	Ethyl cyanoacrylate
Appearance (uncured)	Transparent, colourless
Viscosity	High
Components	One part
Cure	Humidity
Application	Bonding
Key substrates	Wood, MDF and porous mat.

3. PROPERTIES

Specific Gravity	1,08
Viscosity Range (cps)	935-1210
Viscosity, Typical values	1100
Tensile Strength (N/mm ²)	21
Fixture Time (sec)	5-45
Full Cure (hours)	24
Flash Point (°C)	>85
Shelf Life a 5°C (months)	12
Max Gap Fill (mm)	0.20
Operating Temperature Range (°C)	-50°, +80°

4. CURING PERFORMANCE

A. Cure speed vs. Surface

This is defined as the time to develop shear strength of 0.1 N/mm². The speed of cure of cyanoacrylates varies according to the substrates to be bonded. Acidic surfaces such as paper and leather will have longer cure times than most plastics and rubber. Some plastics with very low surface energies, such as polyethylene, polypropylene and Teflon require the use of a primer.

B. Fixture Time, Seconds

Steel (degreased)	<45
Aluminium	<10
Neoprene	<5
Rubber	<15
ABS	<15
PVC	<15
Wood (balsa)	<30
Wood (oak)	<180
Carton	<90
Textile	<15
Leather	<15
Paper	<10

C. Cure Speed Vs. Bond Gap

The cyanoacrylate gives best results on close fitting parts. The product should be applied in a very thin line in order to ensure rapid polymerisation and a strong bond. Excessive bond gaps will result in slower cure speeds. Activator may be used to greatly increase cure speeds.

D. Cure Speed Vs. Humidity

Cyanoacrylate adhesives require surface moisture on the substrates in order to initiate the curing mechanism. The speed of cure is reduced in low-humidity conditions. Low temperatures will also reduce cure speed. All figures relating to cure speed are tested at 21°C.

E. Cure Speed Vs. Activator

Instantaneous Universal Adhesive Multiuse may be used in conjunction with Instantaneous Universal Adhesive Multiuse cyanoacrylates where cure speed needs to be accelerated. Cure speeds of less than 2 seconds can be obtained with most Instantaneous Universal Adhesive Multiuse cyanoacrylates. The use of an activator can reduce the final bond strength by up to 30%. We recommend testing on the parts to measure the effect.

5. PERFORMANCE OF CURED MATERIAL

After 24 hours at 21°C.

Lap Shear Strength

Steel	N/mm ²	12 to 20
	(psi)	(1745 a 2900)
Aluminium	N/mm ²	5 to 15
	(psi)	(725 a 2175)
ABS	N/mm ²	5 to 15
	(psi)	(725 a 2175)
PVC	N/mm ²	6 to 15

	(psi)	(870 to 2175)
Wood	N/mm ²	5 to 15
	(psi)	(725 to 2175)

Tensile strength

Steel	N/mm ²	>18
	(psi)	(>2610)
Wood	N/mm ²	5 to 15
	(psi)	(725 to 2175)

6. PROPERTIES OF CURED MATERIAL

After 24 hours at 21°C.

A. Physical Properties

Coefficient of Thermal Expansion	80x10 ⁻⁶ k
Coefficient of Thermal Conductivity	0.1W (m.K)
Glass Transition Temperature	120°C

B. Electrical Properties

Dielectric Constant/Dissipation Factor	
0.1KHz	2.75/<0.02
1KHz	2.75/<0.02
10KHz	2.75/<0.02
Volume Resistivity (w.cm)	10x10 ¹⁵
Surface Resistivity (w)	10x10 ¹⁵
Dielectric Breakdown Strength (Kv/mm)	25

7. ENVIRONMENTAL REISTANCE

After 1 week to 21°C.

A. Hot Strength

Our adhesives are suitable for use at temperatures up to 80°. At 80°C the bond will be approximately 70% of the strength at 21°C. The bond will be approximately 70% of the strength at 21°C. The bond strength at 100°C is approximately 50% of full strength at 21°C.

B. Heat Aging

The cyanoacrylate retains over 90% of their strength when heated to 80°C for 7 days and then tested at 21°C. Heating the bond to 100°C and then testing at 21°C gives bond strength of approximately 50% of initial strength.

C. Chemical/Solvent resistance

Cyanoacrylate adhesives exhibit excellent chemical resistance to most oils and solvents including motor oil, leaded petrol, ethanol, propanol and Freon. Cyanoacrylates are not resistant to high levels of moisture or humidity over time.

Environment	°C	100h	500h	1000h
Motor Oil	40	95	95	95
Gasoline	22	100	100	100
Ethanol	22	100	100	100
Alcohol Isopropyl	22	100	100	100

Freon TA	22	100	100	100
Heat/Humidity				
95% RH	40	100	75	75

8. GENERAL INFORMATION

This product is not recommended for use in pure exigent 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.

9. DIRECTIONS FOR USE

1. For best performance bond surfaces should be clean and free from grease.
2. This product performs best in thin bond gaps (0.05mm).
3. Apply sparingly to one surface and press parts firmly together until handling strength is achieved.
4. The activator may be required if there are gaps or porous surfaces. Some plastics require previous application of primer.
5. Product is normally hand applied from the bottle.
6. Cured cyanoacrylate may be removed from most substrates, and parts disassembled with the cleaner. For more information consult the Material Safety Data Sheet.

10. STORAGE

Store product in the unopened container in a dry and cool location. Storage information may be indicated on the product container labelling.

The optimal Storage is between 2°C to 7°C. Storage below 2°C or greater than 7°C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container. Bossauto can not assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact our Technical Department.

11. SAFETY

Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of reach of the children.

Irritating to Eyes, respiratory system and skin.

Do not breathe fumes/vapour

Avoid contact with skin and eyes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable gloves.

For additional information consult the Material Safety data sheet.

12. DATA

The data contained in this data sheet may be reported as typical value and/or range. Values are based on actual test data and are verified on a regular basis.

Technical data herein is compliance to our experience. We ensure the quality of the product; however, not finding the working conditions under our control we can not assume any responsibility concerning the obtained results.