HONDE®

Industrial Adhesives Business
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Technical Data Sheet
HONDE® 620

November 2005

PRODUCT DESCRIPTION

Honde® 620 is a single component, general industrial grade cyanoacrylate adhesive. 620 is specifically formulated for applications requiring higher viscosity and slower fixturing speeds than other instant adhesives. 620 is economical to use and develops strong bonds on most metals, plastics and elastomers

TYPICAL APPLICATIONS

Rapid bonding of a wide range of metals, plastics and elastomeric materials, Rough or irregular surfaces, Applications requiring alignment times up to 15 seconds.

PROPERTIES OF UNCURED MATERIAL

	Typical	
	Value	**Range**
Chemical type	Ethyl cyanoacrylate	
Appearance	Clean liquid	
Specific Gravity @ 25°C	1.05	
Viscosity @ 20°C, mPa.s Brookfield LVT Spindle 1 @ 30 rpm	1500	1300 to 1700
Flash point (COC), °C	>80	

TYPICAL CURING PERFORMANCE

Under normal conditions, the surface moisture initiates the hardening process. Although full functional strength is developed in a relatively short time, curing continues for at least 24 hours before full chemical/solvent resistance is developed.

Cure speed vs. substrate

The rate of cure will depend on substrate used. The table below shows the fixture time achieved on different materials at 22°C, 50% relative humidity. This is defined as the time to develop a shear strength of 0.1 N/mm² (14.5 psi) tested according to ASTM D1002.

Substrate	**Fixture Time ,seconds**
Steel (degreased)	35
Zinc dichromate	70
Neoprene	<5
Nitrile rubber	<5
ABS	30
PVC	30
Polycarbonate	50

Cure speed vs. bond gap

The rate of cure will depend on the bondline gap. High cure speed is favored by thin bond lines. Increasing the bond gap will slow down the rate of cure.

Cure speed vs. activator

Where cure speed is unacceptably long due to large gaps or low relative humidity applying activator to the surface will improve cure speed. However , this can reduce the ultimate strength of the bond, therefore testing is recommended to confirm effect.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Coefficient of thermal expansion, ASTM D696, K^{-1} 100×10^{-6}

Coefficient of thermal conductivity, ASTM C177, $W.m^{-1} K^{-1}$ 0.1

Electrical Properties

		Constant	**Loss**
Dielectric constant & loss, 25°C, ASTM D150,			
measured at	100Hz	2.3	<0.02
	1kHz	2.3	<0.02
	10kHz	2.3	<0.02
Volume resistivity, ASTM D257, Ω. cm x 10^{16}			1
Surface resistivity, Ω x 10			4
Dielectric strength, ASTM D149, kV/mm			25

PERFORMANCE OF CURED MATERIAL

(After 24 hrs at 22°C on steel)

Shear Strength, ASTM D1002	**Typical**	
	Value	**Range**
Grit Blasted Steel, N/mm²	22	18 to 26
Etched Aluminum, N/mm²	15	11 to 19
Zinc dichromate, N/mm²	14	10 to 18
ABS, N/mm²	12	8 to 16
PVC, N/mm²	12	8 to 16
Polycarbonate, N/mm²	14	9 to 19
Phenolic, N/mm²	10	5 to 15
Neoprene rubber, N/mm²	10	5 to 15
Nitrile rubber, N/mm²	10	5 to 15

TYPICAL ENVIRONMENTAL RESISTANCE

Test Procedure: Shear Strength, ISO 10123
Substrate: Steel Pins and Collars
Cure procedure: 1 week at 22°C

Chemical / Solvent Resistance

Aged under conditions indicated and tested at 22°C

Solvent	Temp	% Initial Strength retained at		
		100 hr	500 hr	1000 hr
Motor Oil	40°C	100	100	100
Leaded Petrol	22°C	100	100	95
Isopropanol	22°C	100	95	95
Ethanol	22°C	100	90	80
Freon TA	22°C	100	90	90
Humidity 95% RH polycarbonate	40°C	100	100	100

GENERAL INFORMATION

For safe handling information on this product, consult the Material Safety Data Sheets, (MSDS).

Directions for use

For best performance surfaces should be clean and free of grease. This product performs best in thin bond gaps, (0.05mm). Excess adhesive can be dissolved with Honde clean up solvents, nitromethane.

Storage

Product shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8°C to 28°C unless otherwise labelled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container. For further specific shelf life information, contact your local Technical Service Centre.

Note

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