

Cyanoacrylates multipurpose instant adhesive

Description

Lapox Ultrafast is one component, solvent free, nearly instant setting, and room temperature curing adhesive. It is a tenacious adhesive, particularly when used to bond non-porous materials or those that contain minute traces of water. It is compatible with wide range of materials like plastics, wood, metals, glass, rubber etc. It is easy to handle and dispense from convenient squeeze-tube packaging. It is optimal for bonding small parts or assemblies and is adaptable to high speed assembly operations using automatic dispensing.

Applications

This adhesive is useful in bonding plastic, flex, PVC, leather, rubber, glass, metals etc. components where instant bonding is required.

Advantages

Rapid curing (less than a minute) at room temperature and no heat required
 Bond forms with only contact pressure and no clamping required
 Bonding to a wide variety of substrates including metals, rubbers, most plastics and ceramics
 Excellent wetting characteristics with no solvent evaporation or hazardous vapor emission
 Good resistance to weathering
 Resists many chemicals including gasoline, kerosene & various oils
 No mixing required and spread easily
 No special pretreatments required for most of surfaces
 Ideal for high speed production
 Cost effective, as minimal amounts of adhesive are needed to form strong bonds

Typical properties

Properties	Unit	Particulars
Chemical type	-	Ethyl cyanoacrylates
Appearance	Visual	Clear transparent liquid
Colour	Visual	Colourless
Curing	-	Humidity
Specific gravity at 25°C	-	1.04 - 1.06
Viscosity	m Pas	Max 5
Flash point	°C	84
Solubility	-	Nitro methanol, Acetone, Dimethylformamide
Refractive index	-	1.49 (± 0.03)

After cure properties

Test	Unit	Reference	Value
Gap fill	mm	-	0.05
Service temperature	°C	-	(-)55 to 82
Cure speed on MS - MS joint ¹	Seconds	-	≤ 8
Cure speed on Al - Al joint ¹	Seconds	-	≤ 8
Cure speed on acrylic - acrylic joint ¹	Seconds	-	< 10
Cure speed on PVC - PVC joint ¹	Seconds	-	< 5
Lap shear strength after 10 minutes ²	kg/cm ²	ASTM D1002	65
Lap shear strength after 1 hour ²	kg/cm ²	ASTM D1002	90
Lap shear strength after 24 hours ²	kg/cm ²	ASTM D1002	130
Lap shear strength ³	kg/cm ²	ASTM D1002	100

¹Cure speed measured at 25°C on 12.7 mm overlap area

²Lap shear strength on prepared MS strips at 25°C, for different cure schedule time

³Lap shear strength on prepared MS strips. Cure schedule, 24 hours at 30°C and 5 days at 65°C

Processing	<p>Surface preparation: The adherents must be thoroughly degreased with a good degreasing solvent (e.g. toluene, acetone trichloroethylene). Abraded with coarse emery paper or chemically etched metal surface shows an excellent strength. Inadequately pre-treated substrates may not bond satisfactorily.</p> <p>Application: Apply the adhesive sparingly to one surface (usually one drop is sufficient), bring the components together quickly and correctly aligned. Apply sufficient pressure to ensure the adhesive spreads into a thin film. Do not disturb or re-align until curing is achieved. Any surplus adhesive can be removed with cleaner. For difficult or porous surfaces activator is recommended. If bonding to polypropylene, polyethylene, PTFE or silicone surface, then prime surface first with polyolefin primer.</p>
Packaging	Lapox Ultrafast is available in 20 ml HDPE bottles. Other packing may be considered on request.
Storage and handling	Lapox Ultrafast should be stored in a cool and dry place, preferably in a sealed container and should not be exposed to direct sunlight. This product has a shelf life of nine months, if stored in its original container between 20°C and 22°C away from humidity and excessive heat. The shelf life depends on the storage temperature. Containers should be tightly sealed when not in use. When removing an adhesive container from the refrigerator, allow the adhesive to reach room temperature before using it. Excessively aged or outdated adhesive may appear cloudy or milky; if this occurs the material should not be used.
Safety	Wear personal protective equipment (PPE). Avoid contact with the eyes and skin. In case of direct contact and irritation, it should be washed off immediately with soap and warm water. Avoid breathing vapours, mist or gas. As noted earlier, this adhesive cures by the presence of moisture. In light of this, certain precautions must be taken to insure safe and trouble free usage. Use of gloves is mandatory since skin contains moisture and accidental misuse may bond skin. If accidental skin bonding occurs, wash immediately with soap water and slowly pry skin apart. Please refer to the Safety Data Sheet (SDS) of Lapox Ultrafast for detailed safety instructions.
Spills and disposal	In case of spills, sweep up and shovel the spilled material. Keep spilled material in suitable, closed containers for disposal. Soak up with an absorbent such as clay, sand or other suitable material. Flush area with water to remove trace residue. Do not allow the product to reach the sewage system. Waste must be disposed of in accordance with federal, state or local regulations, as applicable.
Contact	E-mail: polymers_support@atul.co.in Website: www.atul.co.in
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