

## Ambient cure high viscous adhesive system

### Description

Lapox Ultra Plus Plus is two component modified, viscous epoxy adhesive system. When both components are mixed in recommended ratios and cured appropriately at room temperature, an excellent bond strength can be achieved with most of the substrates including glass, metals, laminates, wood, textile and natural stones. Faster productivity can be achieved, if curing is performed at higher temperature between 40°C and 60°C. Curing at higher temperature is recommended to achieve optimum bond strength.

### Applications

Artificial jewellery and jewel stone fixing  
Automobile components  
Ceramic works  
Electrical components  
General engineering components  
Handicrafts and sports goods

### Advantages

Excellent electrical insulation properties  
High bond strength  
High mechanical strength even in dynamic conditions  
Long working time  
Thermally stable and suitable to perform in extreme conditions  
Water and chemical resistant

### Typical specifications

| Test              | Unit  | Reference  | Value                |  |
|-------------------|-------|------------|----------------------|--|
|                   |       |            | Resin                | Hardener                                     |
| Description       | -     | Visual     | Clear viscous liquid | Clear, yellowish to brownish, viscous liquid |
| Viscosity at 25°C | m Pas | ASTM D2196 | 30,000 - 45,000      | 30,000 - 40,000                              |
| Colour            | APHA  | ASTM D1209 | Max 70               |  |
| Colour            | GS    | ASTM D1544 |                      | Max 8  |
| Density           | g/cc  | ASTM D792  | 1.15 - 1.17          | 0.92 - 0.98                                  |

<sup>1</sup>Viscosity by Brookfield viscometer

### Mix specifications

| Test                                   | Unit    | Reference  | Value           |
|--|---------|------------|-----------------|
| Mixing ratio (resin : hardener)        | w/w     | -          | 100 : 80        |
| Mix viscosity at 25°C                  | m Pas   | ASTM D2196 | 30,000 - 45,000 |
| Pot life <sup>1</sup>                  | Minutes | ASTM D2471 | 55 - 65         |
| Peak exotherm temperature <sup>2</sup> | °C      | ASTM D2471 | Max 50          |
| Surface dry*                           | Minutes | ASTM D5895 | 70 - 90         |
| Touch dry*                             | Minutes | ASTM D5895 | 270 - 290       |
| Hard dry*                              | Minutes | ASTM D5895 | 460 - 480       |

<sup>1</sup>Pot life of 100 g mix mass at 25 ± 1°C in plastic disposable cup by 'Gardco' gel timer

<sup>2</sup>Total 100 g mix mass in plastic disposable cup at 25°C

\*Drying time of 200 micron film on glass plate at 25°C

### After cure specifications

| Test                                    | Unit               | Reference  | Value   |
|---|--------------------|------------|---------|
| Lap shear strength at 25°C <sup>1</sup> | kg/cm <sup>2</sup> | ASTM D1002 | Min 160 |

<sup>1</sup>Lap shear strength on prepared aluminum strips after 24 hours curing



## Processing

**Surface preparation:** The adherents must be thoroughly degreased with a good degreasing solvent (e.g. toluene, acetone trichloroethylene) and abraded with coarse emery paper or chemically etched. Inadequately pre-treated substrates may not bond satisfactorily.

**Application:** The mixed mass is applied by brush or spatula on the surface to be adhered. The mix must be used within its pot life.

**Curing:** Curing normally takes place at room temperature within about 24 hours depending on the ambient temperature but may be accelerated by the application of heat.

## Packaging

Lapox Ultra Plus Plus is available in 1.8 kg HDPE bottles. Other packing may be considered on request.

## Storage and handling

Lapox Ultra Plus Plus 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 two years, if stored in its original container between 2°C and 40°C away from humidity and excessive heat.

## 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 vapors, mist or gas. Please refer to the Safety Data Sheet (SDS) of Lapox Ultra - U 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

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## Note

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