



SYNPOL PRODUCTS PRIVATE LTD.

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Synpol AD-200 BASE & HARDENER

INTRODUCTION :

Synpol AD-200 BASE and HARDENER are formulated Synthetic resin adhesives, based on our Epoxy and Polyamide resins. The above system is well established for many applications: for bonding various articles of metals, plastics, rubber, wood, stone, porcelain, glass, concrete, etc., giving excellent bond strength and stability under varied application conditions. Both are available in fluid, easy to mix consistency, ready for immediate application.

The success of epoxy-polyamide adhesive system is due to their low shrinkage, high strength, good mechanical ability, good light stability, good chemical resistance, low viscosity, and easy to cure.

SPECIFICATIONS :

	<u>BASE</u>	<u>HARDENER</u>
1) Appearance	Hazy viscous liquid	Clear Amber yellow viscous liquid
2) Viscosity @ 25 ⁰ C by Brookfield viscometer spindle # 6, 20 rpm, poises	275 - 375	275 - 375
3) Specific Gravity @ 25 ⁰ C	1.12	0.88
4) Mixing Ratio: i) By weight ii) By volume	100 100	80 100
5) Cure schedule: i) @ room temperature ii) @ 60 ⁰ C iii) @ 100 ⁰ C		24 hours 2 hours 30 minutes

CHARACTERISTICS OF FULLY CURED ADHESIVE :

(After curing @ room temperature {25⁰ C} for 72 hrs.)

a) Tensile strength ASTM D 638 MS to MS (kg/cm ²)	160 - 175
b) Lap Shear strength (ASTM D 1002 MS to MS (kg/cm ²)	800 - 100
c) Cleavage strength ASTM D 1062 MS to MS (kg/25 mm)	360 - 400
d) Compressive strength (kg/cm ²)	650 - 950
e) Hardness Shore D	70 - 85

POT LIFE :

The two components must be mixed shortly before use. The pot life depends on room temperature, quantity of the mix, etc. The higher the temperature and quantity of the mix, the shorter will be the pot life. Good compromise can be arrived at by considering temperature and amount of mix, so that pot life is enough for application. Generally 100g. of mix of the above gives pot life of 30 to 60 minutes approximately, depending upon conditions of the use, at room temperature of approximately 25⁰ C.

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DISCLAIMER: Above Specifications are subject to change without prior notice and company reserves the right to modify the same at any time

APPLICATIONS :

Because of its versatility, Synpol AD-200 BASE and HARDENER are used in thousands of industrial applications:

- As adhesive for aircraft honeycomb structure, for paintbrush bristles, and for concrete topping compounds.
- As body solders and caulking compounds for repair of plastic and metal articles of machine, toys, automobiles, boats, etc.
- As casting compounds for fabrication of short run and prototype molds, stamping dies, patterns, and tooling.
- As caulking and sealant compounds in building and highway construction application where higher order of chemical resistance is required.
- As potting and encapsulation compound and impregnating resins for electronics and electrical equipments.
- As laminating resins for air frame and missile applications, for ment wound structures and for tooling fixtures.

PRECAUTIONS :

- i) The epoxy resin and hardener should be mixed by weight in ratio as shown above only, otherwise proper curing will not take place and will result in deterioration of properties.
- ii) Quantity of the mix should be as low as possible, to increase unusable life of the mix. Mix quantity above 100g. will give much shorter pot life than as indicated above, due to exothermic nature of the reaction between epoxy resin and hardener.
- iii) Prior to application, each surface should be abraded and degreased thoroughly in order to obtain maximum bond strength. Certain materials require chemical etching. The adhesive is suitable for application by brush, spatula, or roller and should be applied to both the surfaces. For best results, the joint should be tightly clamped while the adhesive cures.
- iv) The working conditions should be kept clean. Direct contact with skin should be avoided. Use of good quality rubber socks or gloves are recommended.
- v) Keep the resin and hardener in a cool place. Containers should be tightly closed, to increase storage life. The above resin and hardener can be stored for a period of at least one year in their original container, if kept in sealed condition.

MATERIAL SAFETY DATA :

Product name	Synpol AD-200 Base	Synpol AD200 Hardener
Flash point ⁰ C. (Abel closed cup)	200	200
Flammability	Moderate fire risks.	
Toxicity	Moderately toxic by exposure and inhalation Avoid contact with skin	
Handling	Keep away from sources of ignition, provide all electric connections of flame-proof design. Wear safety glasses, rubber gloves and protective clothings.	
Emergency treatment and measures		
1 Hygienic precautions	Adequate ventilations.	
2 Hygienic treatments (First Aid)	Flush eyes thoroughly with water. Apply ophthalmic cortisone for conjunctivitis and keratities. Wash out contaminated skin with soap and water. Gastric lavage (stomach wash), if swallowed, followed by saline catharsis.	
3 Fire precautions (in case of outbreaks)	Use dry chemical or carbon dioxide. Water spray may help to keep containers cool, to dilute leaked resins and to diffuse vapours.	
Spills and leakage	Absorb liquid materials in sand and collect solid material and burn under hood in incinerator.	
Disposal and waste treatment	Spray into furnace under controlled conditions.	

STORAGE :

Synpol AD-200 Base and Hardener should be stored in cool and dry place under the shade. The properties are so adjusted to have a storage stability of minimum 6 months.

PACKINGS :

1 kgs & 0.8 kgs. nett in plastic bottles and 25 kgs & 20 kgs. nett in M.S. drums of Base & Hardener respectively,.

DISCLAIMER :

Information in this literature is to the best of our knowledge true and accurate. However, since conditions under which our products may be used are beyond our control, recommendations are made without warranty or guarantee. Our co-operation will always be available in tackling any specific technical problems.

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