



PROTAVIC[®] ANA 10710

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DEFINITION

Electrically insulating high speed curing mono-component used for the sticking of microchips. The rheology of **PROTAVIC[®] ANA 10710** has been developed for application by micro-dispenser using automatic machines.

It presents a 2 weeks pot life at 20±1°C combined with a very high reactivity at medium temperature. It exhibits an excellent thermal and humidity stability.

PRODUCT DESCRIPTION

Appearance	fluid liquid	
Odor	faint	
Color	black	
Guaranteed specification	Standard	method
Cone and plate CP 51 viscosity, 5 rpm - 25°C	8 000 ± 1 500 mPa.s	NFT 51211
Other informations		
Thixotropic index (0.5 / 5 rpm)	about 3	
Pot life* at 20 ± 2°C	2 weeks	
Density	1.20 approx.	
Possible curing cycles	- less than 10 seconds in the 150 – 180°C temperature range	
Storage stability	6 months at -20°C	

*: defined as 100% viscosity increase.

APPLICATION PROPERTIES

PROTAVIC[®] ANA 10710 adhesive exhibits excellent adhesive properties.

Its good latency enables it to be kept at 20±2°C for several days, allowing a great flexibility during its use on automatic lines.

It is 100% cross-linkable by heat at temperature of between 150 and 180°C.

It exhibits an excellent thermal stability up to 200°C and a low humidity uptake, which allow the product to maintain its bonding properties in a large scale of temperature/humidity conditions.

Its fineness makes the use of very small internal diameter needles possible.

METHOD OF USE

- 1) Take the container out of the freezer not more than 20 to 30 minutes before use in order to prevent any re-absorption of moisture.
- 2) Work on clean surfaces or clean all surfaces in order to remove any dirt or grease.
- 3) Apply the adhesive with a micro-dispenser. The product is perfectly compatible with small internal diameter needles.
- 4) Cure using one of the curing cycles compatible with the components, the substrate and the manufacturing conditions.

FIELDS OF USE

PROTAVIC[®] ANA 10710 adhesive excellent properties make it especially suitable for use in the electronics fields like die attach.

1- PHYSICO-CHEMICAL PROPERTIES OF UNCURED PRODUCT

Properties	Methods	Units	Results
Density at 20°C	NFT 51201 ISO 1675		about 1.20
Viscosity – CP 51 – 25°C	NFT 51211	mPa.s	8000±1500
Shear thinning Index 0.5/5 rpm	NFT 51211		About 3

2- CURING CONDITIONS

Possible curing cycles	- less than 10 seconds in the 150 – 180°C temperature range
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3- PHYSICO-CHEMICALS PROPERTIES OF CURED PRODUCT

Adhesion with 2x2mm ² silicon dies / PET substrates	Units	Results	
Curing conditions			
- 10" @150°C	kg/cm ²	100	
- 8" @160°C	kg/cm ²	125	
- 10" @160°C	kg/cm ²	200	
- 8" @170°C	kg/cm ²	250	
- 10" @170°C	kg/cm ²	200	
Properties	Methods	Units	Results
Coefficient of thermal expansion from 30 to 140°C	TMA 1	ppm/°C	90
Glass transition temperature	TMA 1	°C	About 150°C
Decomposition temperature in air	TGA 1	°C	about 390
Loss of weight between 25 and 150°C	TGA 1	%	About 0.8 %

PRECAUTION IN USE

Refer to the attached material safety data sheet

PACKAGING

PROTAVIC® ANA 10710 adhesive is supplied in syringes.

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Protavic International specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Protavic International's products. Protavic International specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Protavic International patents that may cover such processes or compositions. We recommend that each prospective user tests his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more European or foreign patents or patent applications.