



PROTAVIC INTERNATIONAL WORLDWIDE

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DEFINITION

The electrically non-conductive **PROTAVIC® ANH 20110** die attach adhesive is designed for BGA packages. **PROTAVIC® ANH 20110** presents excellent properties of flexibility, good adhesion and moisture resistance which allow package to withstand 260°C Pb-free reflow temperature. Its specific reactivity combines both latency at room temperature and fast curing cycle.

PRODUCT DESCRIPTION

Appearance	viscous liquid	
Odor	slight	
Color	off-white	
Guaranteed specifications	Standards	method
Cone and plate viscosity (5 rpm - 25°C)	10000 ± 1500 mPa.s	NFT 51211
Other information		
Pot life* at 20 ± 2°C	> 5 days	
Viscosity increase at 20°C after 1 day	Less than 25%	
density	1.3 approx.	
Thixotropy index	4.0	
Possible curing cycles	30 minutes at 175°C 2 minutes at 230°C	
Storage stability	1 year at T<-20°C	

* : defined as 100% viscosity increase.

APPLICATION PROPERTIES

PROTAVIC® ANH 20110 adhesive features excellent hot/wet adhesive properties. Its good latency enables it to be kept at 20±2°C for 1 day with a little increase of viscosity, so the viscosity remains virtually unchanged throughout the working day. The long pot life and the absence of solvent ensure that the product remains at a reasonably constant viscosity and facilitate application.

PROTAVIC® ANH 20110 may be oven cure at moderate temperature (175°C) and also snap cured when heated at 220-230°C.

METHOD OF USE

- 1) Take the package out of the freezer not more than 1 hour 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. Do not deposit the adhesive on a substrate which has just been cleaned with chlorinated solvents.
- 3) Apply the adhesive (by dispensing).
- 4) Cure using one of the curing cycles compatible with the components, the substrate and the manufacturing conditions.

FIELDS OF USE

The excellent properties of **PROTAVIC® ANH 20110** adhesive make it especially suitable for use in structural sticking where softness, moisture resistance and thermal resistance are required.

1- PHYSICO-CHEMICAL PROPERTIES

Properties	Methods	Results
SHORE D hardness	NFT 51109	50 - 60
Weight loss on cure 30min ramp up (25°C to 175°C) + 15min at 175°C	TGA 1	2.2 %
Moisture absorption (168 hours at 85°C, 85% Hr)	R 0802	< 1%
Tg by TMA Coefficient of thermal expansion α_1 α_2	TMA 1	-25°C 70 ppm/°C 135 ppm/°C
Modulus At 25 °C At 100°C At 250°C	DMA 1	430 Mpa 100 Mpa 75 MPa

Die shear strength at 25°C oven cure (30 minutes at 175°C)	5.6 kg/die	2x2 mm ² (80x80mil ²) Si die on Ag plated Cu frame
Die shear strength at 250°C	2.3 kg/die 7,5 kg/die	3.5x3.5 mm ² (140x140mil ²) Si die on Ag plated Cu frame 6.35x6.35 mm ² (250x250mil ²) Si die on Ag plated Cu frame
Die shear strength at 250°C after 85°C moisture saturation exposure for 1 day.	2.7 kg/die 6.8 kg/die	3.5x3.5 mm ² (140x140mil ²) Si die on Ag plated Cu frame 6.35x6.35 mm ² (250x250mil ²) Si die on Ag plated Cu frame

PRECAUTION IN USE

Refer to the attached material safety data sheet.

PACKAGING

PROTAVIC® ANH 20110 adhesive is supplied in 10 g and 30 g syringes.

The information contained in this data sheet corresponds to the present state of our knowledge ; it is intended for your guidance but we are not bound by it since we are not in a position to exercise control over the manner in which our products are used. Moreover, the attention of the user is drawn to the risks that could possibly occur should a product be used for an application other than that for which it is intended.