



PROTAVIC[®] ANE 10932

6-28157

DEFINITION

Insulating epoxy resin for die attach, **PROTAVIC[®] ANE 10932** presents a high glass transition temperature and a low coefficient of thermal expansion, perfectly adapted for high reliability ceramic attaching applications.

Its particular rheology makes the product well adapted to screen printing technology. It presents a good pot life at room temperature 20-22°C and a high reactivity at moderate temperature

PRODUCT DESCRIPTION

Appearance	Viscous liquid	
Odor	Faint	
Color	Cream	
Guaranteed specifications	Standards	Method
Cone and plate viscosity (5 rpm - 25°C)	25 000 ± 5 000 mPa.s	NFT 51211
Other information		
Pot life* at 20 ± 2°C	3 days	
Viscosity increase after 24 hours at 20±2°C	No evolution measured	
Density	1.65 approx.	
Possible curing cycles	- 6 minutes at 135°C - 3 minutes at 150°C - 60 to 90 seconds at 175°C	
Storage stability	- 3 months at T<-20°C - 6 months at T < -40°C	

* : defined as 100% viscosity increase.

APPLICATION PROPERTIES

PROTAVIC[®] ANE 10932 adhesive combines excellent adhesive and thermal properties.

Its good latency enables it to be kept at 20±2°C for three days, so the viscosity remains virtually unchanged throughout the working day.

It possesses excellent properties in terms of adhesion and protection against harmful environmental factors, due to its high purity epoxy base.

It is 100% cross-linkable by heat at temperature of between 125 and 200°C.

METHOD OF USE

- 1) Take the container out of the freezer not more than 30-45 minutes before use in order to prevent any reabsorption 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 screen printing or equivalent method.
- 4) Cure using one of the curing cycles compatible with the components, the substrate and the manufacturing conditions.

FIELDS OF USE

The properties set out below were determined following measurements carried out in the laboratory over a small number of tests. They are values given by way of guidance, and do not constitute a guarantee. It will be for the user, in all cases to carry out their own tests to determine whether **PROTAVIC ANE 10932** resin can be used for the particular application the user has in mind.

1- UNCURED SYSTEM

Properties	Methods	Units	Results
Color			Cream
Density at 20°C	NFT 51201		About 1.65
	ISO 1675		
Curing time @ 150°C (isotherm DSC)	DSC1	minutes	10
viscosity	NFT51211	mPa.s	about 25 000
Shear Thinning Index (0.5 / 15 rpm)	NFT51211		about 1
Grinding fineness	ISO 1524	microns	< 15
Filler content	TGA 1	%	about 65 %
loss of weight between 25 and -300°C	TGA 1	%	about 0.4

2- POLYMERIZED SYSTEM

Properties	Methods	Units	Results
shear strength	15'/150°C	daN/cm ²	> 300 50
Coefficient of thermal expansion - from -50°C to + 120°C	TMA 1	ppm/oC	25

Properties	Methods	Units	Results
Glass transition temperature	TMA 1	°C	150
SHORE D hardness	NFT 51109	none	90
Decomposition temperature in air	TGA 1	°C	about 440

PRECAUTION IN USE

Refer to the attached material safety data sheet.

PACKAGING

PROTAVIC[®] ANE 10932 adhesive is supplied in 40 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.