PROTAVIC® BCE-60462 (C3462LV)

REV 3.3 > A 28990-08-05 A

DEFINITION

Pure silver-based electroconductive varnish in solvent, cured by heating, for applying a conductive coating by dipping, especially on tantalum capacitors. Characteristic features are its thermo-stable base and slow rate of settling.

The **PROTAVIC® BCE-60462** has been specially designed to only leave a limited drop under the sheet of tantalum after dipping on an automatic machine.

PRODUCT DESCRIPTION

Appearance	liquid	
Odour	fruity	
Colour	silver	
Guaranteed specifications	**Standards**	**Methods**
Volume resistivity (mΩ.cm) 30 min. at 20°C + 5 min. at 200°C	< 0.2	ECA 1
Brookfield viscosity at 25°C (mPa.s) Mobile 2 - Speed 10 rpm	1 000 ± 200	NFT 51210
% Dry matter (P:90:10/170/4)	63 ± 3	S 9613
Other information		
Storage stability at T 20 ± 5°C	(Mix every three months to avoid hard pack) 1 year	
Curing conditions	30 min. at 20°C + 15 min. at 125°C or 30 min. at 20°C + 5 min. at 230°C	
Density	1.6 approx.	
Flash point	62°C	
Diluent (if needed)	**DILUANT PROTAVIC® 434**	

PROTAVIC

METHOD OF USE

A - Application process

Before being used in any way, the **PROTAVIC® BCE 60462** must be made absolutely homogeneous by stirring in its original container (using a spatula for small amounts) or by rolling the bottle slowly for between 4 and 12 hours at a speed of 5 to 15 rpm.

The **PROTAVIC® BCE 60462** does not require an undercoat. It adheres simply as a result of the evaporation of the solvent which it contains. The surface to which it is applied must be dry and free from any traces of oil, grease or dust.

The **PROTAVIC® BCE 60462** can be used as supplied, after having homogenized it as previously described.

Given its original viscosity, the application processes are as follows :

- dipping
- stencilling.

However, a diluent (exclusively the **DILUENT PROTAVIC® 434**) may be added until the desired viscosity is achieved, for special applications, in particular spraying.

The **DILUENT PROTAVIC® 434** may also be used for removing any **PROTAVIC® BCE 60462** which has been incorrectly applied before it undergoes drying and curing and for cleaning the equipment used for applying it.

B - Drying

The **PROTAVIC®** BCE 60462 must be dried in open air or in a ventilated oven (set to a temperature of about 65°C) ; it is also possible to remove its solvent system (in the space of somewhere between a few minutes and quarter of an hour depending on the thickness deposited) by infrared drying.

With thin layers this is not necessary.

C - Curing conditions

After the evaporation of its solvent phase, the **PROTAVIC®** BCE 60462 can be cured at 125°C in 14-15 min.

Very good results in terms of adhesion and conductivity are achieved by curing for 30-60 min. at 150°C.

When the curing temperature is not an obstacle for the component or the manufacturing process, curing for 30 min. at 175°C enables the user to achieve optimum adhesion, conductivity and protection against harmful environmental factors.

Temperatures of around 205°C or over produce very good results with curing times of less than 5 min.

TYPICAL PROPERTIES OF CURED PROTAVIC® BCE 60462

A - Electrical properties

Curing conditions	Volume resistivity(*)
30 min. at 20°C + 1 h at 125°C	0.2 m-ohm.cm
30 min. at 20°C + 30 min. at 150°C	0.15 m-ohm.cm
30 min. at 20°C + 15 min. at 175°C	0.1 m-ohm.cm

(*) ECA 1 Method (Method available on request)

B - Glass transition temperature

Curing conditions	Glass transition temperature (**)
30 min. at 20°C + 15 min. at 175°C	70-90°C

(**) Values obtained by differential calorimetric analysis.

C - Thermostability in air

A thermogravimetric analysis (***) of **PROTAVIC® BCE 60462C** cured for 15 min. at 175°C gives :

Decomposition temperature in air	350°C approx.

D - Ionic purity

Chlorine content	< 5 ppm

(***) 10°C/min. in a stream of air (200 ml/mn)

FIELD OF APPLICATION

The **PROTAVIC® BCE 60462**'s good properties and ease of use mean that it finds its preferred use in the field of electronics, both for professional users and the general public, when seeking to achieve electro-conductive, thermostable coatings and carry out sticking operations, especially for :

- resistors, capacitors, etc.
- fixing conductive wires on quartz crystal,
- producing electroconductive tracks,
- producing electroconductive coatings, etc.

PROTAVIC

STORAGE CONDITIONS

The **PROTAVIC® BCE 60462** must be stored at a temperature 20°C ± 5°C in order to keep its initial properties.

It also needs to be kept in its hermetically sealed container in order to prevent losses of solvent through evaporation.

If necessary, any losses due to evaporation can be made good by adding diluent (exclusively the **DILUENT PROTAVIC® 434**).

Storage temperature	20°C ± 5°C	20°C ± 5°C
Storage time	1 year	1 **year**

PRECAUTIONS OF USE

Refer to the enclosed safety data sheet.

PACKAGING

The **PROTAVIC® BCE 60462** is supplied in various size flasks.

PROTAVIC

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.