



PROTAVIC International

Your source for the latest in electronic material for active and passive component, packaging to board level assembly.



The story of Protavic International



PROTAVIC INTERNATIONAL is a part of a diversified and internationally oriented chemicals group:

Protex International

We are able to provide tailor made services and products with the backing of a global company.

500 employees over the world

100 M Euros

With strategically facilities located in Europe, America and Asia we are your neighbor



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Protex International locations



North America

Europe:

Austria
Belgium
Denmark
France
Germany
Italy
Netherlands
Portugal

United Kingdom
Spain
Sweden
Switzerland
Morocco

Asia:

China
Hong Kong
Indonesia
South Korea
Taiwan
Thailand



Protavic locations



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Strong Innovation Policy



With over 100 patents issued, 12% of the sales invest in R&D, Protavic products are continuously evolving to keep ahead of the fast growing needs of the electronic industry today.

Protavic International has 4 R&D centers located near our customer:

France château Renault

USA Londonderry – NH

China Suzhou - Jiangsu

South Korea – DaeJeon



Quality Policy



We have over 70 years experience producing high quality products and with our industry experts to develop new cutting edge materials, you are assured of working with the best in the business.

Protavic is certified ISO 9001 vers. 2000



Our products types



The productions of Protavic include:

- Adhesives
- Encapsulants
- Coating materials
- Sealants
- Inks
- Silver powders and flakes

Material properties manage:

- Thermal conductivity
- Electrical conductivity
- Electrical insulation

Based on several chemistries:

- Epoxy
- Polyurethane
- Silicone
- Polyimide
- Polyester
- Acrylic
- Copolymers and Hybrids



Protavic products and technologies

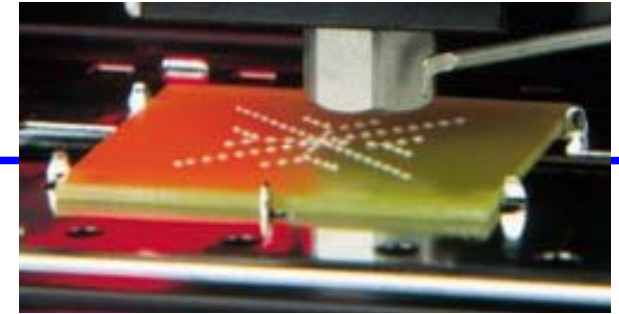


Applications:

- * Die attach
- * Glob top
- * Dam and Fill
- * Underfill
- * Potting
- * Electroconductive inks and adhesives
- * Ferrite bonding
- * General bonding and sealing
- * Hacking prevention for STB
- * Sensor bonding & LED



Die attach



Applications

- * Smart Card: Die attach and Flip Chip bonding
- * Tantalum capacitors : Pavement bonding
- * SMD Technology

Epoxy electro conductive

ACE 10011

ACE 10131

ACE 10600 MD A/B

ACE 10030 LF

ACE 10201

ACE 20203

ACE 10221LF

ACE 30001

Epoxy insulating

ATE 10130

ANE 30100

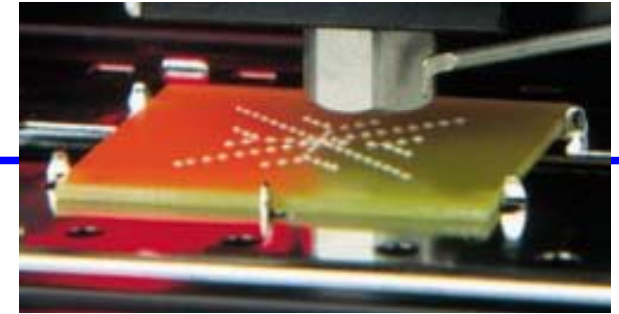
ANE 10700

ANE 10420

ATE 10615



Die attach



Applications

- * Package assembly for
PDIP, PLCC, SO, SSOP, SSOP H/S,
SSOP EPP, TSOP Type 1, TSOP Type 2,
TSOP type 2 LOC, TSSOP, TSSOP EPP,
MQFP, LQFP, TQFP, TQFN punch type,
TQFN saw type, FBGA, PBGA, TFBGA,
Stacked CSP

Standard Epoxy and B-stageable, Polyimide

ACE 10200

ACA 10490

ANH 20110

ACH 20120

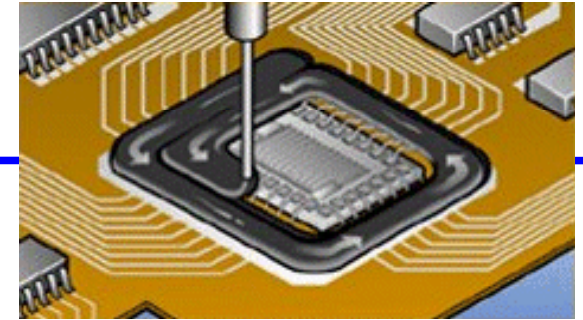
ACH 20130

BCM 60240

ACE 10609 A-B



Glob Top



Protect wire bonding and sensible components against thermal and physical stress

Applications

- * Smart Card
- * Package
- * Hybrid/PCB selective coating

Epoxy (thermal cure)

ANE 20231

PNE 20270

PNE 30750

Epoxy (UV cure)

PNE 90292

PNE 90592

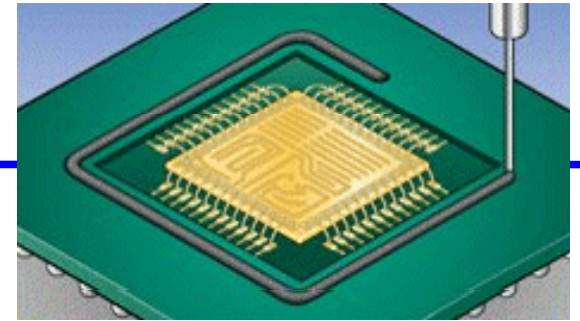
PNE 90540

PNE 90580

PNE 90590



Dam and Fill



Applications

- * Smart Card
- * Packages
- * Hybrid/PCB

Epoxy (thermal cure)

PNE 20451 & PNE 20450
PNE 30250 & PNE 30270
or PNE 30273
PNE 30251 & PNE 30261

Epoxy (UV cure)

PNE 90541 & PNE 90540
or PNE 90542
PNE 90592 & PNE 90292
PNE 90598 & PNE 90298
PNE 90599 & PNE 90299

Protect wire bonding and sensible components against thermal and physical stress by using 2 types of resins

*1st pasty and thixotropic resin to make a barrier
*2nd liquid resin to fill the cavity

advantage: control the size (larger and thickness) of the encapsulation by using liquid resin



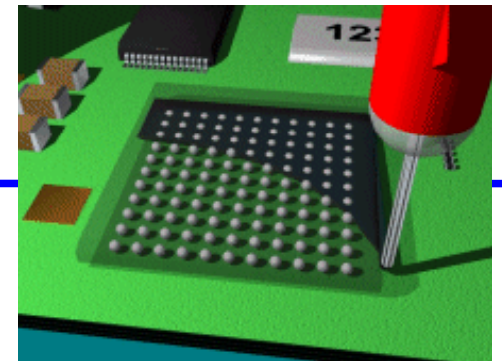
Underfill

Application

- * Mobile phone
- * Defence, aeronautics, aerospace
- * Set Top Boxes

Epoxy 1 component

ANE 10931
ANE 20901
ANE 20904
ANE 20930
ANE 20950
ANE 20960



Prevent and protect
CSP, BGA, flip chip.
Improvement of
connected reliability to

- * Thermal stress
heat
humidity
- * Physical stress
drop test
push test
vibration



Potting

Applications

- * Automotive
- * Converters
- * Defence, aeronautics, aerospace
- * General electronic applications

Epoxy (thermal cure)

PNE 40771

PNE 40772

PNE 50720

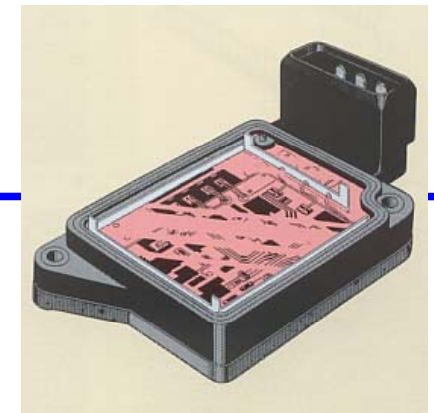
PNE 30273

PNE 20274 A/B

L101K or L102 or L103 + H12

L203(N) + H12

L213N + H13



Protect components by filling a cavity, against:

- * Thermal stress
heat
humidity
- * Mechanical stress
- * Chemical stress



Potting

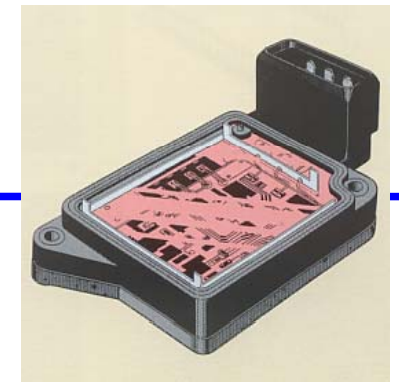
Epoxy 2 component
PNE 47859A/B

Epoxy (UV cure)
ANE 90572

Acrylate (UV cure)
ANA 97173

Polyurethane insulating 2 components
PNU 46201A/B
PNU 46203A/B
PNU 46204A/B

Silicone insulating 1 component
PNS 46301



Electro conductive Inks

Application

- * RFID
- * Contactless and Dual Smart Card
- * Membrane switches

Polyester inks for RFID and membrane switches

VCO 60101
VCO 60110
VCO 60120
VCO 60130



Realize
electroconductive
tracks on different
kind of substrate:
plastic
paper
by screen printing
process

advantage: good
adhesion and
flexibility on PC, PET
substrate



Ferrite Bonding

Application

- * Automotive
 - electric motor for wiper
 - power assisted steering
- * Converters
 - general electronic application
 - defence, aeronautics, aerospace

Epoxy 1 component
ANE 20020
ANE 30010
ANE 26144-00XX
ANE 26145
ANE 26147-00XX

Epoxy 2 component
ANE 36142A/B
ANE 36143A/B
ANE 26144A/B

Without spacer and
high thermal resistance
resistance
ANE 20423



Bonding of every
types of ferrite
cores: E, U....

With spacers
between 38µm to
135 µm to control
the resin thickness



Sealing

Applications

- * Automotive
- * Industry
- * Medical
- * Defence, aeronautic, aerospace

Polyurethane insulating 2 components

PNU 46201A/B

PNU 46203A/B

PNU 46204A/B

Silicone insulating 1 component

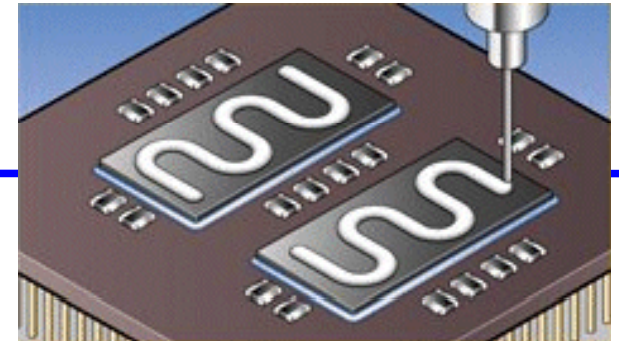
PNS 46301



Sealing by
overmoulding,
coating or cover
bonding



Thermal dissipation



Thermal conductive
adhesives for bonding,
potting applications

Applications

- * Converters
- * Power supply
- * Micro processing

Epoxy 2 components
PTE 47853A/B

Polyurethane 2 components
PTU 46201A/B

Silicone 1 component
PTS 46313

Silicone 2 components
PTS 46303 A/B
PTS 46323A/B



Hacking prevention for STB

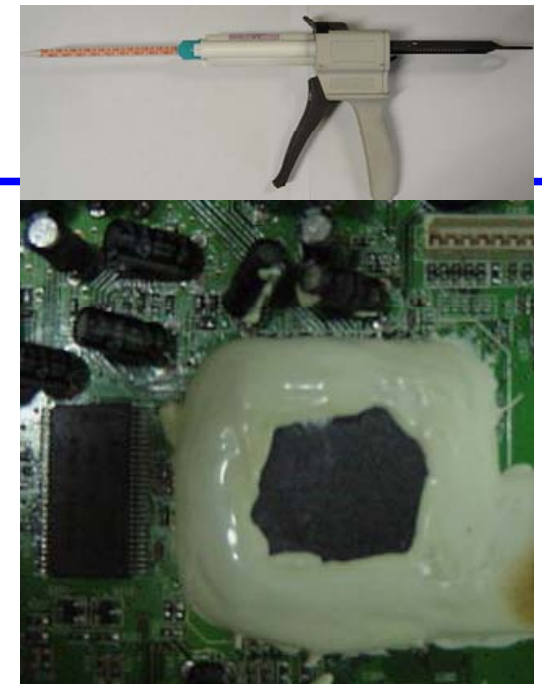
Application

* Set Top Boxes for pay TV

Epoxy 1 component for BGA underfill
ANE 10931

Epoxy 1 component for testing points and via protection
PNE 20600

Epoxy 2 component for component coating
PNE 44822A/B
PNE 44006A/B
PNE 40824A/B



Protect testing point
and components (flash
memory...)
by encapsulation or
underfill



Sensor bonding

Application

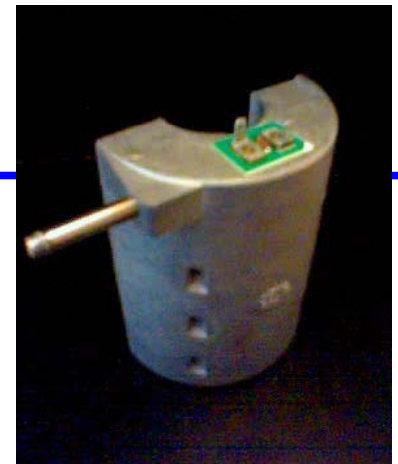
- * Automotive
- * Household appliance

Epoxy 1 component

PNE 10420
PNE 10421
PNE 30273
ANE 10422

Epoxy 2 components

PNE 20274A/B



Specific resin developed for sensor bonding. Assure an excellent energy transfer between the sensor and the substrate.

- * thermal
- * mechanical (deformation, shock)

