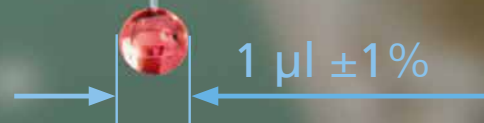


micro
dispensing
in perfection!

2018



$1\ \mu\text{l} \pm 1\%$



preeflow®

by ViscoTec

preeflow® 1K dispensers

The brand with the systematic approach.
preeflow® – high-quality products ranging
from control units to dispensers that live
up to our vision 'small, precise, economical'.



eco-PEN300
min. dosing quantity
0.001 ml
volume flow
0.12-1.48 ml/min
weight
approx. 380 g



eco-PEN330
min. dosing quantity
0.002 ml
volume flow
0.2-3.3 ml/min
weight
approx. 410 g



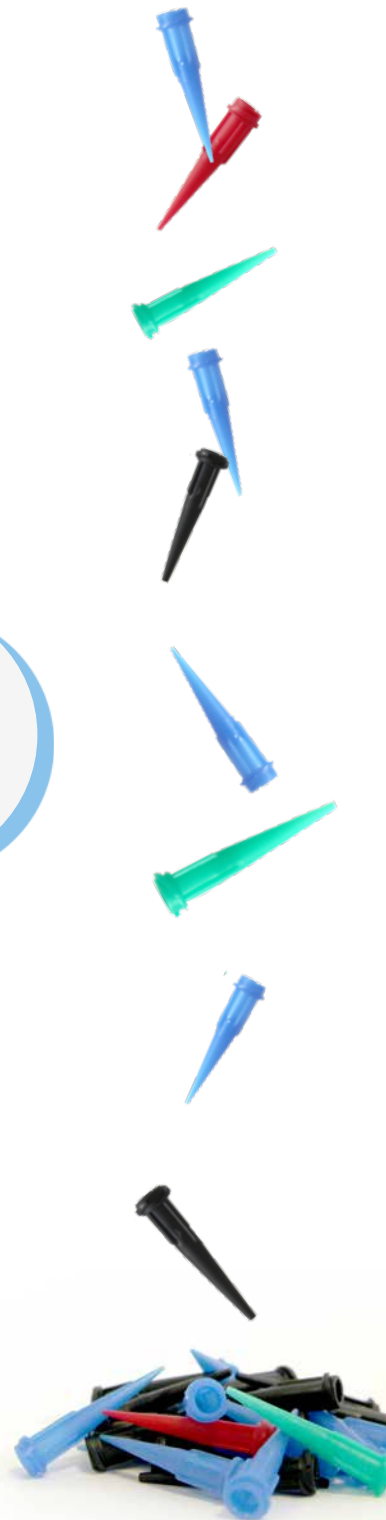
eco-PEN450
min. dosing quantity
0.004 ml
volume flow
0.5-6.0 ml/min
weight
approx. 410 g



eco-PEN600
min. dosing quantity
0.015 ml
volume flow
1.4-16.0 ml/min
weight
approx. 750 g



eco-PEN700^{3D}
min. dosing quantity
0.060 ml
volume flow
5.30-60.0 ml/min
weight
approx. 750 g



preflow® 2K dispensers



eco-DUO600
min. dosing quantity
0.030 ml
volume flow
0.6-32.0 ml/min
weight
approx. 1,600 g





ec-DUO450

min. dosing quantity
0.010 ml
volume flow
0.2-12.0 ml/min
weight
approx. 1,100 g

ec-DUO330

min. dosing quantity
0.005 ml
volume flow
0.1-6.6 ml/min
weight
approx. 1,100 g

preeflow® 1K controllers



EC200-K



EC200-B

process
safe

original
sizes



plug'n'dose

precise

Precision mechanics coupled with the latest digital control – a perfect combination.
Designed to optimize your 2K process.
preeflow® – micro dispensing in perfection!

preeflow® 2K controllers



EC200-DUO

volumetric

easy

fast



plug'n'mix

You can find more information
about our 2K equipment and
the other preeflow® products
on our website: www.preeflow.com

preeflow[®] spray dispensers

The new precision volume dispenser eco-SPRAY made by ViscoTec offers a wide range of applications for low to high viscosity spray media. The preeflow[®] eco-SPRAY guarantees a volumetric spray application based on the endless piston principle. The base of this new microspraying technology is still our proven rotor/stator technology. Due to a defined rotary motion of the rotor the medium in the stator is volumetrically replaced and conveyance is created. Thus a determined amount of medium is process controlled and directed to the special low flow spray chamber. The precise nebulization and spraying can take place continuously or punctually. The revolutionary combination of the endless piston principle and the low flow spraying chamber guarantees perfect spraying of low to high-viscosity fluids with high edge definition and lowest possible overspray.

eco-SPRAY

min. dosing quantity
50 µl
volume flow
0.5 to 6.0 ml/min
weight
approx. 640 g

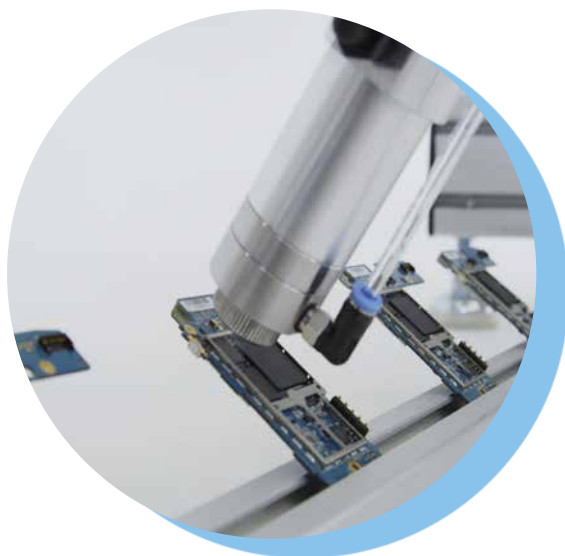
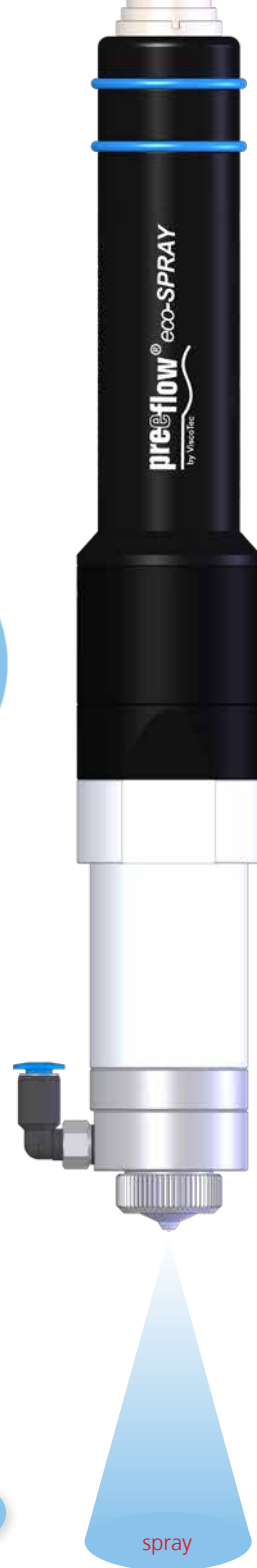
high edge
definition/
no over
spray

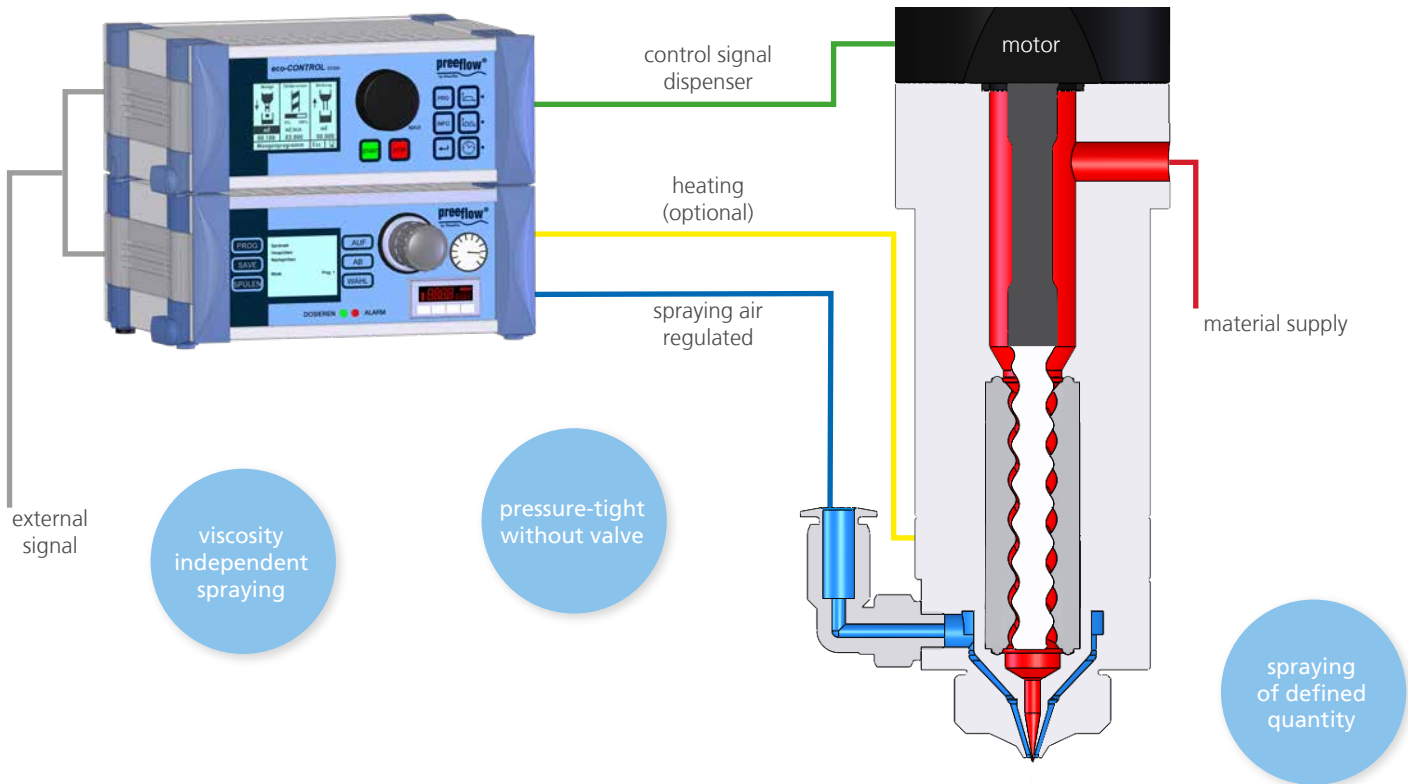
controllable
round
spray

low to high
viscosity
spray

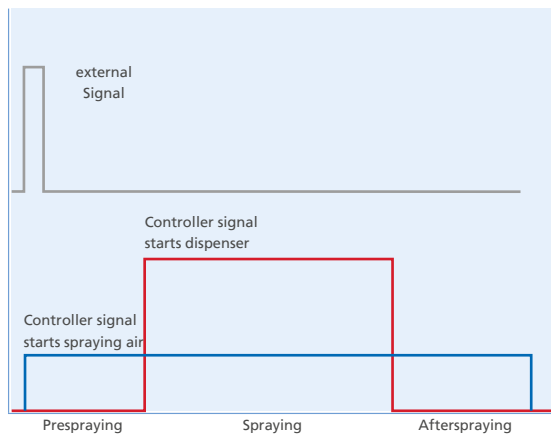
true volumetric
spray

high precision
spray

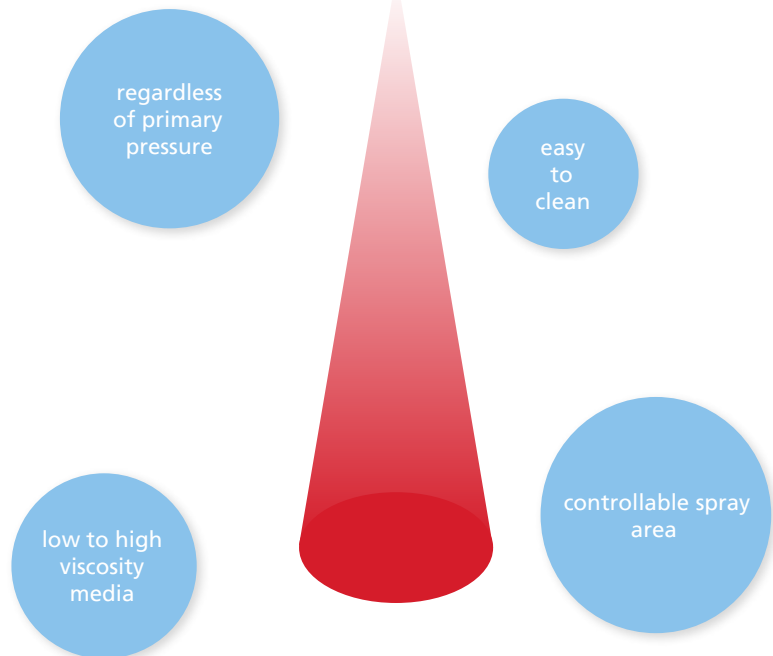




Switching example eco-SPRAY controller



Prespraying, spraying, afterspraying and pressure are customer specifically adjustable. Thereby individual spray contours are possible.



benefits and technology

The medium is unaltered by this process. And simply by switching to reverse-flow **preeflow®** ensures a clean and controlled stop of material or medium. No drips, no mess – always!

more than
20 years
dispensing
experience

very easy
handling

100 %
dosing
technology

our vision -
always a step
ahead



we focus
on your
solution

world wide
24/7
support

Technology:

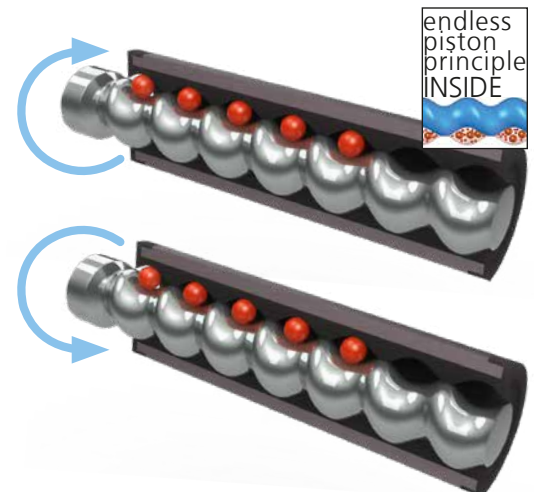
The dosing principle of **preeflow®** dispenser is based on progressive cavity pumps.

This special dosing geometry allows an endless and pulsation free dosing flow. The possibility of reversing the dosing flow (suckback) will prevent from dripping and leads to a perfect control of media stringing or dripping.

Especially sensitive fluids with high viscosity and fillers inside experience a gentle treatment due to the low shear stress and the low pressure.

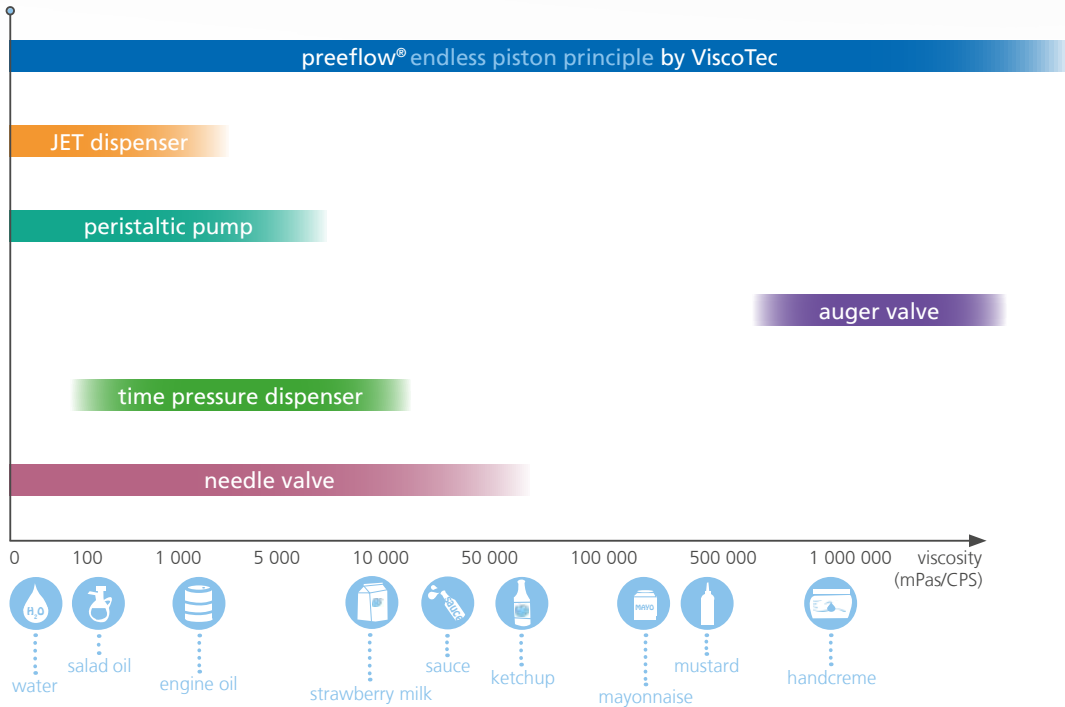
Therefore, it is: many tasks – one principle!

preeflow®

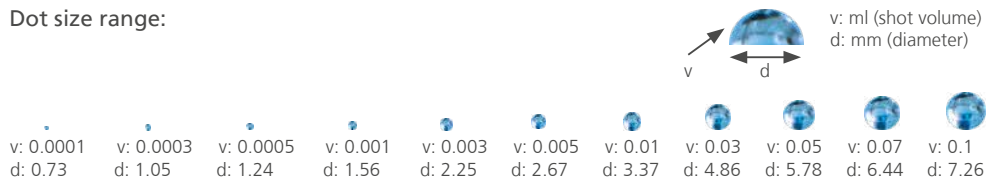




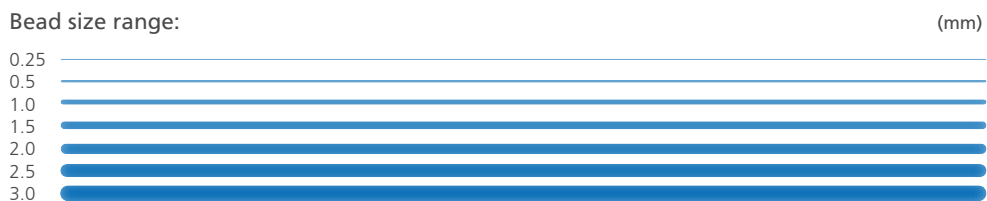
Dosing technologies in use:



Dot size range:



Bead size range:



applications in focus

preeflow® products offer the ideal properties to ensure that all relevant 1 & 2 component applications in several industries are perfectly dosed!

easy to
integrate
in machines

max.
particle
size 1 mm

endless piston
principle
inside

high
repeatability
more than
99 %

Bonding

In the industrial world, the term of Bonding refers to join securely to something else, especially by means of an adhesive or chemical substance, heat or pressure. In our case, any combination of any type and roughness of materials could be joined together through the application of adhesives. The bonding therefore replaces more traditional technics such as riveting or welding.



reversible
material
flow

Optical Bonding

Optical Bonding is a process in which a clear adhesive is applied between the layers of glass in a touch screen display. The main goal of this bonding process is to improve the performance of the display. This procedure eliminates the gap between the glass and the display. A great deal of importance is placed on dosing precision in the field of smartphone and tablet manufacturing in particular.



Conformal Coating

Conformal Coating is a protective coating which takes the form of a non-transparent or transparent varnish that is applied to all or parts of PCBs. The materials are usually high viscosity thermal or UV curing materials and are dosed onto the PCB using either a thin film or a thick film procedure.

no stringing
nor dripping

bead
factor
< 2 %

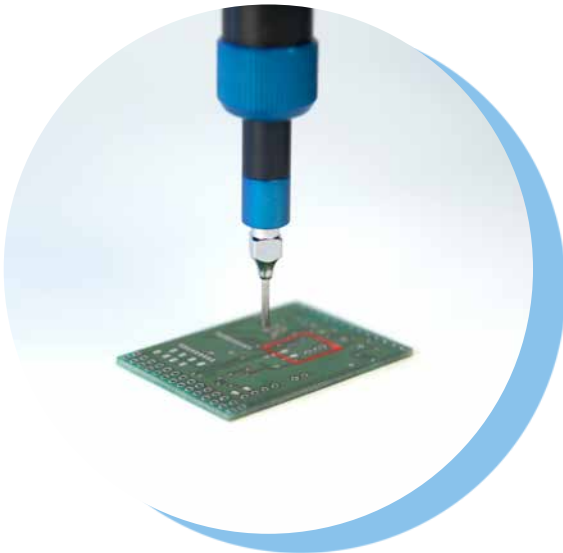
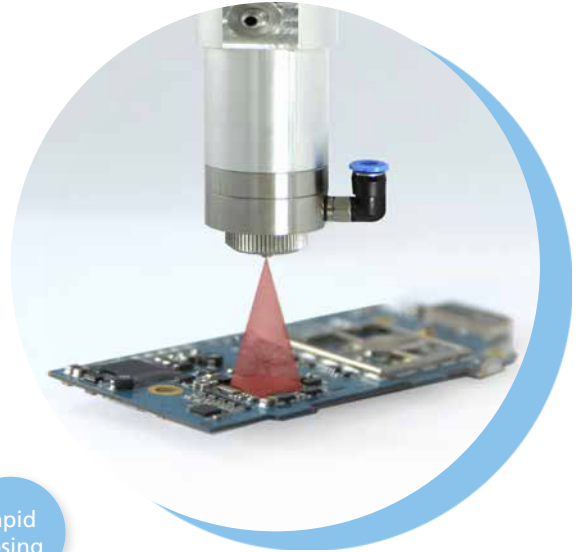
independent
of pressure,
temperature
and time

rapid
dosing

very wide
viscosity
range

liquids
containing
fillers

pulsation
free



Dam & Fill

In Dam & Fill applications, the primary aim is to protect highly complex assemblies. Firstly, a high viscosity barrier, known as the "Dam", is applied to the surface to be sealed. Then the adjacent area is filled with a filler which provides protection and sealing effect.

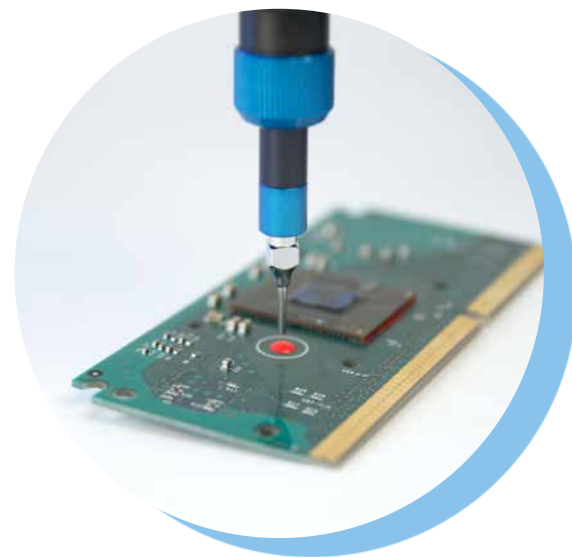
Glob Top

Glob Top potting is designed to protect sensitive components, usually semiconductor chips, from mechanical stress such as vibrations or fluctuations in temperature. External environmental factors too, like moisture or corrosion, are thus prevented from having an impact on the potted components. This effect is realised by applying a fluid resin matrix, mostly an epoxy resin adhesive, which is then cured.

gentle
product
handling

reproducible
results

pure
volumetric
dosing



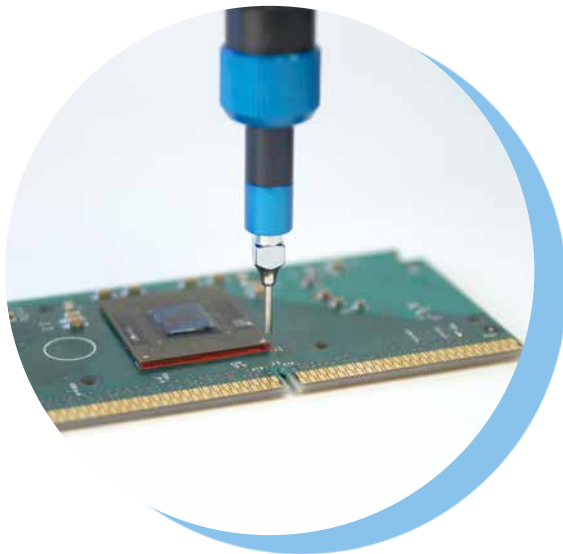
Underfill

Underfill applications usually are used with isotropic conductive adhesives. In this case, the isotropic conductive adhesive provides the electrical connection from the microchip to the substrate. As this adhesive is not applied over the entire surface, after the thermally or UV curing process, another filling of the hollow space is necessary, the so called "Underfill".

easy to
clean

up to
three shots
per second

exact
volume
control



examples
of
materials

UV & light curing

toluene

sealing agents

shear-sensitive
adhesives

2K epoxy

heat curing

anaerobic

1K epoxy

gasoline

high fill fluids

flavours

thermal
conductive
paste

short and easily
accessible
fluid path

self sealing
displacement
system

Micro Dispensing

Micro Dispensing refers to the dosing of fluid media in volume of just a few microlitres. Other fields of application are, for example, bead dosing, sealing, dot dosing, potting and 2 component applications. These applications in particular call for high levels of precision, repeatability and reliability.



pressure
stable

low to high
viscous
liquids



Encapsulating

Encapsulating is the process of applying a fluid sealing compound to a small and defined area on a component or on a surface. The sealing compound protects the electrical component both in transports and from environmental influences such as vibration, shakes, humidity, dust and extreme temperature.

Other benefits include an improved electrical insulation, a higher safety against damage as well as a better chemical resistance.

dosing
accuracy
 $\pm 1 \%$

solder paste

silver paste

cosmetics & medicines

industrial oils

silicones

isopropanol

paints & inks

biotechnical suspensions

MEK

epoxy resin

acetone

alcohol

brazing paste

electrolytic solutions

grease

primer

thermal grease

perfume

PU

and
many
more...



preeflow®
by ViscoTec

- e**asy dosing technology
- e**asy handling, easy dispensing
- e**xact, precise dosing
- e**ffective dosing
- e**conomic, saves up to 30% of the medium

More information: www.preeflow.com

THE ORIGINAL!

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service & support center
please contact us
for further information!

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Internet: www.viscotec.de

Telefon: +49(0)8631/9274-0
Fax: +49(0)8631/9274-300

ViscoTec