

micro  
dispensing  
in perfection!



**preeflow<sup>®</sup>**

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-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<sup>3D</sup>

min. dosing quantity  
0.060 ml  
volume flow  
5.30-60.0 ml/min  
weight  
approx. 750 g



original  
sizes

# preeflow<sup>®</sup> 1K controllers

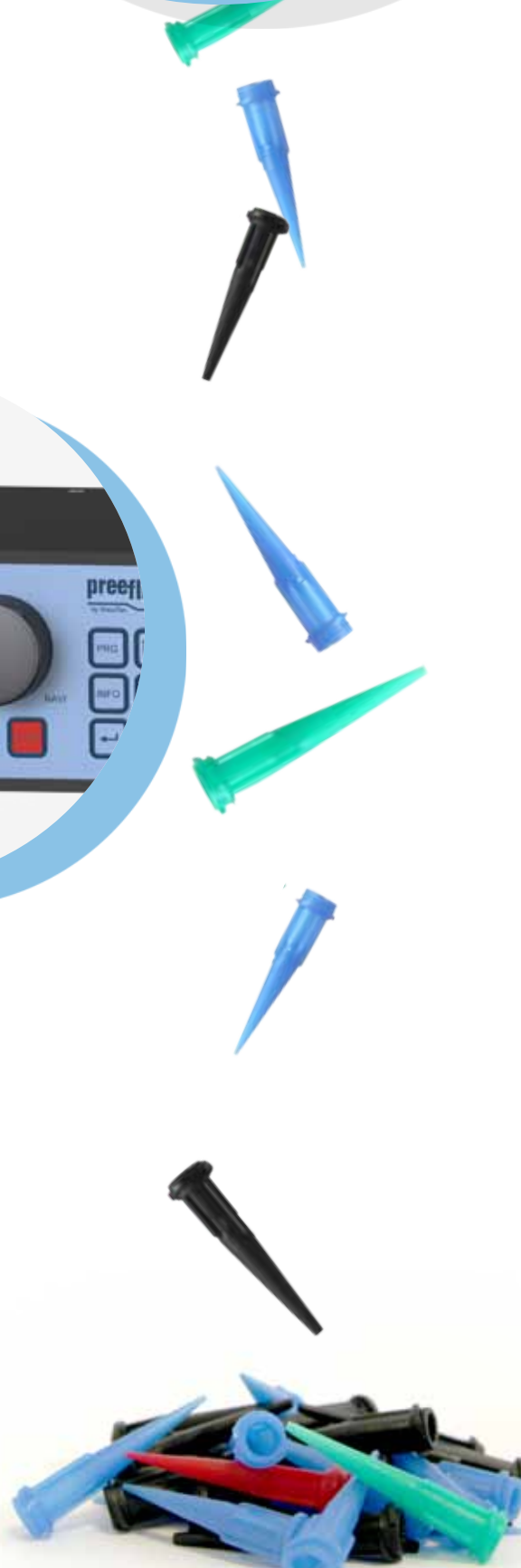
EC200-K



EC200-B



plug'n'dose



# pre@flow<sup>®</sup> 2K dispensers

original  
sizes



**eco-DUO450**  
min. dosing quantity  
0.010 ml  
volume flow  
0.2-12.0 ml/min  
weight  
approx. 1,100 g

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

**new!**

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

# preeflow® 2K controllers

EC200-DUO



**new!**

plug'n'mix



You can find more information about our 2K equipment and the other preeflow® products on our website: [www.preeflow.com](http://www.preeflow.com)



# benefits and technology

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

**preeflow**<sup>®</sup>  
by ViscoTec

more than  
20 years  
dispensing  
experience

our vision -  
always a step  
ahead

100 %  
dosing  
technology

we focus  
on your  
solution

very easy  
handling

world wide  
24/7  
support



## Technology:

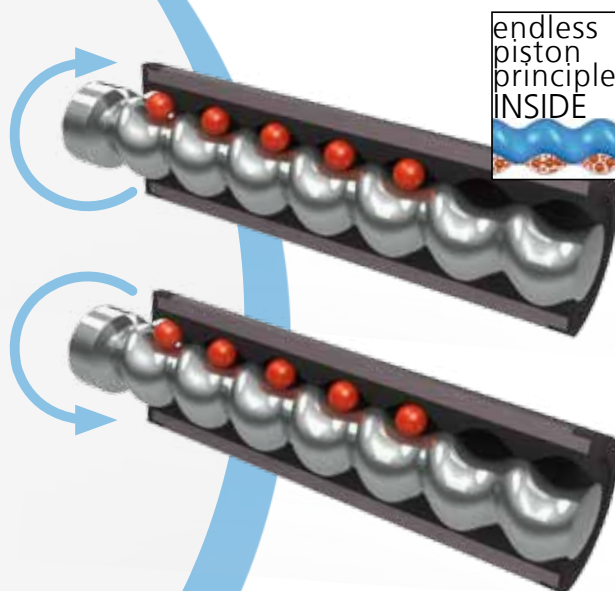
The dosing principle of **preeflow**<sup>®</sup> dispenser is an endless piston dispenser.

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.

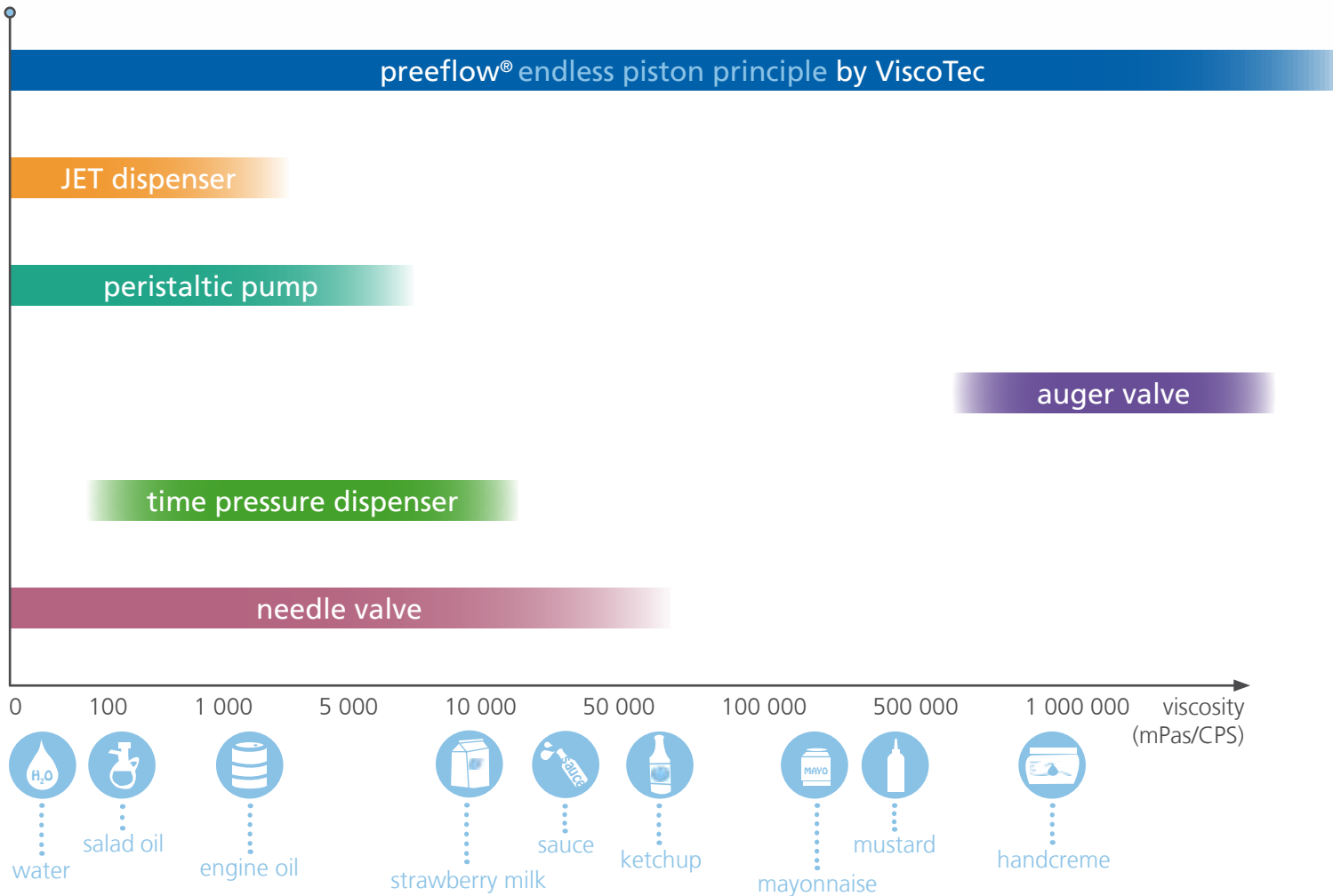
Therefore, it is: many tasks - one principle!

**preeflow**<sup>®</sup> one for all - conformal coating, sealing, bonding, micro dot, dam & fill, underfill, glob top.

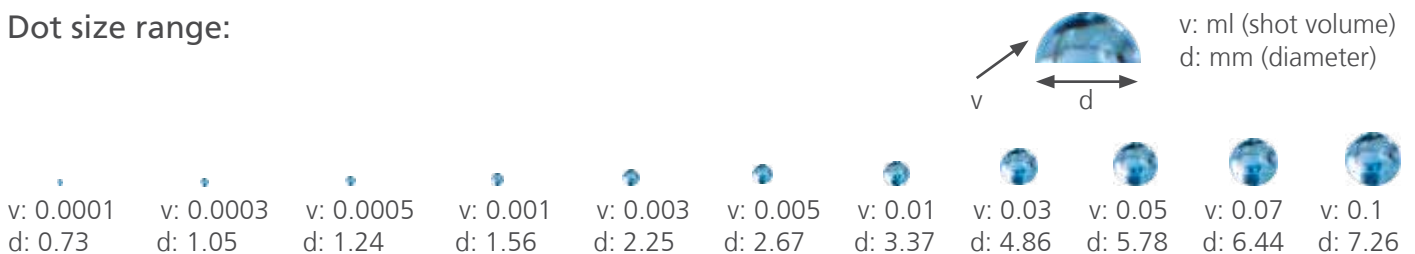




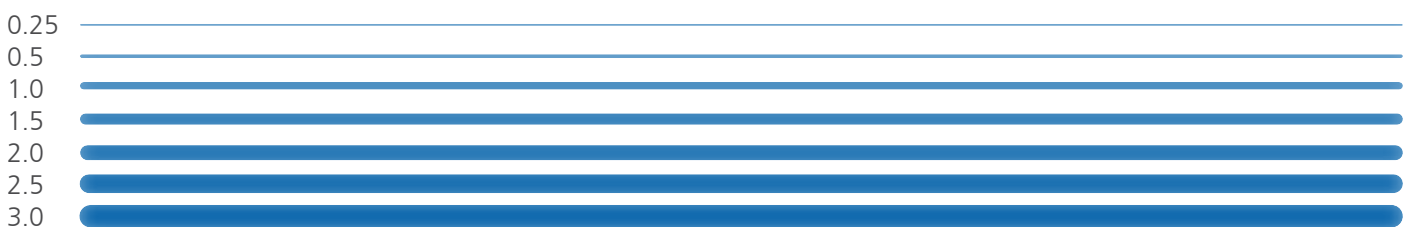
Dosing technologies in use:



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!

max.  
particle  
size 1 mm

endless piston  
principle  
inside

## 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.

easy to  
integrate  
in machines

high  
repeatability  
more than  
99 %



reversible  
material  
flow



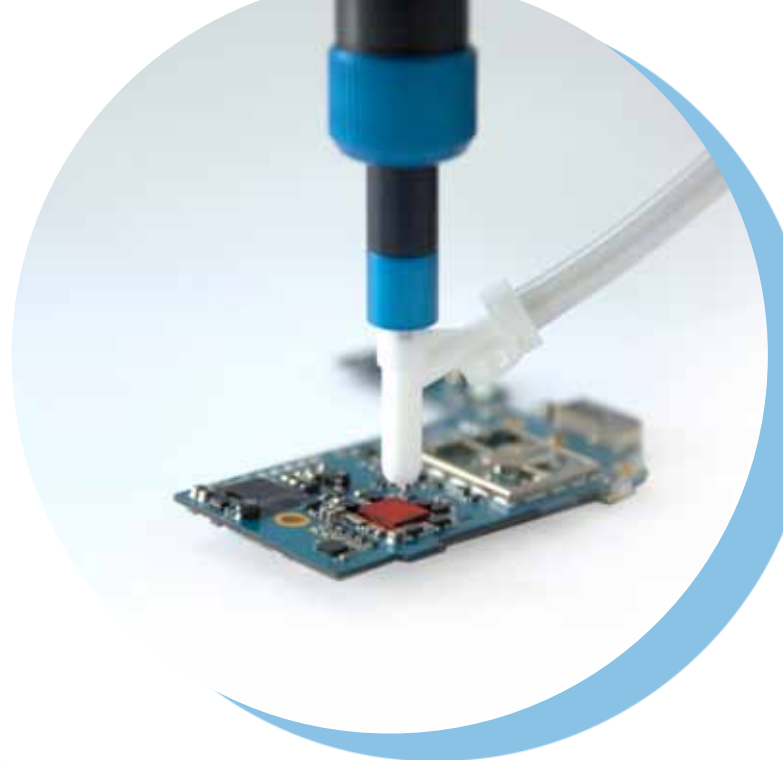
## Optical Bonding

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 when outdoors. 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

A 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.

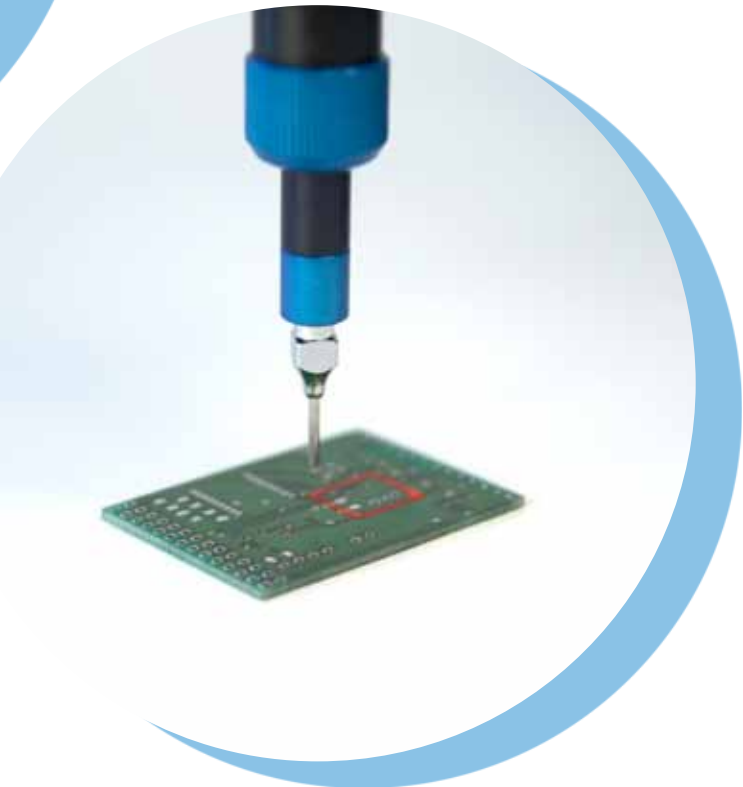


bead  
factor  
< 2 %

no stringing  
nor dripping

independent  
of pressure,  
temperature  
and time

very wide  
viscosity  
range



## 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.

rapid  
dosing

pulsation  
free

liquids  
containing  
fillers

# 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.

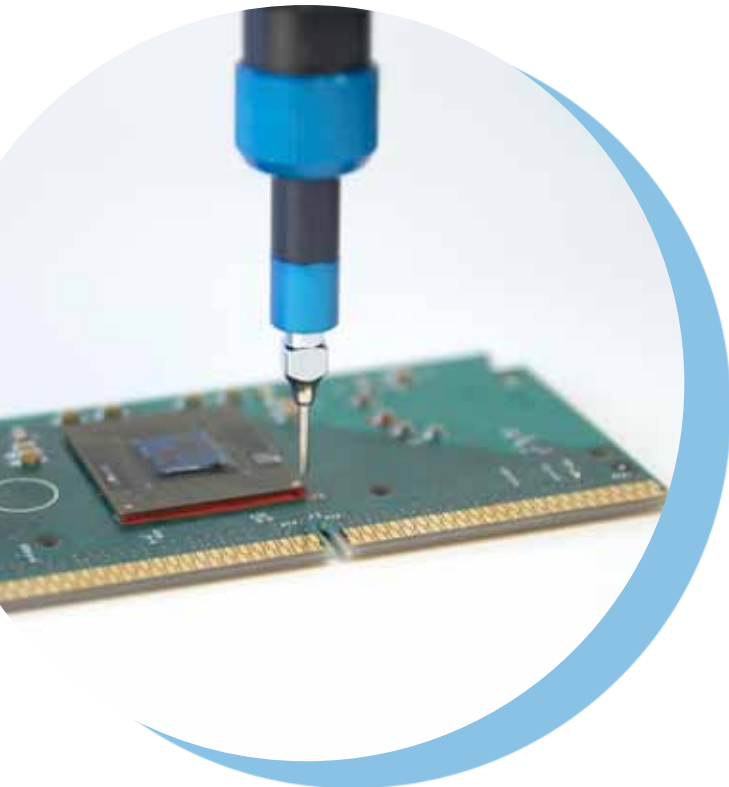


gentle product handling

reproducible results

pure volumetric dosing

easy to clean



## 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".

up to three shots per second

exact volume control

# examples of materials

UV & light curing

anaerobic

toluene

sealing agents

2K epoxy

heat curing

shear-sensitive adhesives

1K epoxy

flavours

gasoline

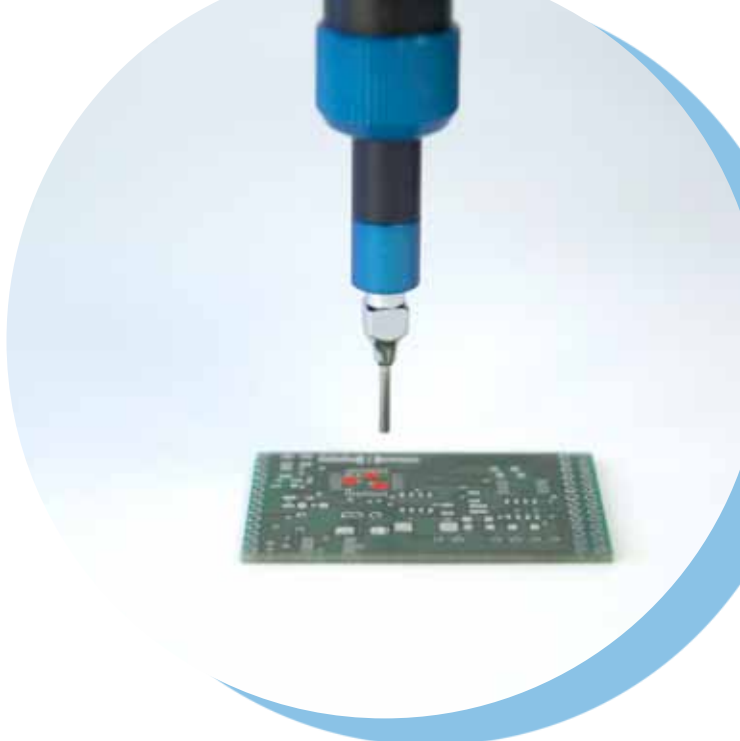
high fill fluids

LED resins

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, repeat accuracy and reliability.



watery to high viscous liquids

pressure stable

dosing accuracy  $\pm 1\%$

## Encapsulating

Encapsulating is the process of applying a fluid sealing compound to a small and define 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.

solder paste

RTV rubbers

silver paste

flux

industrial oils

perfume

silicones

cosmetics & medicines

biotechnical suspensions

isopropanol

alcohol

MEK

grease

thermal grease

paints & inks

acetone

electrolytic solutions

brazing paste

primer

epoxy resin

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](http://www.preeflow.com)

**THE ORIGINAL!**

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