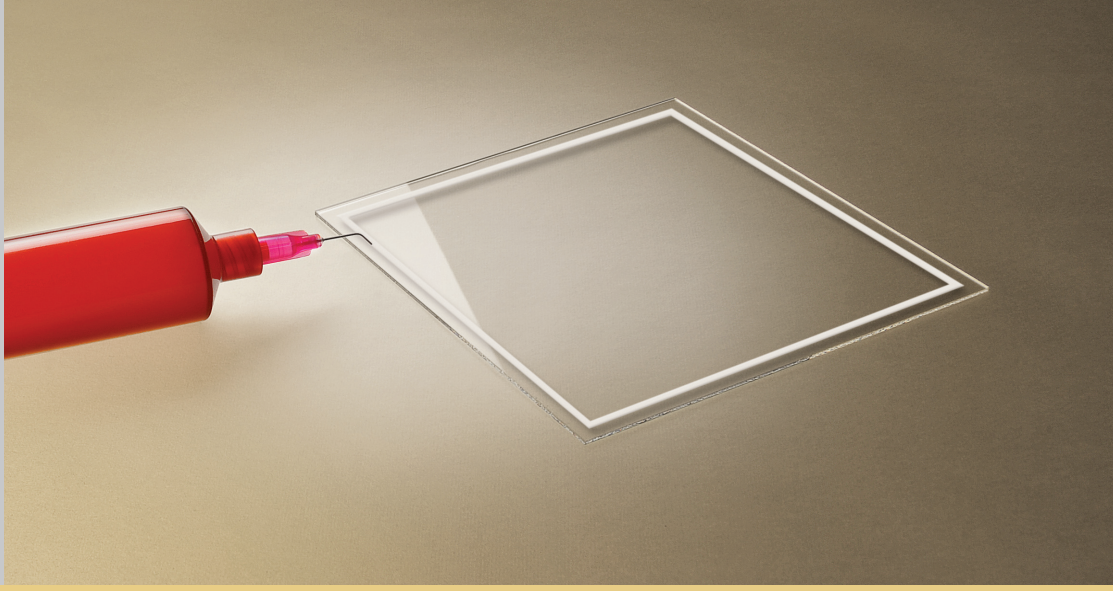
FlexGloo
Flexible Active Edge Sealant



HIGHLIGHTS

General Features

- ☐ The first active edge sealant with mechanical properties really enabling plastic electronics
- ☐ An easy replacement of high performance edge sealants, boosting barrier properties and full flexibility, without delamination
- ☐ Compatible with both rigid and plastic surfaces
- ☐ Superior adhesion performances, coupled to optimized barrier properties
- ☐ To be applied via needle dispensing, blading and slot die coating on the entire surface, or as an active edge sealant in flexible type dam-and-fill encapsulation

Applications

- ☐ Active Matrix OLED displays
- ☐ Passive Matrix OLED displays
- ☐ OLED lighting systems
- ☐ Organic photovoltaic devices
- ☐ Organic sensors
- ☐ OFETs
- ☐ OLETs
- ☐ Organic lasers
- ☐ Any moisture-sensitive device

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Product Description

FlexGloo™ is a UV curable dispersion of and irreversible moisture getter in an epoxy matrix. FlexGloo combines the superior barrier performances of epoxies with the good mechanical properties typical of flexible adhesives.
FlexGloo looks like a whitish paste.

Material Property	Typical value
Appearance	Whitish glue
Viscosity at 25 °C (cP)	5,800 (*)
Density (g/cm^3)	1.20
T_g (glass transition temperature) (°C)	20 - 30
Storage Modulus a RT (MPa)	10 (**)
Storage temperature (°C)	2 - 5
Shelf life (months)	> 4
Pot life (RT, < 10 ppm H_2O) (days)	> 5
Storage atmosphere	Dry air or nitrogen
Lap Shear Strength (MPa)	0.4 (†)
Peel off force	3.89 N
Peel off force after cyclic bending	3.57 N (††)
Normalized WVTR @ 23 °C, 65% R.H.	0.2 (†††)
Water sorption capacity (%wt)	1

(*) at a shear rate of $5s^{-1}$
(**) measured in tensile mode at 1 Hz.
(†) on PET substrate, with properly cured glue (according to ASTM D1002).
(††) on PET substrate after 1000 cycles with 3 mm bending radius.
(†††) 0.2 mm layer thickness (g *mm/m^2 *day).

Processing

Store FlexGloo in the original package at room temperature for at least 2 hours before use.

Deposition

Apply via needle dispensing, blading and slot die coating.
Plastic surfaces with good wettability which have already been fully tested with FlexGloo: PET, PEN, PET/SiOx, PET/SiNx and PI.

Curing

- ☐ UV Curing is required.
- ☐ Suggested curing conditions are:
  - Irradiance of 100 mW/cm^2 for > 120 s with λ = 365 nm
  - Thermal post curing at 80 °C for 30 minutes
  - Max irradiance: < 500 mW/cm^2
  - Max energy density: < 12 J/cm^2

Cleaning

Typical solvents used for cleaning are acetone, toluene, methyl ethyl ketone (MEK) and glycol ethers.

Shipping and Storage

Storage conditions are temperature of 2 - 5 °C and dry atmosphere.
FlexGloo can be stored in a normal refrigerator provided that the original packaging is not open, or it is sealed in dry atmosphere.
In the event of exposure at temperatures higher than 50 °C, FlexGloo must be discarded.

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