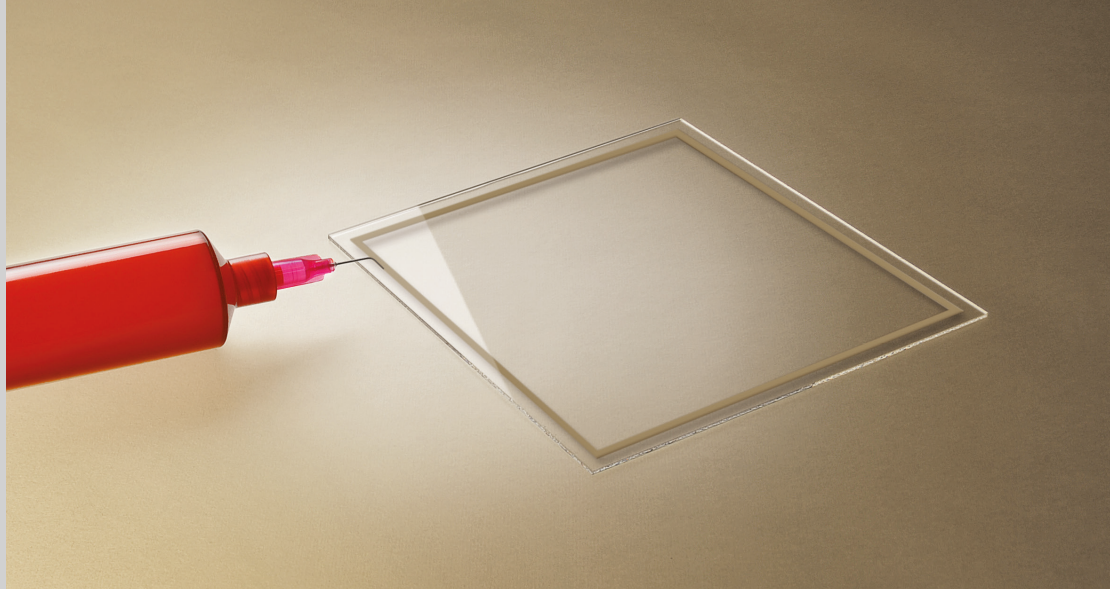


FlexGloo/O2™

Oxygen Barrier Sealant



HIGHLIGHTS

General Features

- Low Oxygen Transmission Rate (OTR)
- Suitable for flexible devices
- Thermally curable
- High decomposition temperature
- Solvent free, epoxy based
- Very low outgassing

Applications

- Electrochromic devices
- Oxygen sensitive photovoltaic cells
- Optoelectronic devices
- Microelectronic devices

Product Description

FlexGloo/O2™ is a mono-component, thermally curable, high barrier adhesive for oxygen. It has been designed to work as a barrier sealant or barrier coating in electronic, optoelectronic and medical devices. FlexGloo/O2 is based on a solventless epoxy matrix.

FlexGloo/O2 is able to guarantee extremely low permeation for oxygen and can be employed in flexible devices.

Material Property	Value	
Appearance	Brownish paste	
Viscosity at 25°C (cP)	18,500 (*)	
Density (g/cm ³)	1.15	
Oxygen Transmission Rate (OTR) (cc/m ² .day)	0 % RH	1.0 (**)
	90 % RH	1.2 (**)
Decomposition temperature (°C)	> 350	
Tg (glass transition temperature) (°C)	20 to 46	

* at 50 s⁻¹ shear rate

** at 23 °C and 1 mm wide edge seal

How it Works

FlexGloo/O2 is optimized to be deposited by needle dispensing, with blading as an alternate processing technique. Other dispensing methods can be applied, if compatible with the range of viscosity of this product.

Compatible surfaces are:

- Glass
- Stainless steel and other metals coupled with glass
- Polymer Films (e.g. PET, PI, PEN) and engineered multilayers (e.g. PET/SiO_x)

Example of typical dispensing parameters (referred to a deposition line ranging between 0.5 mm and 2.0 mm):

- Needle size 254 μm
- Pressure 2.8 bar
- Speed 20 mm/s
- Dispense gap 0.4 mm

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Curing conditions:

A two step curing process is mandatory, in order to achieve the best performances:

- 1 hour at 100°C
- 1 hour at 150°C

No solvent is released during the curing. Weight loss at the end of the curing is negligible (< 0.5 %)

Additional Processing and Storage Information

FlexGloo/O2 can be stored in a normal refrigerator (2°C – 8°C), provided that the original package is not open, or it is sealed in nitrogen atmosphere. According to the available data, shelf life under this condition is 6 months.

Before use, FlexGloo/O2 must be left at room temperature for at least 2 hours; otherwise, viscosity could be higher than the nominal value.

In the event of exposure at temperatures higher than 50 °C, FlexGloo/O2 must be discarded.

FlexGloo/O2™ Oxygen Barrier Sealant

The SAES manufacturing companies are ISO9001 certified, the Asian and Italian companies are also ISO14001 certified. Full information about our certifications for each company of the Group are available on our website at: www.saesgroup.com

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