

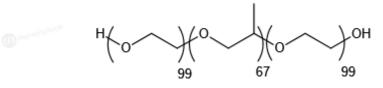
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# Polyether 127 (F127)

# **Product component**

ltem	Character	Package Size	Notes
F127	White powder	10g/bottle	Keep in dark
This instruction applies to EEL 197			

This instruction applies to EFL–127



F127 molecular structure

# **Product introduction**

Polyether F127 (F127) is a triblock copolymer of polyethylene glycol-polypropylene glycol – polyethylene glycol. F127 has excellent thermoresponsive gel (heating gel) properties and good biosafety, and the material system based on F127 can be applied in the biomedical field, such as drug carrier, wound dressing, cell carrier shear protector, bio 3D printing, etc.

# Application

Thermogenic hydrogels, injectable hydrogels, drug carriers, biological 3D printing, tissue engineering, etc

#### Storage

Dry kit: room temperature, 24 months. Please note that repeated freezing and thawing of the solution will affect the performance of the product, so it is best to prepare it when using it.

# Period of validity

The date of manufacture is shown in the package.



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#### Use concentration

When used as a thermoresponsive gel, it is recommended that F127 be used at a concentration of 20~30% w/v, that is 200~300 mg/mL;

When used as a surfactant, the recommended concentration of F127 is 0.5-2% w/v, that is 5~ 20mg/mL.

### Solution preparation

- (1) Take the required mass of F127 into the centrifugal tube;
- (2) Dissolve at  $2 \sim 8^{\circ}$ C for 0.5 $\sim$ 2h, shaking several times.

#### About thermoresponsive gels

F127 solution of 20~30% w/v can form a reversible thermoresponsive gel when placed at a temperature higher than 30°C. The temperature or concentration of the solution can improve the gel strength.

#### **Illustration:**

F127 solution has the characteristics of thermoresponsive gel (warming gel). During the preparation of solution, when the concentration is  $\leq$  15%, it can be dissolved by stirring at room temperature, and cooling is conducive to dissolution. When the concentration is  $\geq$  15%, it is recommended to stand and dissolve at 2–8°C, shaking several times with the vortex mixer.

F127 solution with a high concentration can gelatinize when standing at room temperature. The higher the concentration, the easier it is to gelatinize. The gel at this time is physically reversible, when the temperature is reduced to 2~8°C, the solution returns to the solution state.



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