

## Polyglycerol sebacate methacrylate (PGSM)

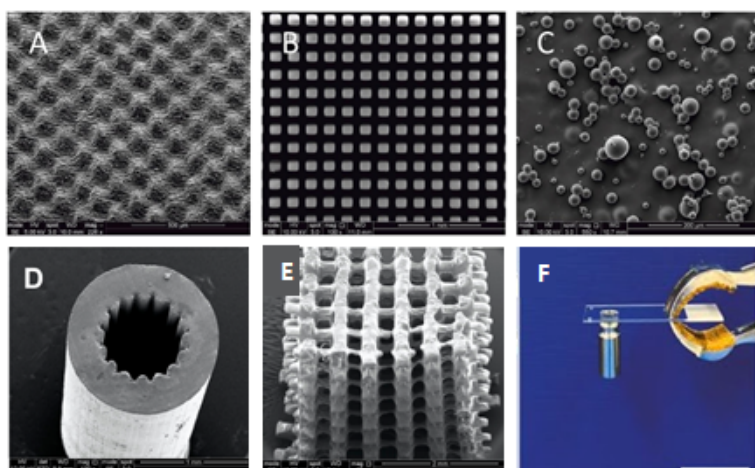
Polyglycerol sebacate methacrylate resin for a variety of applications such as coatings, 3D printable inks, microporous scaffolds for tissue engineering, and alternative food matrices.

### Category

Research Reagents/New

Research Reagents

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Our photocurable resins are suitable as sustainable coatings and packaging, for 3D printing, cultured meat and tissue engineering scaffolding applications.

We offer a wide range of polymeric resins. The resin properties can be tuned to align with the customer's demands, allowing us to cater to industries/companies developing materials in the field of biocompatible and elastic coatings, medical devices, cultured meat, and 3D printing inks.

Our resins:

- Are suitable for bio-based applications with proven biocompatibility with a variety of primary cells/cell lines
- Have tuneable mechanical properties and tailored biodegradability
- Fit with scalable manufacturing process, which can be tailored for sustainable approaches (e.g. green solvents, surfactant-free)
- Are photocurable (which makes them suitable as 3D printing inks), thermally stable between 60-80 °C, and adhesive under both wet and dry conditions

For more information, visit - <https://www.sheffield.ac.uk/commercialisation/current-opportunities/biocompatible-and-biodegradable-resins>, or contact the team directly.

### References

1. Rachel Furmidge, Caitlin E. Jackson, María Fernanda Velázquez de la Paz, Victoria L. Workman, Nicola H. Green, Gwendolen C. Reilly, Vanessa Hearnden, Frederik Claeysenscorresponding author 1, 2, \*(2023), <https://pubmed.ncbi.nlm.nih.gov/37681209/>, *Frontiers in Chemistry*, 11, 1236944
2. Dharaminder Singh, Adam J Harding, Emad Albadawi, Fiona M Boissonade, John W Haycock, Frederik Claeysens(2018), <https://www.sciencedirect.com/science/article/pii/S1742706118304586?via%3Dihub>, *Acta Biomaterialia*, 78, 48-63