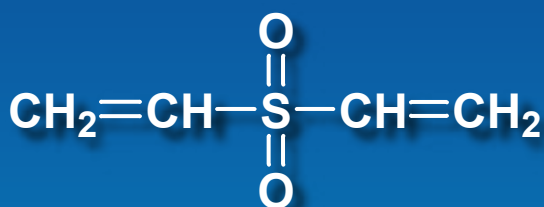


Divinyl Sulfone, a Useful Cross-linking Agent



Divinyl Sulfone (stabilized with HQ)
5g / 25g / 250g
[D0959]

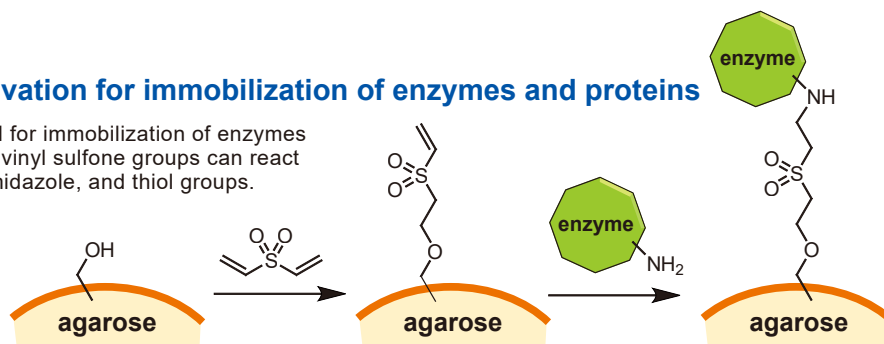
Advantages

- Two electron-deficient vinyl groups are useful to form chemical bonds between a variety of molecules.
- Many years of manufacturing experience.
- Available in large quantities.

Applications

• Agarose gel activation for immobilization of enzymes and proteins

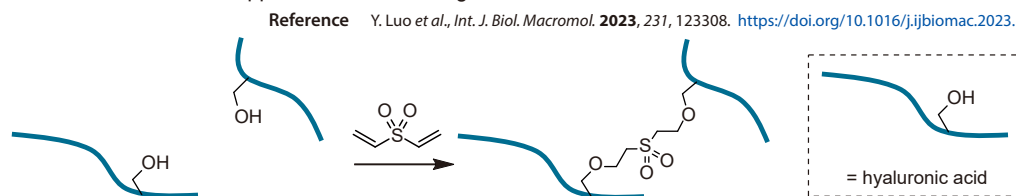
Divinyl sulfone is used for immobilization of enzymes and proteins because vinyl sulfone groups can react with amino, phenol, imidazole, and thiol groups.



References J. C. S. dos Santos *et al.*, *RSC Adv.* **2015**, 5, 20639. <https://doi.org/10.1039/C4RA16926C>
R. C. Rodrigues *et al.*, *Biotechnol. Adv.* **2021**, 52, 107821. <https://doi.org/10.1016/j.biotechadv.2021.107821>

• Cross-linking of hyaluronic acid

Cross-linking with divinyl sulfone is used to modify the mechanical properties and degradation rate of hyaluronic acid hydrogels in research aimed at applications such as regenerative medicine.



Reference Y. Luo *et al.*, *Int. J. Biol. Macromol.* **2023**, 231, 123308. <https://doi.org/10.1016/j.ijbiomac.2023.123308>

• Cross-linking of a conductive polymer PEDOT:PSS

In the bioelectronics research including wearable sensors, cross-linking with divinyl sulfone is used to improve the stability of PEDOT:PSS in water or its bonding with other materials while maintaining the conductivity and flexibility of PEDOT:PSS.

Reference F. Alshabouna *et al.*, *Mater. Today* **2022**, 59, 56. <https://doi.org/10.1016/j.mattod.2022.07.015>

• Electrolyte additive for batteries

Divinyl sulfone has been reported to enhance the cathode-electrolyte interfacial stability in lithium-ion batteries with Ni-rich cathodes by forming a passivation layer derived from divinyl sulfone on the cathode surface.

Reference T. Yim *et al.*, *J. Power Sources* **2016**, 302, 431. <https://doi.org/10.1016/j.jpowsour.2015.10.051>

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