Comments and Suggestions for Authors

1. The title of the publication refers to an eco-friendly epoxy-terminated polyurethane modified epoxy resin. However, the author does not explain why it is environmentally friendly.
2. In the section «Synthesis of epoxy-terminated polyurethane», there is no evidence that the product that the authors are making is obtained.
   For example, in the articles
   1. Yeganeh H., Lakouraj M. M., Jamshidi S. Synthesis and properties of biodegradable elastomeric epoxy modified polyurethanes based on poly (ε-caprolactone) and poly (ethylene glycol) //European Polymer Journal. – 2005. – Т. 41. – №. 10. – С. 2370-2379.
   2. Slobodinyuk A. et al. Synthesis and Study of Physical and Mechanical Properties of Urethane-Containing Elastomers Based on Epoxyurethane Oligomers with Controlled Crystallinity //Polymers. – 2022. – Т. 14. – №. 11. – С. 2136.

the completion of the synthesis is confirmed by analytical analyzes of the mass content of free isocyanate groups. Based on this analysis, the mass of glycidol is calculated. Next, it is necessary to carry out an analysis to determine the mass content of free epoxy groups. This analysis is necessary to calculate the required mass of hardener.

3. The authors are studying a system that is already described in the article:

Li Y. S. et al. Polyether and polyester polyol based glycidyl-terminated polyurethane modified epoxy resins: Mechanical properties and morphology //Polymer international. – 1994. – Т. 35. – №. 4. – С. 371-378.

So epoxy-terminated polyurethane is synthesized by the authors of the article [Li Y. S. et al. Polyether and polyester polyol based glycidyl-terminated polyurethane modified epoxy resins: Mechanical properties and morphology //Polymer international. – 1994. – Т. 35. – №. 4. – С. 371-378] on the basis of polypropylene glycol with a molecular weight of 2000, 2,4 toluene diisocyanate and glycidol.

The authors of the article sent for review have the same thing. The epoxy resin used was DGEBA in both articles (or its equivalent DER-331). Moreover, the same compounds are used as the hardener: D-230 Polyoxypropyleneamine. The authors are studying mixtures of epoxy-terminated polyurethane and DGEBA (or DER-331 equivalent) cured with D-230.

The scientific novelty of the publication is not understandable and requires a more detailed explanation.