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Shear viscosity is one of the most important technological parameters for both glass and glass fibre production. The operational window, in which the fiberizing is possible, is mainly determined by the viscosity-temperature relationship. It is therefore of great importance to be able to predict this relationship for designing new melt composition for fiberizing in terms of fiber spinnability and working range of temperature. This is especially crucial when working with complex multicomponent liquids since the experimental determination of viscosity is very time and economy demanding. There exist various predictive models for predicting the viscosity-temperature relationship in different composition fields. Recently a topological model for predicting the viscosity of multicomponent compositions has been suggested by Mauro, *et. al.* [1,2]. In this paper, we demonstrate how this model is applied to stone wool compositions. The results show that there is a good agreement between the predicted viscosity-temperature trend and experimental trend. We investigate the influence of individual components for typical stone wool compositions on the melt viscosity at liquidus temperature and hence the melt spinnablity. We present a couple of examples showing how a small variation in composition drastically affects the viscosity and hence the fiberizing process.

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[2] J. C. Mauro, Y. Z. Yue, A. J. Ellison, P. K. Gupta and D. C. Allan: "Viscosity of Glass-forming liquids", Proc. Nat. Acad. Sci. USA 106 (2009) 19780.