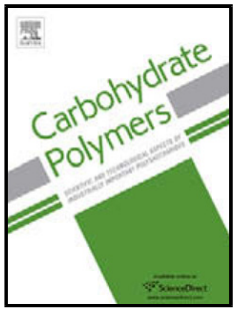

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PII: S0144-8617(18)31109-3
DOI: https://doi.org/10.1016/j.carbpol.2018.09.034
Reference: CARP 14077

To appear in:

Received date: 28-6-2018
Revised date: 1-9-2018
Accepted date: 17-9-2018

Please cite this article as: Reinoso D, Martín-Alfonso MJ, Luckham PF, Martínez-Boza FJ, Rheological characterisation of xanthan gum in brine solutions at high temperature, *Carbohydrate Polymers* (2018), https://doi.org/10.1016/j.carbpol.2018.09.034

Rheological characterisation of xanthan gum in brine solutions at high temperature

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Highlights

- Potassium and calcium brines extend the shear-thinning behaviour of xanthan
- Thermorheological behaviour of xanthan depends on the type of salt in the brine
- Formate brine shifts the order/disorder transition of xanthan to high temperature

Abstract

Xanthan gum solutions are used in the oil industry for flooding, drilling and completion operations. The stabilization of the structure of xanthan gum solutions in presence of salts increases the value of both the order-disorder transition temperature and the gel strength. This effect is very important in order to design drilling and completion fluids since not only density and viscosity of the fluid can be improved by increasing the