

Accepted Manuscript

Title: Rheology of epoxidized cellulose pulp gel-like dispersions in castor oil: influence of epoxidation degree and the epoxide chemical structure

Authors: E. Cortés-Triviño, C. Valencia, M.A. Delgado, J.M. Franco



PII: S0144-8617(18)30849-X
DOI: <https://doi.org/10.1016/j.carbpol.2018.07.058>
Reference: CARP 13858

To appear in:

Received date: 25-4-2018
Revised date: 13-6-2018
Accepted date: 17-7-2018

Please cite this article as: Cortés-Triviño E, Valencia C, Delgado MA, Franco JM, Rheology of epoxidized cellulose pulp gel-like dispersions in castor oil: influence of epoxidation degree and the epoxide chemical structure, *Carbohydrate Polymers* (2018), <https://doi.org/10.1016/j.carbpol.2018.07.058>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Rheology of epoxidized cellulose pulp gel-like dispersions in castor oil: influence of epoxidation degree and the epoxide chemical structure

E. Cortés-Triviño, C. Valencia, M.A. Delgado, J.M. Franco✉

Pro²TecS-Chemical Product and Process Technology Research Centre.

Universidad de Huelva. Campus El Carmen, 21071 Huelva, Spain.

✉ Author to whom correspondence should be addressed:

Prof. J.M. Franco. Pro²TecS. Departamento de Ingeniería Química. Campus de “El Carmen”. Universidad de Huelva. 21071 Huelva. Spain.

Phone: +34959219995, Fax: +34959219983, e-mail: franco@uhu.es

HIGHLIGHTS

- Epoxidized cellulose pulp allows to thicken castor oil medium for bio-lubricant applications
- Epoxidation improves cellulose pulp/castor oil compatibilization
- Epoxidation degree and epoxide chemical structure noticeably impact the rheological properties of cellulose pulp dispersions
- Rheology is consequence of the balance between cellulose pulp/castor oil compatibility and a chemical crosslinkingThe use of aromatic epoxides allows to obtain more cross-linked structures with higher consistency

Download English Version:

<https://daneshyari.com/en/article/7781020>

Download Persian Version:

<https://daneshyari.com/article/7781020>

[Daneshyari.com](https://daneshyari.com)