CEPI EUROKRAFT
European Producers of Sack Kraft Paper and Kraft Paper

Fact Sheet 1

Speed of filling 50 kg cement in paper sacks and in WPP sacks

The results in this fact sheet refer only to these lab tests and to the conditions during the period of tests.

Study overview

CEPI Eurokraft conducted a lab test to compare the speed of filling 50 kg cement into a paper sack versus a woven polypropylene (WPP) sack. The test was performed using a Haver & Boecker single spout impeller packer at the Billerud Packaging Development Center in Karlsborg, Sweden. The cement used was Portland cement from Heidelberg Materials in Slite, Sweden, with a density of 1,4 kg/l and a Blaine value of 4,132 cm^2/g. Note, paper is suited also for higher cement Blaine values.

Packaging specifications

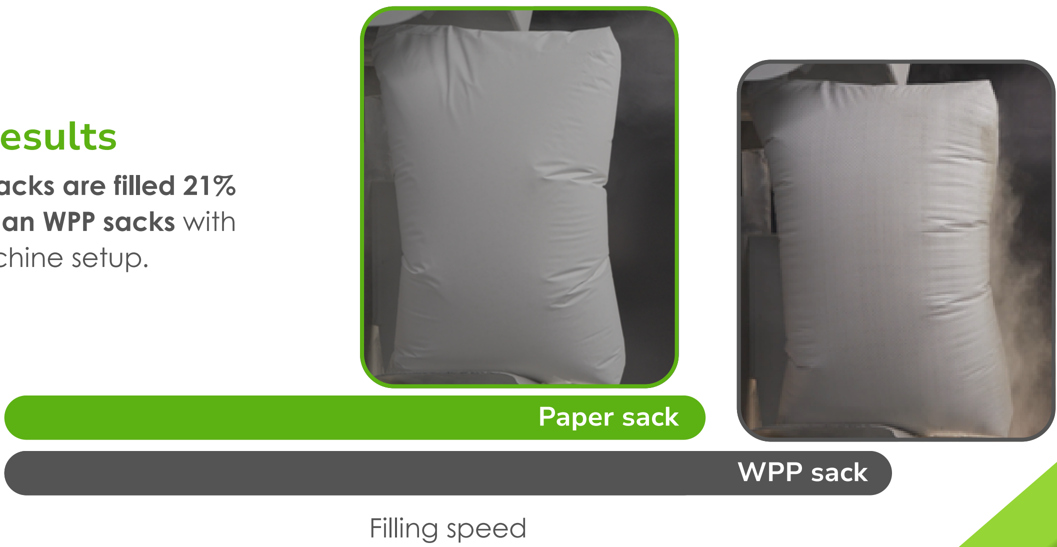
Specifications	Paper sack	WPP sack
Material:	2 plies high-porous paper: inner ply 80 gsm brown, outer ply 90 gsm white	63 gsm PP 22 gsm PP lamination
Air escaping system:	Unperforated	Perforated
Type:	Flush cut valve sack	Flush cut valve sack
Length x Width (mm):	630 x 500	630 x 500
Top/Bottom width (mm):	110	110
Volume (l):	35,8	35,8
Air flow test (Mega Gurley) at 50 mBar (Nm3/h):	125	90

Test methodology

- Five samples per packaging type were filled with 50 kg cement.
- The first two samples for each packaging type were excluded based on machine supplier recommendations.
- An average value was calculated from the three remaining samples.

Key results

Paper sacks are filled 21% faster than WPP sacks with this machine setup.

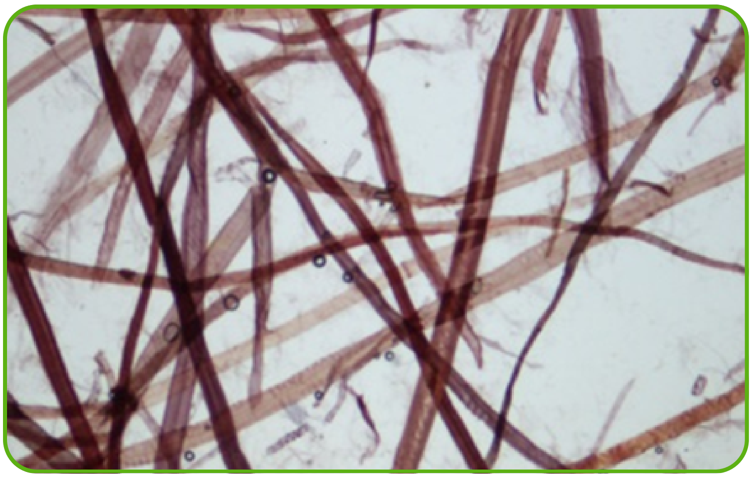


Key findings

The natural porosity of **paper sacks allows** for **rapid and problem-free** venting during **filling**.

High-porous **paper sacks eliminate** the **need for additional air extraction** systems, **reducing complexity and costs**.

Paper sack filling machines require **less setup and maintenance, lowering operational expenses**.



A **special mechanical refining process** of the long fibres results in a high bonding strength, which **gives sack kraft paper** its **unique strength while** at the same time **keeping the porosity characteristics**.

Conclusion

The study demonstrates that high-porosity paper sacks significantly improve cement filling speed, reducing operational costs and enhancing efficiency compared to WPP sacks.

The test report is available on CEPI Eurokraft website: www.cepi-eurokraft.org
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For more information, contact your sack kraft paper producer or CEPI Eurokraft secretariat.

CEPI Eurokraft would like to thank the members of the working group responsible for generating these insights:

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CEPI Eurokraft is the European Association for Producers of Sack Kraft Paper for the Paper Sack Industry and Kraft Paper for the Packaging Industry.
It has ten member companies representing a volume of 3 million tonnes of paper produced in eleven countries. www.cepi-eurokraft.org

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