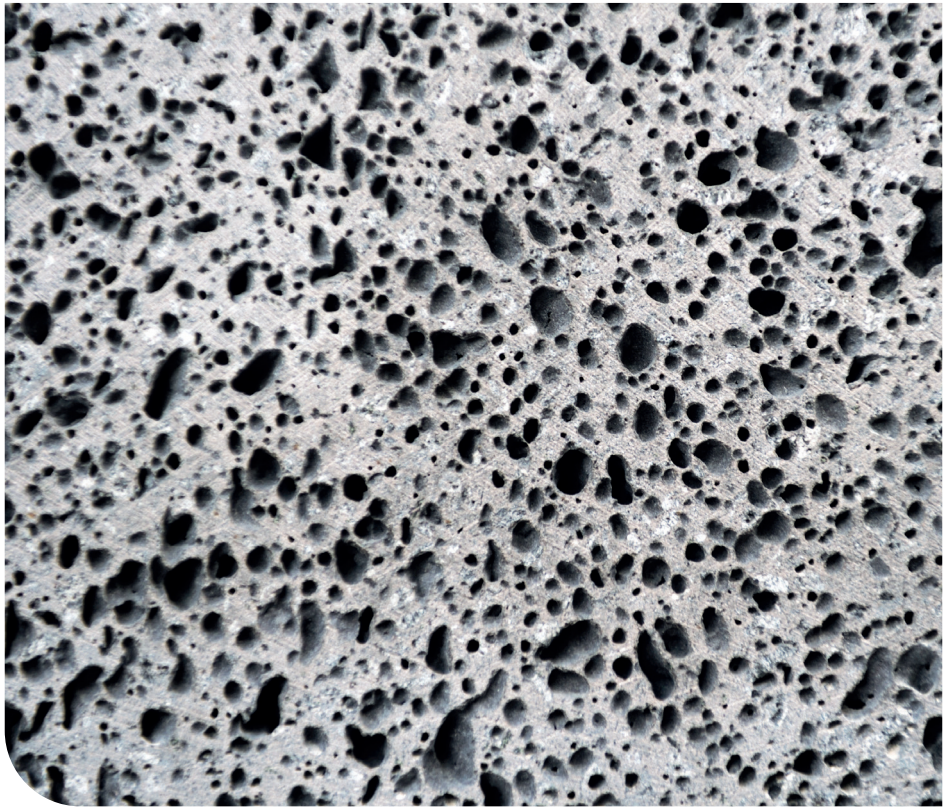
Foaming agents and superplasticizers

FOR PLASTERBOARDS

Foaming agents for plasterboards

Foaming agents for plasterboards have the ability to generate pores with a unique structure in the gypsum core.



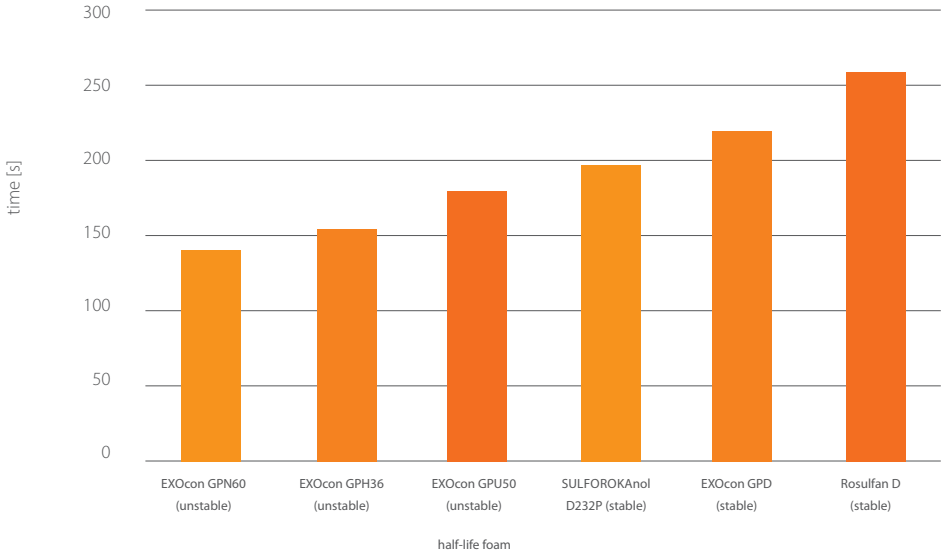
Foaming agents from PCC:

- reduce the weight of plasterboard
- save raw materials
- motivate gypsum activity
- are safe to use and free of volatile solvents

Foaming Agent Profiles

Product	Appearance	Activity (%)	Description
EXOcon GPH36	liquid	36	Coalescing foaming agent (unstable) for use in the production of lightweight gypsum plasterboard to achieve low-density boards.
EXOcon GPN60	liquid	50	Highly coalescing (unstable) foaming agent for use in the production of lightweight plasterboard. High active substance content.
EXOcon GPU50	liquid	50	Medium-coalescing foaming agent (semistable) for use in the production of plasterboard with medium-sized pores. High active substance content.
SULFOROKAnol D232P	liquid	32	Stable foaming agent for use in the production of gypsum plasterboard to achieve standard-density boards
SULFOROKAnol D232P MB	liquid	32	This product is RSPO Mass Balance certified.
EXOcon GPD	liquid	35	Effective stable foaming agent for use in the production of gypsum plasterboard to achieve standard-density boards.
Rosulfan D	liquid	36	Stable foaming agent for use in the production of gypsum plasterboard to achieve standard-density boards.
SULFOROKAnol N232P	liquid	32	Stable foaming agent to achieve standard-density boards.

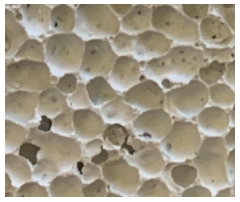
Water drainage



Half-life foam analysis (0.2% active substance in tap water). The diagram illustrates the loss of water from the foam as a function of time.

Coalescing foaming agent

EXOcon GPH36
EXOcon GPN60



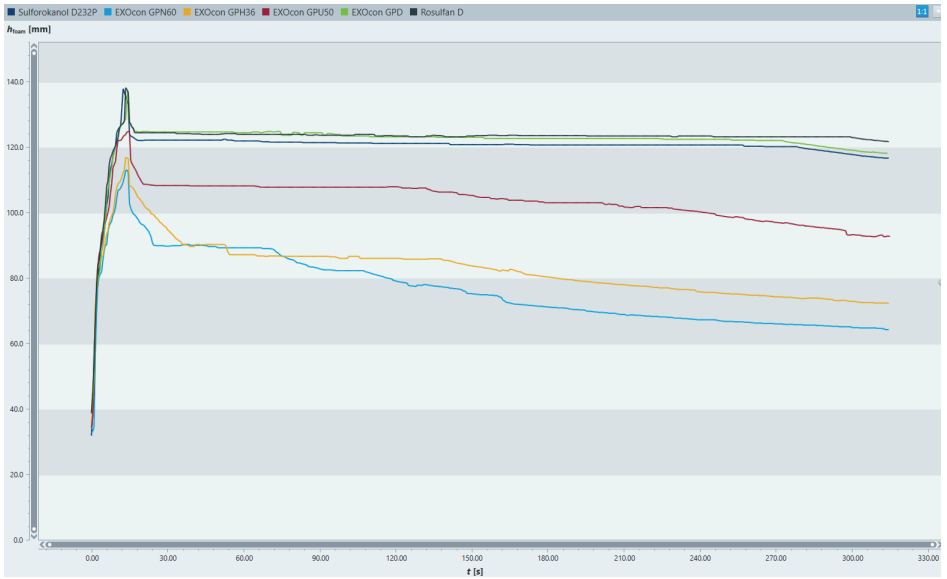
Medium-coalescing foaming agent

EXOcon GPU50

Stable foaming agent

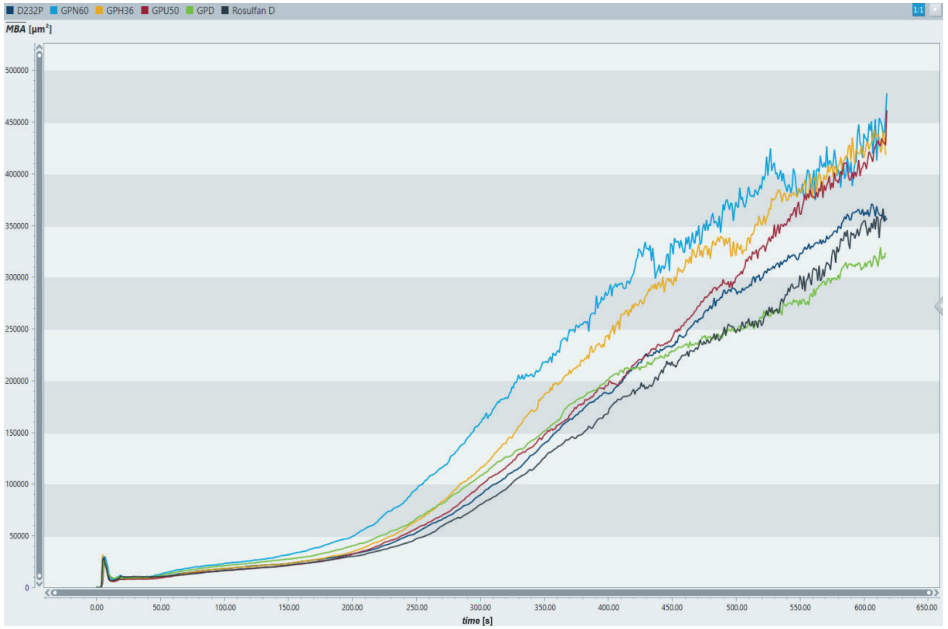
SULFOROKAnol D232P
Rosulfan D
EXOcon GPD

Foam height and stability



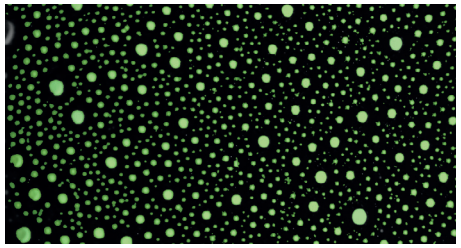
The line graph illustrates the effectiveness of the foaming agent and allows the selection of optimal dosage in industrial conditions.

Mean bubble area

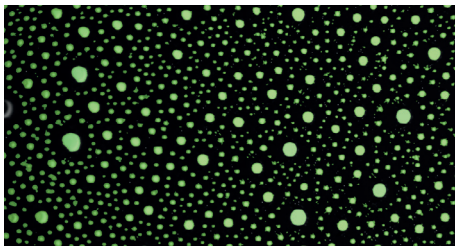


Foam analysis – differences in air bubbles

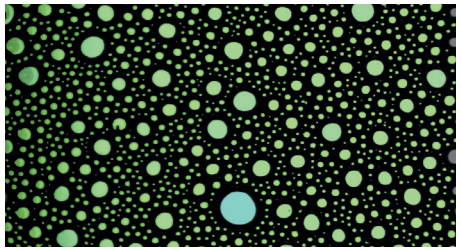
Standard foaming agent

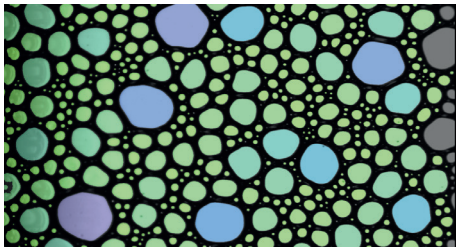


Coalescing foaming agent



Immediately after foaming





5 minutes after foaming

Pore size modifications

Example 1

EXOcon GPH36 + EXOcon GPU50

Large pores

Example 2

EXOcon GPH36 + SULFOROKAnol D232P

Medium pores

Example 3

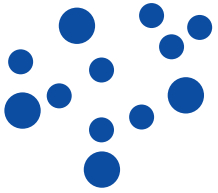
EXOcon GPN60 + SULFOROKAnol D232P

Very large pores

Example 4

EXOcon GPU50 (single)

Slightly enlarged small pores



Superplasticizers for gypsum wallboard production

PRODUCT NAME	CHEMICAL NAME	CAS	FORM	pH	ACTIVE SUBSTANCE %	CHLORIDE % (m/m)	DESCRIPTION	FUNCTION
Superplasticizer CA	a polymer of calcium salt naphthalenesulfonic acid with formaldehyde	37293-74-6	powder	6.5-9.5	min. 85	max. 0.05	A compound acting as a dispersant in the base for liquefying and plasticizing admixtures in the construction industry and as a water reducer in the production of plasterboard.	• Liquefaction of a gypsum mixture • Reduction of mixing water • Improving the stability of the gypsum mixture
Superplasticizer CA 40 FF	a polymer of calcium salt naphthalenesulfonic acid with formaldehyde	37293-74-6	liquid	6.5-8.5	39-41	max. 0.05	A liquefying substance for gypsum products, and a superplasticizer in the production of cardboard-gypsum boards.	
Rofluid CA	an aqueous solution of polycarboxy ether	27599-56-0	liquid	5.0-7.0	49-51	max. 0.05	PCE grades are based on modified polycarboxylic ether polymers. Used as fluidiser for wallboard production.	

Thanks to surfactants and superplasticizers, less water and energy is consumed during their production. This allows a significant reduction in manufacturing costs, and helps to protect the environment.

www.products.pcc.eu

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