

Description

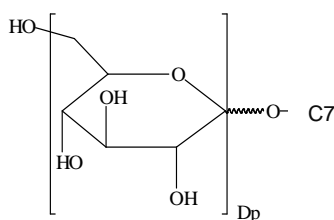
SIMULSOL SL 7 G is a non-ionic surfactant, from polyglucosides family. It is a hydrotrope prepared with n-heptanol alcohol (derived from castor oil) and glucose (produced from starch).

It is manufactured using green chemistry methods: mild and catalytic conditions, excess reagent is recycled, efficient at low rate of use.

SIMULSOL SL 7 G is a concentrated liquid, easy to handle and exhibiting excellent compatibility, stability and solubility in highly concentrated media and on a broad range of pH.

Hydrotropes are product that improves the solubility of organic compounds in aqueous solutions. It enables to formulate combinations of surfactants.

Chemical formula



Identity card

Analytical data	Standard limits	Method
Appearance 25°C	Limpid	S 52 180
Dry content	71 to 77%	S 52 034
HLB	14.2	
pH	4 to 6	NFT 73 206
Residual alcohol	<1%	S 52 239
Color	9 max	S 52 150
Viscosity 25°C	500 - 3000	LV M3 V60
Gel point	<-5°C	S 52 053
Aerobic biodegradability	82.25% (100mg/L)	OCDE 301F
Shelf life	730 days	
Labels	ECOCERT Suitable for Ecolabel DID UE list Underways : EPA	



- *Hydrotrope & solubiliser ecosurfactant*
- *Low foam properties*
- *Suitable for alkaline, acidic, oxidative or electrolytic media*
- *No cloud point*
- *Readily biodegradable***
- *Better hydrolysis resistance vs other green hydrotropes*
- *Ecocert and suitable for Ecolabel*
- *Awarded the Prix Pierre Potier in 2013*

* Substance that improves the solubility of sparingly soluble molecules in water

** Readily biodegradable = 60% of biodegradation reached in a 10-d window within the 28-d period of the test

Technical properties

1- Solubility

Comparison of SIMULSOL SL 7 G with conventional products in different electrolytes:

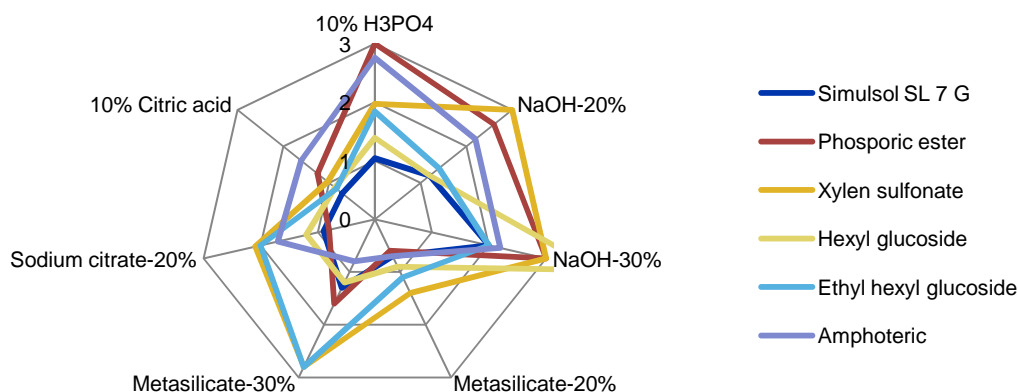
		%MA	SIMULSOL SL 7 G	Phosphoric Ester	Sulfonate Xylen	Hexyl glucoside	Ethyl Hexyl glucoside	Amphoteric					
% NAOH	10	1	x	x	No	x	x	x					
		2											
		5		No									
	30	1		x			No		x				
		2											
		5											
	48	1		No				No		No		No	No
		2											
		5											
% Metasilicate	20	1	x	x	No	No					x		
		2											
		5											
	30	1		No			No						
		2											
		5											

Simulsol SL 7 G is soluble in all evaluated media.

2- Hydrotropic activity

The minimum concentration of hydrotrope (w/w) needed to obtain a clear solution when mixed with detergent surfactants depends on the type, the quantity of salt and on the ethoxylated alcohol to be solubilised. The hydrotrope will cause a reduction in the solution viscosity.

Minimum ratios of hydrotopes/surfactants in different media



SIMULSOL SL 7 G exhibits the best performance. Its dosage is always among the smallest ones whatever the media is.

Ionic surfactants in concentrated sodium (NaOH, etc.) media do not lead to stabilization.

With metasilicates, SIMULSOL SL 7 G is comparable with amphoteric hydrotopes, which are the most efficient in these media.

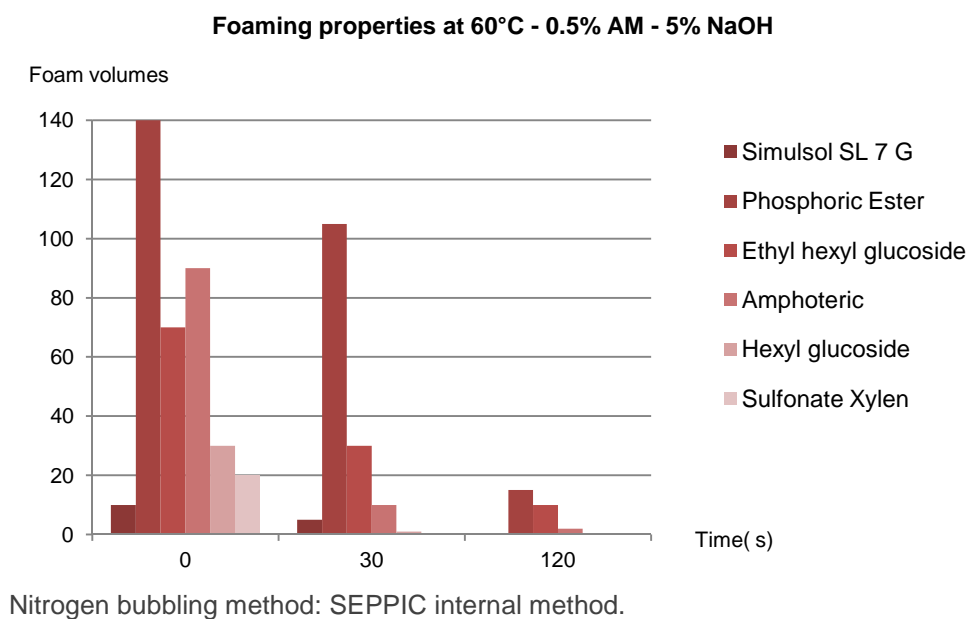
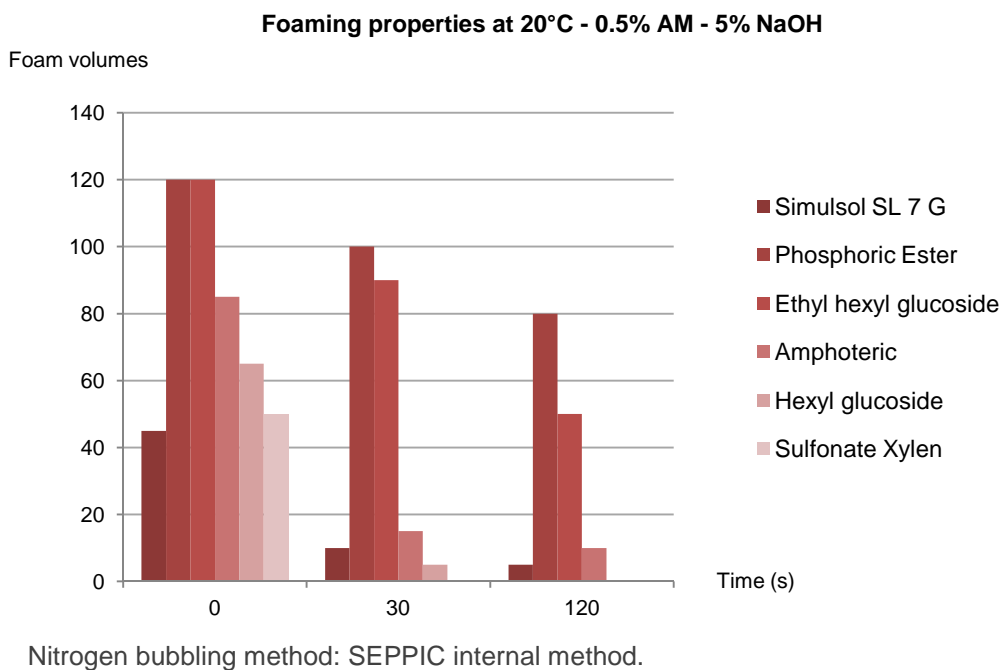
SIMULSOL SL 7 G is especially designed for systems that contain organic salts.

SIMULSOL™ SL 7 G is a multipurpose hydrotrope.

3- Foaming properties

SIMULSOL SL 7 G is a low foaming hydrotrope that does not affect the foaming power of the composition in which it is added.

Charts below show the foam volumes right after stopping nitrogen introduction, 30 seconds and 120 seconds after stopping introduction.



Potential applications

Detergency

SIMULSOL SL 7 G enables the innovative development of cleaning formulations, that are environmentally friendly and energy saving as they are efficient, even at low temperature.

Oilfield

SIMULSOL SL 7 G acts as an efficient hydrotrope and boosts other surfactants properties in media with high concentrations of electrolytes and/or extreme pHs.

Crop protection

Improve the efficacy of active ingredients by reducing the surface tension.

Packaging

SIMULSOL SL 7 G is delivered in 200 kg polyethylene drums and in IBCs

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Nota:

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