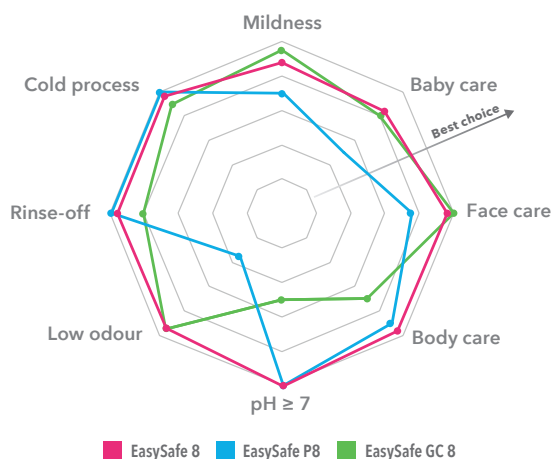


Specifications and Characteristics

NAME	EASYSAFE 8	EASYSAFE P8	EASYSAFE GC 8
INCI	Caprylyl Glycol, Glycerin, Water	Caprylyl Glycol, Phenylpropanol, Water	Caprylyl Glycol, Glyceryl Caprylate/ Caprate, Glycerin
MELTING POINT	≈ 13°C	< 5 °C	< - 10 °C
ASPECT	Liquid , colorless	Liquid , almost colorless	Liquid , slightly colored
ODOUR	Faint, characteristic	Faint, aromatic	Faint, characteristic
WATER SOLUBILITY (20°C)	0.9%	0.9%	< 0.1%
pH OF USE	unlimited	unlimited	4.0 ▶ 7.0
USE LEVEL	0.5 ▶ 2.0%	0.5 ▶ 2.0%	0.75 ▶ 2.0%
COLD PROCESS	Yes	Yes	Yes
MICROBICIDE EFFECT	Yeast/mold/ bacteria	Yeast/mold/ bacteria	Yeast/mold/ bacteria
LISTED PRESERVATIVE FREE	Yes	Yes	Yes

EasySafe selector



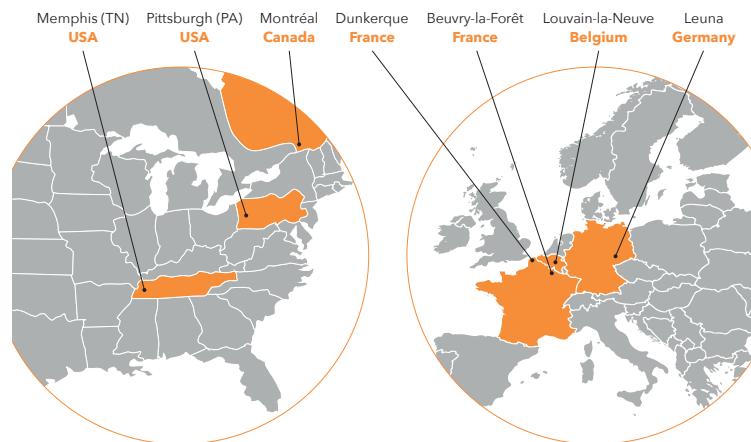
The given information is accurate to the best of our knowledge. Buyers are advised to make their own studies on the usefulness of any product for a particular application or purpose. Recommended usage information is only provided as indication, and should not be considered as recommendations to use the products in violation of any patents, intellectual property rights, laws, or regulations relating, but not limited to, manufacture, composition, product design or end usage.

MINASOLVE® is an affiliate of MINAFIN® Group

Created in 2004, The Minafin® Group is an expert in Health Chemistry, Green Chemistry and Challenging Chemistry. Activities include industrial subcontracting, development of chemical syntheses and industrial scale-up of custom-made processes as well as proprietary products with high added value for the pharmaceutical, cosmetics, agriculture and high-tech industries. Strong synergies exist between all business units: MINASOLVE, MINAKEM, PENNAKEM, PRESSURE CHEMICAL and MINASCENT.

Serving market leaders as well as emerging players we support our customers' efforts to improve the quality of life in the global community by:

- ▶ Improving our chemistry and operational excellence today
- ▶ Creating and innovating for tomorrow
- ▶ Driving our enterprises together to **go beyond expectations**



300
M€ SALES

1050
EMPLOYEES

150
SCIENTISTS

7
PRODUCTION SITES

MINAFIN
GROUP

EASYSAFE 8 - P8 - GC 8

ECO-FRIENDLY & COST-EFFECTIVE SYNERGISTIC SOLUTIONS FOR OPTIMUM ANTIMICROBIAL PROTECTION

- ✓ **Optimized for high performance**
- ✓ **Efficient at low dosage**
- ✓ **Versatile and easy to use**



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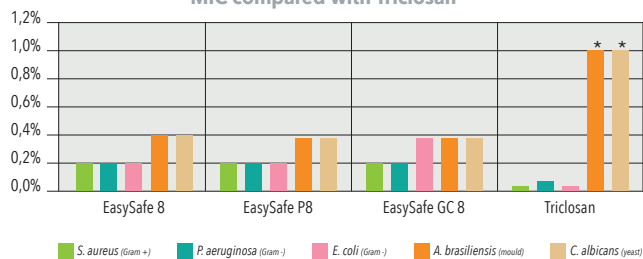
EasySafe 8, P8, GC 8 from Minasolve: A TOOLBOX OF THREE PERFORMANCE SOLUTIONS

For cost effective antimicrobial protection

Safety is key in the design of consumer products, regardless of their sales price. Minasolve therefore offers three economical solutions for alternative formula protection. **EasySafe 8, EasySafe P8** and **EasySafe GC 8** are all **based on the cost-effective multifunctional ingredient Caprylyl Glycol (Octiol)**.

All three solutions are temperature-stable, effective at low dosage, versatile and easy to use liquids. They are based on safe, mild and undisputed components, they are readily biodegradable and suitable for "clean labelling" (halogen-free, paraben-free, formaldehyde-free ...). Having a wider antimicrobial spectrum than Triclosan, these three EasySafe blends can be considered safe alternatives.

MIC compared with Triclosan



(*) Value > 0.5

Optimized for wet wipes protection

EasySafe 8, P8 and GC 8 have been subjected to challenge tests on wet wipes in accordance with the Pharm. Eur. protocol.

- ▶ **EasySafe P8** effectively preserve wet wipes at **1% use-level** (criteria A).
- ▶ The recommended use-level for **EasySafe GC 8** is **1.5%**.

Tested wipes: Ascutech, 50 g/m² airlaid, 92% total chlorine free (TCF) cellulose + 8 % ethylene/vinyl acetate binder.

Wet wipes liquid: 91-94% water, 5-8% Natragem S140 NP, 1% EasySafe Blend, pH = 5.5 adjusted with citric acid.

Performance in microbial challenge tests

Phase	Raw material	INCI name	%
A	Deminerlized Water	Aqua	ad 100
	Xanthan Gum N ⁽²⁾	Xanthan Gum	0.5
B	Emulgade PL 68/50 ⁽³⁾	Cetearyl Glucoside (and) Cetearyl Alcohol	5.0
	Shea Butter ⁽⁴⁾	Butyrospermum Parkii (Shea) Butter	3.0
	Jojoba Oil ⁽⁴⁾	Simmondsia Chinensis (Jojoba) Oil	3.0
	Hazelnut Oil ⁽⁴⁾	Corylus Avellana (Hazel) Seed Oil	3.0
C	Bioxan T70 ⁽⁵⁾	Tocopherol	0.1
D	aq. Citric Acid / NaOH	Citric Acid / Sodium Hydroxide / Aqua	pH 4.5 • 8.0
E	EasySafe 8 / P8 / GC 8 ⁽¹⁾	Caprylyl Glycol + X ...	0.5 ▶ 1.5 %

Phase	Raw material	INCI name	%
A	Deminerlized Water	Aqua	ad 100
	Xanthan Gum N ⁽²⁾	Xanthan Gum	0.6
	Plantacare 818 UP ⁽³⁾	Coco Glucoside	15.0
	Plantapon ACG HC ⁽³⁾	Sodium Cocoamphoacetate	5.0
B	TEGO Betain F 50 ⁽⁶⁾	Cocamidopropyl Betain	5.0
	aq. Citric Acid / NaOH	Citric Acid / Sodium Hydroxide / Aqua	pH 4.5 • 8.0
C	EasySafe 8 / P8 / GC 8 ⁽¹⁾	Caprylyl Glycol + X ...	0.5 ▶ 2.0 %

Raw material suppliers:

⁽¹⁾ Minasolve ⁽²⁾ Jungbunzlauer ⁽³⁾ BASF ⁽⁴⁾ Casear & Loretz ⁽⁵⁾ BTSa ⁽⁶⁾ Evonik

	pH	EasySafe P8			EasySafe GC 8			EasySafe 8		
		0.5%	0.75%	1%	0.75%	1%	1.5%	0.5%	0.75%	1%
O/W emulsion	4.5	A	A	●	B	A	●	B	●	●
	5.5	A	A	A	B	A	A	●	A	A
	7.0	●	B	A	B	B	A	●	A	A
	8.0	●	A	A	-	-	-	B	A	A
Sulfate-free shampoo (very hard to preserve)	1%	1,5%	2%	1%	1,5%	2%	1,0%	1,5%	2%	
	4.5	A	●	●	B	B	●	A	●	
	5.5	●	B	A	B	B	B	●	A	
	8.0	●	A	●	-	-	-	●	●	
	EasySafe P8 + EasySafe GC 8									
		0,5% + 0,5%		0,75% + 0,75%		1% + 1%				
	4.5	A		●		●				
	5.5	●		A		●				

A **B** Challenge test result, fulfils criteria A/B of ISO 11930 ● Likely to fulfill criteria A of ISO 11930 - Not suitable for this application

Standalone antimicrobial solutions

▶ The three EasySafe solutions are effective as standalone protection agents for various types of personal care products.

▶ EasySafe P8 can also act synergistically in combination with EasySafe GC 8