

Technical Information

sybio®solv clear plus MB

Natural source, clear solutions

Intended use

Solubilizer, co-surfactant

Benefits at a glance

- Powerful natural solubilizer for perfume and essential oils
- PEG-free
- Low odor and color
- 100% naturally derived
- Compliant with COSMOS
- Pleasant skin feel, non-sticky

INCI (PCPC name)

Caprylyl/Capryl Glucoside; Aqua; Sodium Cocoyl Glutamate; Glyceryl Caprylate; Citric Acid; Polyglyceryl-6 Oleate; Sodium Surfactin

Chemical and physical properties (not part of specifications)

Active content	~74%
Appearance	Viscous light, yellow liquid
HLB	~ 16
CMC	0.6 g/l
Surface tension	24.4 mN/m
In-vitro-mildness testing (red blood cell test)	L/D > 100 (basically non-irritant)

Properties

sybio®solv clear plus MB is a powerful naturally derived solubilizer blend for transparent cosmetic products. It provides a powerful PEG-free alternative for the formulation with and without alcohol. The environmentally friendly manufacturing process and the composition of readily biodegradable raw materials is ideal for natural certified cosmetic concepts.

- Excellent solubilization of perfume oils, essential oils

Performance features of sybio®solv clear plus MB

- Very effective due to low critical micelle concentration
- Can be used for transparent aqueous solutions and surfactant-based products
- Suitable for alcohol-containing and alcohol-free formulations
- Pleasant, non-sticky skin feel
- Contributes to the foaming performance and foam quality of the final product
- Removes make-up efficiently

sybio®solv clear plus MB shows excellent solubilizing performance, comparable to PEG-40 Hydrogenated Castor Oil and Polysorbate 20 (see figure 1). Since in many markets, consumers and manufacturers are asking for PEG-free surfactants, **sybio®solv clear plus MB** is a powerful solution to replace ethoxylated solubilizers.

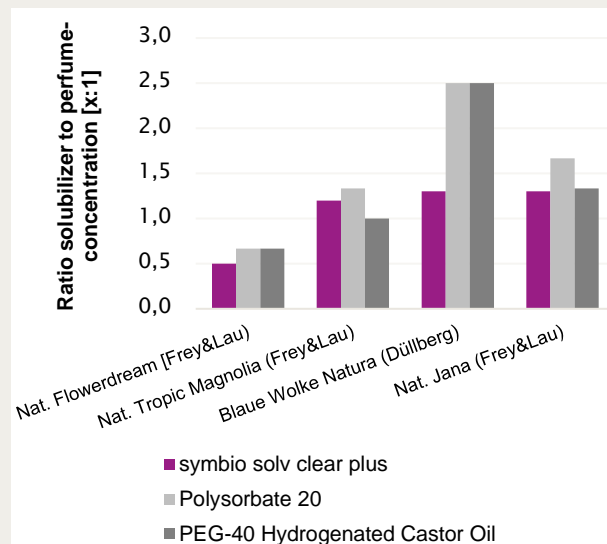


Figure 1: Solubilization of perfume oils – comparison between sybio®solv clear plus MB and benchmark solubilizers (amount of solubilizer blend needed in relation to perfume oil)

Application

symbio®solv clear plus MB can be used as PEG-free solubilizer in cleansing formulations for skin and hair, such as

- Tonics, micellar waters
- Wet wipe solutions
- Body washes, gels
- Foams

Usage level

Product concept	Dosage (ratio)
Transparent aqueous solution	1 : 3 – 1 : 5 (oil : solubilizer) max. 4 – 5%
Surfactant-based products	0.5 – 1.5%

symbio® solv clear plus MB is NOT recommended for Baby Diaper Care, Intimate Care and spray applications due to reclassification of Glyceryl Caprylate.

Processing

Manufacturing procedure for aqueous solutions or surfactant-based products (laboratory scale)

1. Pre-mix **symbio®solv clear plus MB** with perfume and other lipophilic substances to be solubilized at room temperature.
2. Add water, the aqueous phase or the surfactant base, to the pre-mix under stirring.
3. Adjust pH to 4.5 – 6.5 if necessary.
4. If required, add ethanol at the end of the formulation process, in small portions.

Note: In surfactant-based products: **symbio®solv clear plus MB** may reduce the viscosity. Adjust viscosity at the end of the formulation process.

Finding the right dosage of **symbio®solv clear plus MB**: dosage depends on specific lipophilic component. For the beginning, start with a ratio of 1 : 3 (one part oil, three parts solubilizer). If the solution stays milky, increase amount of solubilizer. Restart formulation process in this case.

Formulation advice

Compatible with	Natural perfumes or essential oils
	Conventional perfume oils
	Lipophilic actives
	Synthetic ester oils
	Ethanol (max. 10%)
Incompatible with	Alcohol-free, transparent concepts
	Non-ionic conditioning agents
	Vegetable oils
	Cationic compounds

- Working with ethanol (max. 10%): if turbid after ethanol addition, it might help to add some more solubilizer afterwards.
- In case of pH drift, use buffer system (e. g. Tri-Sodium Citrate).

Storage

Store at temperatures between 5 °C – 30 °C in original closed package.

Hazardous goods classification

Information concerning

- classification and labelling according to regulations for transport of chemicals
- protective measures for storage and handling
- measures in case of accidents and fire
- toxicological and ecotoxicological effects

is given in our safety data sheets.

Guideline Formulations

If you are interested in guideline formulations please visit our homepage <https://personal-care.evonik.com>.

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