

COSMACOL

Esters and specialities

Sasol Performance Chemicals



SASOL



Contents

1. About us	3
2. COSMACOL esters	4–7
2.1 COSMACOL ELI	4
2.2 COSMACOL ECI	5
2.3 COSMACOL EBI	5
2.4 COSMACOL EMI	6
2.5 COSMACOL ETI	6
2.6 COSMACOL ECL	7
2.7 COSMACOL PLG	8
3. Analytical methods	10

1. About us

Sasol's Performance Chemicals business unit markets a broad portfolio of organic and inorganic commodity and speciality chemicals. Our business consists four key business divisions: Organics, Inorganics, Wax and PCASG (Phenolics, Carbon, Ammonia and Speciality Gases). About 6300 people (incl. employees from Regional Operating Hubs) in offices in 18 countries serve customers around the world with a multi-faceted portfolio of state-of-the-art chemical products and solutions for a wide range of applications and industries.

Our key products include surfactants, surfactant intermediates, fatty alcohols, linear alkyl benzene (LAB), short-chain linear alpha olefins, ethylene, petrolatum, paraffin waxes, synthetic waxes, cresylic acids, high-quality carbon solutions as well as high-purity and ultra-high-purity alumina. Our speciality gases sub-division supplies its customers with high-quality ammonia, hydrogen and CO₂ as well as liquid nitrogen, liquid argon, krypton and xenon gases.

Our products are as individual as the industrial applications they serve, with tailor-made solutions creating real business value for customers. Ongoing research activities result in a continuous stream of innovative product concepts that help our customers position themselves successfully in future markets.

Our products are used in countless applications in our daily lives to add value, security and comfort. Typical examples include detergents, cleaning agents, personal care, construction, paints and coatings, leather and metal processing, hot-melt adhesives, bitumen modification and catalyst support for automotive catalysts and other diverse specialty applications including oil and gas recovery, aroma production, plastic stabilisation, and polymer production. Every day, our researchers explore ways to improve our products and develop innovations that improve the quality of people's lives.



2. COSMACOL esters

COSMACOL esters are lipophilic emollients based on linear or mono-branched primary fatty alcohols. This product line includes raw materials with different skin feeling, from light to rich, and offers ingredients for a wide range of finished cosmetics. COSMACOL esters show generally good spreadability and non-greasy feel.

In addition COSMACOL ELI is also a mild body odour reducing agent which allows to lower the amount of commonly used actives in antiperspirants and deodorants. COSMACOL ELI is also used as wetting and dispersing agent in make-up.

2.1 COSMACOL ELI

INCI name: C12-13 Alkyl Lactate

COSMACOL ELI is versatile polar emollient suitable for both personal cleansing and skin care formulations. This ester exhibits some peculiar activities of lactic acid derivatives, as moisturising and mild keratolytic effect, and therefore it is suitable for skin care products targeted for different types of skin, from dry to greasy. COSMACOL ELI shows also thickening effect on SLES-Betaine system as well as anti-irritant properties and can be used for various personal care products, including lines for delicate and atopic skins.

COSMACOL ELI



Packaging:

25 and 190 kg drums; 900 kg IBC.

Storage:

protect from moisture and heating sources; keep below 30° C.

Shelf life:

2 years from production date for product in its original sealed package.

Suggested dosage:

- deodorants: 2 wt%
- make-up: 5–20 wt%
- skin care: 3–5 wt%
- rinse-off: 0.3–1 wt%

COSMACOL ELI

Sales specification

Appearance @ 20° C		clear liquid
Colour	[APHA]	50 max
Purity as ester	[wt. %]	88 min
Free alcohol	[wt. %]	12 max
Acid value	[mg KOH/g]	3.0 max
Water	[wt. %]	0.5 max

Additional properties

Density @ 20° C	[g/cm ³]	approx. 0.923
Viscosity @ 20° C	mPa*s	approx. 21
Pour point	[° C]	< -55
Flash point	[° C]	approx. 156
Refractive index @ 20° C		approx. 1.445
Total aerobic microbial count	CFU/g	100 max
Total yeasts/moulds count	CFU/g	10 max

2.2 COSMACOL ECI

INCI name: Tri-C12-13 Alkyl Citrate

COSMACOL ECI exhibits light touch and is therefore suitable in skin care products for greasy skin where it also contributes to regulate sebum level. This ester can also be used in anti-perspirant/deodorant formulations to prevent stickiness of inorganic salts. COSMACOL ECI, due to its hydrophilic groups, is used also as dispersing agent for pigments in make up products as well as for UV filters in sunscreen formulation.

COSMACOL ECI

Packaging:

25 and 190 kg drums

Storage:

protect from moisture and heating sources; keep below 30° C.

Shelf life:

3 years from production date for product in its original sealed package.

Suggested dosage:

- skin care: 3–6 wt%
- sun care: 3–6 wt%
- make-up: 4–15 wt%
- deodorants: 1–3 wt%



2.3 COSMACOL EBI

INCI name: C12-15 Alkyl Benzoate

COSMACOL EBI is highly spreading emollient providing very light touch. It is particularly suitable for sunscreen and make-up products for its ability to disperse respectively UV filters and pigments.

COSMACOL EBI

Packaging:

25 and 190 kg drums

Storage:

protect from moisture and heating sources; keep below 30° C.

Shelf life:

3 years from production date for product in its original sealed package.

Suggested dosage:

- skin care: 3–5 wt%
- sun care: 3–5 wt%
- lipsticks, eye pencils: 3–5 wt%
- hair conditioners: 1–2 wt%
- hair sprays: 0.5–1 wt%
- cleansing lotions: 1–5 wt%



		COSMACOL ECI	COSMACOL EBI
Sales specification			
Appearance @ 20° C		clear liquid	clear liquid
Colour	[APHA]	50 max	50 max
Purity as ester	[wt. %]	90 min	90 min
Free alcohol	[wt. %]	10 max	10 max
Acid value	[mg KOH/g]	3.0 max	3.0 max
Water	[wt. %]	0.5 max	0.5 max
Additional properties			
Density @ 20° C	[g/cm ³]	approx. 0.933	approx. 0.933
Viscosity @ 20° C	mPa*s	approx. 137	approx. 16
Pour point	[° C]	approx. -51	approx. -27
Flash point	[° C]	approx. 178	approx. 190
Refractive index @ 20° C		approx. 1.458	approx. 1.485
Total aerobic microbial count	CFU/g	100 max	100 max
Total yeasts/moulds count	CFU/g	10 max	10 max

2.4 COSMACOL EMI

INCI name: Di-C12-13 Alkyl Malate

COSMACOL EMI shows good moisturising properties providing also benefit in treatment of aged skin as well as greasy skin where it helps to regulate sebum level. This ester provides rich texture without greasy feeling on the skin even in combination with high amount of waxy components. COSMACOL EMI is suitable also in hair care formulations improving silkiness and overall dry manageability of the hair.

COSMACOL EMI



Packaging:

25 and 190 kg drums; 900 kg IBC

Storage:

protect from moisture and heating sources; keep below 30° C.

Shelf life:

2 years from production date for product in its original sealed package.

Suggested dosage:

- skin care: 3–5 wt%
- hair conditioners: 0.5–2 wt%
- make-up: 5–15 wt%
- shampoos: 0.3 wt%

2.5 COSMACOL ETI

INCI name: Di-C12-13 Alkyl Tartrate

COSMACOL ETI is a polar emollient effective as dispersing agent for inorganic pigments in make-ups thus improving overall stability of final formulation and ability to form thinner film.

This di-ester is also reliable alternative to castor oil in make up products to achieve better spreadability. COSMACOL ETI is also used in hair care products where it improves glossing effect.

COSMACOL ETI



Packaging:

25 and 190 kg drums

Storage:

protect from moisture and heating sources; keep below 30° C.

Shelf life:

2 years from production date for product in its original sealed package.

Suggested dosage:

- skin care: 3–6 wt%
- make-up: 5–30 wt%
- shampoos: 0.2–0.5 wt%

		COSMACOL EMI	COSMACOL ETI
Sales specification			
Appearance @ 20° C		clear liquid	clear liquid
Colour	[APHA]	50 max	50 max
Purity as ester	[wt. %]	90 min	90 min
Free alcohol	[wt. %]	10 max	10 max
Acid value	[mg KOH/g]	3.0 max	3.0 max
Water	[wt. %]	0.5 max	1.0 max
Additional properties			
Density @ 20° C	[g/cm ³]	approx. 0.933	approx. 0.956
Viscosity @ 20° C	mPa*s	approx. 88	approx. 291
Pour point	[° C]	approx. -51	approx. -39
Flash point	[° C]	approx. 174	approx. 168
Refractive index @ 20° C		approx. 1.456	approx. 1.459
Total aerobic microbial count	CFU/g	100 max	100 max
Total yeasts/moulds count	CFU/g	10 max	10 max

2.6 COSMACOL ECL

INCI name: Tri-C14-15 Alkyl Citrate

COSMACOL ECL is a waxy emollient used as viscosity improver of O/W formulations. It also shows mild keratolytic effect being suitable for product for atopic skin. COSMACOL ECL can be used in make up products as lipsticks and pencils to improve stability against blooming. COSMACOL ECL is also effective in reducing the stickiness of formulations.

COSMACOL ECL

Packaging:

25 and 100 kg drums

Storage:

protect from moisture and heating sources; keep below 30° C.

Shelf life:

3 years from production date for product in its original sealed package.

Suggested dosage:

- skin care: 3–5 wt%
- sun care: 2–5 wt%
- lipsticks, eye pencils: 4–10 wt%



COSMACOL ECL

Sales specification

Appearance @ 20° C		white flakes
Purity as ester	[wt. %]	90 min
Free alcohol	[wt. %]	10 max
Acid value	[mg KOH/g]	3.0 max
Water	[wt. %]	0.5 max
Melting point	[° C]	44–54

Additional properties

Total aerobic microbial count	CFU/g	100 max
Total yeasts/moulds count	CFU/g	10 max

2.7 COSMACOL PLG

INCI name: Di-C12–13 Alkyl-Tartrate;
Tri-C12–13 Alkyl Citrate; Silica

COSMACOL PLG is a base for water free clear gels that can be used with both vegetable and synthetic oils. Lipogel based on this product can be prepared at room temperature by homogenisation of oily ingredients; mixture obtained can be further thickened by glycols or additional silica.

COSMACOL PLG

Packaging:
25 kg drum

Storage:
protect from moisture and heating sources; keep below 30° C.

Shelf life:
3 years from production date for product in its original sealed package.



COSMACOL PLG

Sales specification

Appearance @ 20° C		clear liquid
Colour	[APHA]	50 max
Acid value	[mg KOH/g]	3.0 max
Water	[wt. %]	1.0 max

Additional properties

Density @ 20° C	[g/cm³]	approx. 0.988
Viscosity @ 20° C	mPa*s	approx. 1009
Pour point	[°C]	approx. -36
Total aerobic microbial count	CFU/g	100 max
Total yeasts/moulds count	CFU/g	10 max



3. Analytical methods

	Sasol method	with reference to
APHA colour	RCM 3607	ASTM D 1209
Purity as ester	RCM 1111 / RCM 1201 (*)	Internal method
Free alcohol	RCM 1111 / RCM 1201 (*)	Internal method
Acid value	RCM 3817	ASTM D664
Water	RCM 3804	ASTM E203
Density @ 20° C	—	ASTM D7042
Viscosity @ 20° C	—	ASTM D7042
Melting point	RCM 3637	ASTM E794
Pour point	RCM 3629	ASTM D97
Flash point	RCM 3628	ASTM D93
Refractive index @ 20° C	RCM 3619	ASTM D1218
Total aerobic microbial count	—	Eu. Ph. 5.1.4
Total yeasts/moulds count	—	Eu. Ph. 5.1.4

(*) RCM 1111 is applied to COSMACOL ELI and EBI while RCM 1201 is applied to COSMACOL EMI, ETI, ECI and ECL.

Additional information are available upon request.



Our global footprint

- Sasol Performance Chemicals headquarters
- Sasol Performance Chemicals locations, including sales offices and laboratories



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