



**temix** *Oleo*

products from renewable sources



# COSMETIC AND PERSONAL CARE



PRODUCTS FROM RENEWABLE SOURCES

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ESTERIFYING IS OUR ATTITUDE

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## OUR PRODUCTS ARE DERIVED FROM RENEWABLE SOURCES

The raw materials used in our processes are biomass deriving primarily from the refining of vegetable oils for human nutrition.

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## ENHANCING YOUR NATURAL PORTFOLIO

**Temix Oleo** was formed in October 2014 by the merger of **Oleochimica Italia** (previously Undesa Italia) and **Temix International**. Given its roots, the new company is based in strong historical traditions and values, while offering extensive expertise in the respective industries of its predecessors: detergents and cosmetics (**Temix international**), and lubricants, rubber and other industrial application products (**Oleochimica Italia**).

Honoring **Temix International's** slogan "Enhancing your natural portfolio", **Temix Oleo** combines its experience in the distribution of raw materials, selected mainly from renewable sources, together with the technology and experience of **Oleochimica Italia** in esters and fatty acids production.

## REAL SUSTAINABILITY

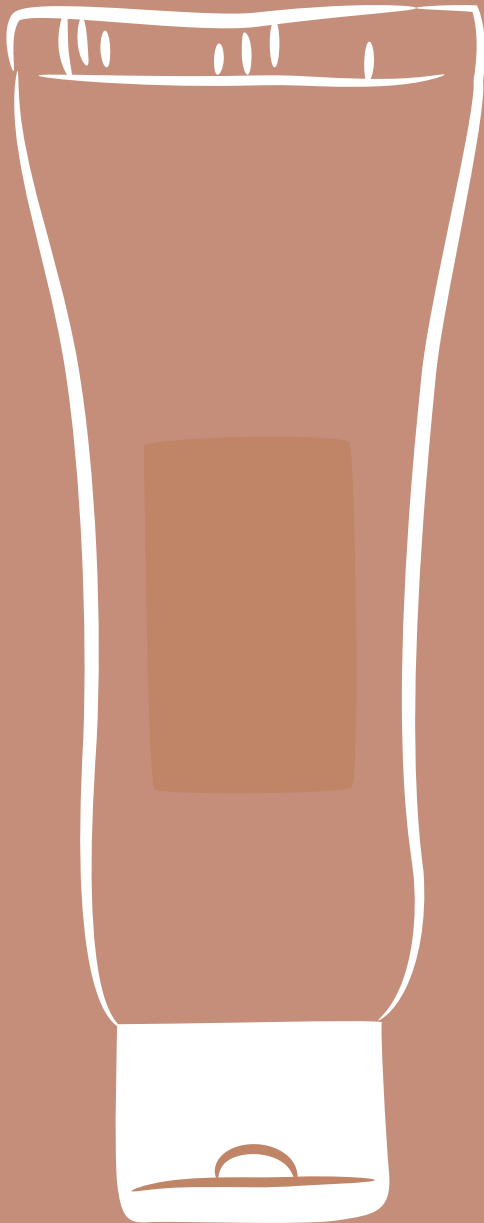
Now a well-known resource for specialty oleochemical esters, **Temix Oleo** focused on sustainable chemistry, promoting the use of **selected renewable and biodegradable raw materials**. Even internally, **Temix Oleo** promotes **Eco-compatible** business management practices, encouraging its team to continually seek innovative, sustainable and qualitative solutions.

## RESEARCH AND DEVELOPMENT

With an ever-changing market, the ability to innovate is paramount. **Temix Oleo** continually invests in technological innovation, particularly through its Research and Development efforts.

## CUSTOMIZED PRODUCTS

**Temix Oleo** has the ability to develop **tailor-made** products designed to meet each customer's needs. For more information on the technical details of this process, our sales office would be happy to help you.



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## EMOLLIENTS ENHANCING SMOOTHNESS

Emollients are products that have softening and smoothing properties.

They promote general smoothing of the skin and diminish facial lines through plumping of individual corneocytes.

These effects may be simply due to the hydration imparted by the occlusive property of the emollients. They can also serve to lubricate the skin's surface and diminish the rough feeling associated with the dead cells of the outer skin layer.

**Emollients** come in many categories, ranging from water-soluble and oil-soluble to refatting agents. In selecting cosmetic products, present-day consumers gravitate towards those perceived as natural, along with those having lighter, non-greasy textures and additional conveniences like the two-in-one function, quick-drying, long lasting and effective performance.

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# EMOLLIENTS APPLICATION GUIDE

COMMERCIAL NAME	INCI	SUN CARE	BODY CARE	FACE CARE	HAIR CARE	MAKE UP	AP DEO
TEMEST 2EHS	Ethylhexyl Stearate		***	*			
TEMEST 2EHP	Ethylhexyl Palmitate		***	*			
TEMEST 2EHC	Ethylhexyl Cocoate		***		**		
TEMEST 2EHL	Ethylhexyl Laurate		***	*	*		*
TEMEST J65 D	Ethylhexyl Oleate		**	*	**		
TEMEST J110	Di Octyl Azelate	**			***	***	***
TEMEST J30	Di Ethylhexyl Sebacate	***	**		**	**	
TEMEST J05	Di Ethylhexyl Adipate	***		**	*	**	**
TEMEST 125 LT	C12-15 Alkyl Lactate	*		***	*	***	*
TEMEST 810	Caprylic/Capric Triglyceride	***	**	*		**	
TEMEST GMO	Glyceryl Oleate		***	**	***		
TEMEST GMS V40	Glyceryl Stearate	**	**				
TEMEST GMIS	Glyceryl Isostearate	**		***		***	
TEMEST T20	Coco Caprylate/Caprates	***		*			***
TEMEST ALB	C12-15 Alkyl Benzoate	***				***	**
TEMEST TEC	Triethyl Citrate						***
TEMEST CTE	Cetearyl Ethylhexanoate	***	**	**	**	**	
TEMEST CTN	Cetearyl Isononanoate	**	*	**	**	**	**
TEMEST CTP	Cetyl Palmitate	*	**	**	*		
TEMEST IPP	Isopropyl Palmitate	*		**	**	**	**
TEMEST IPM	Isopropyl Myristate	**	**			**	**
TEMEST IPMP	Isopropyl Myristate and Isopropyl Palmitate	**	**			**	**
TEMEST DO	Decyl Oleate		**		**		
TEMEST IPIS	Isopropyl Isostearate	***		**	*	***	**
TEMEST PTIS	Pentaerythrityl Tetraisostearate	***	**		**	***	

 Kosher certified product. - Kosher certificate available upon request.

## EMOLLIENTS VARYING CHARACTERISTICS

The choice of an emollient or a blend of emollients depends on various characteristics:

- Chemical structure
- Polarity
- Spreading value
- Molecular weight
- Hydrolytic stability
- Rheological properties
- Solubilizing properties

### POLARITY

The polar emollients, mostly triglycerides, esters and liquid waxes, avoid clogging the skin pores, thus allowing the skin to breathe. Non-polar emollients provide a good protective barrier for moisture retention. Polarity is also an important factor for the stabilization of W/O formulations.

### SPREADING

The spreading values of emollients depend on their chemical structure, consistency and molecular weight. They provide information about the fatty characteristics of an emollient, which play an important role in assessing an emollient. Spreading values show how regularly an oil spreads on the irregular skin surface and how it penetrates and disappears from the skin surface.

### BRANCHED CHAIN ESTERS


Due to their good spreading characteristics and consistent viscosity despite the temperature, saturated branched chain esters have gained attention. Human sebum contains high proportions of branched chain fatty acids. Sebum, however, is a highly unstable material prone to discoloration and the formation of malodorous decomposition products through autoxidation.

Synthetic, stable and saturated branched chain esters are good substitutions for natural skin lipids.



# EMOLLIENTS TYPICAL PRODUCT CHARACTERISTICS

COMMERCIAL NAME	INCI	POLARITY	SPREADING VALUE	FEELING ON THE SKIN	MOLECULAR WEIGHT	CLOUD POINT	REFRACTIVE INDEX
<b>TEMEST 2EHS</b>	Ethylhexyl Stearate	Medium	Medium	Medium light feeling	396	5	1,465
<b>TEMEST 2EHP</b>	Ethylhexyl Palmitate	Medium	Medium	Medium light feeling	365	-3	1,465
<b>TEMEST 2EHC</b>	Ethylhexyl Cocoate	Medium	Medium	Medium light feeling	360	-5	1,465
<b>TEMEST 2EHL</b>	Ethylhexyl Laurate	Medium	Medium	Medium light feeling	312	0	1,465
<b>TEMEST J65 D</b>	Ethylhexyl Oleate	Medium	Medium	Dry emollient	394	-20	1,458
<b>TEMEST J110</b>	Di Octyl Azelate	High	Medium	Functional emollient with velvet sensation	412	-35	1,448
<b>TEMEST J30</b>	Di Ethylhexyl Sebacate	High	Medium	Velvet sensation Excellent UV dispersion	426	-40	1,449
<b>TEMEST J05</b>	Di Ethylhexyl Adipate	High	High	Non-oily silky touch	370	-45	1,442
<b>TEMEST 125 LT</b>	C12-15 Alkyl Lactate	Medium	High	Non-oily silky touch	284	-15	1,435
<b>TEMEST 810</b>	Caprylic/Capric Triglyceride	Medium	Medium	Rich skin feeling Excellent UV dispersion	500	-5	1,445
<b>TEMEST GMO</b>	Glyceryl Oleate	Medium	Low	Refatting agent	370	15	1,4833
<b>TEMEST GMS V40</b>	Glyceryl Stearate	Medium	Low	Refatting agent	358	59	1,465
<b>TEMEST GMIS</b>	Glyceryl Isostearate	Medium	Low	Refatting agent	358	5	1,465
<b>TEMEST T20</b>	Coco Caprylate/ Caprate	Medium	High	Non oily silky touch	458	5	1,465
<b>TEMEST ALB</b>	C12-15 Alkyl Benzoate	High	High	Dry emollient Excellent UV dispersion	290	4	1,483
<b>TEMEST TEC</b>	Triethyl Citrate	High	High	Dry emollient Excellent for deo formulation	276	-55	1,442
<b>TEMEST CTE</b>	Cetearyl Ethylhexanoate	Medium	Medium	Non greasy light skin feeling	388	-4	1,445
<b>TEMEST CTN</b>	Cetearyl Isononanoate	Medium	Medium	Dry skin feeling. No tacky	390	-1	1,449
<b>TEMEST CTP</b>	Cetyl Palmitate	Medium	Medium	Moisturizing properties	536	54	1,457
<b>TEMEST IPP</b>	Isopropyl Palmitate	Medium	High	High spreading and lubrication	298	13	1,436
<b>TEMEST IPM</b>	Isopropyl Myristate	Medium	High	High spreading and lubrication	270	-3	1,433
<b>TEMEST IPMP</b>	Isopropyl Myristate and Isopropyl Palmitate	Medium	High	High spreading and lubrication	270	-3	1,433
<b>TEMEST DO</b>	Decyl Oleate	Medium	Medium	Dry emollient	422	5	1,46
<b>TEMEST IPIS</b>	Isopropyl Isostearate	Medium	High	Excellent for Make Up formulation	326	-46	1,488
<b>TEMEST PTIS</b>	Pentaerythrithyl Tetraostearate	High	Medium	Excellent for Make Up formulation	1202	-25	1,486

 Kosher certified product. - Kosher certificate available upon request.

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## OUR POLYBUTENES

**Polybutene** is a versatile cosmetic emollient ideal for a wide range of personal care products. It is available in both low and high viscosity grades that are easily blended.

**Polybutene** is ideal for use in color cosmetics and lip products to help provide skin with a soft feeling, while adding waterproofing capability and moisturizing effects.

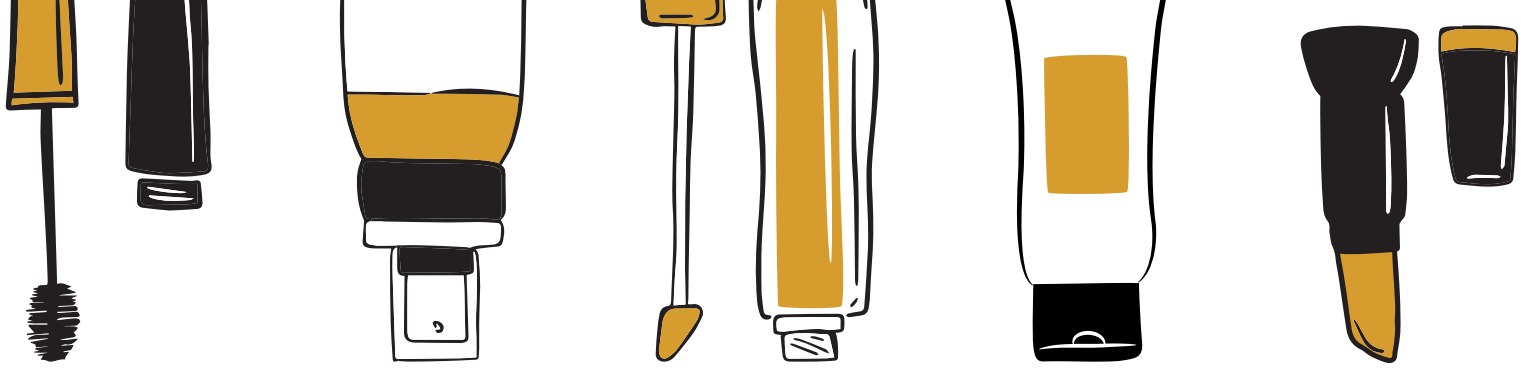
**Polybutene** is an effective waterproofing agent for sunscreen formulations. Skin texture improves significantly within minutes after application of formulations containing polybutene, showing a clear contrast and fine texture. With its long-lasting effects, it helps to retain skin moisture content and thus improve skin tone and texture.

As an affordable alternative to higher-priced esters, polybutene provides the soft feeling that today's cosmetic formulations demand.

## CONSISTENCY AGENTS AND THICKENERS

Consistency agents are substances that provide creams with density, increase stability and improve suspension of added ingredients. Thickeners enhance the consistency and viscosity of cosmetic products and also improve stability and performance on the skin. Therefore, selection of the correct thickener can impact desired performance.

Ester-based thickeners may have emulsifying or gelling properties as well; due to their biocompatibility, can also improve stability and performance on the skin.



## POLYBUTENES

CLASSIFICATION	MOLECULAR WEIGHT	VISCOSITY CST @ 100°C	COLOR (APHA)	WATER	ACID VALUE
<b>PBT 10H</b>	950	220	max 15	30 ppm	0,01
<b>PBT 30H</b>	1300	645	max 15	30 ppm	0,01
<b>PBT 210H</b>	2400	4700	max 15	30 ppm	0,01

## CONSISTENCY AGENTS AND THICKENERS

COMMERCIAL NAME	INCI	MELTING POINT	HLB	MAIN PROPERTIES
<b>ALCOLTEX 1498 F&amp;B</b>	Myristyl Alcohol	35-38°C		Used in emulsion to increase viscosity and impart a dry non-greasy feeling
<b>ALCOLTEX 1698 F&amp;B</b>	Cetyl Alcohol	47-50°C		Fatty Alcohol. Acts as consistency factor O/W co-emulsifier
<b>ALCOLTEX 1618 F&amp;B (30:70)</b>	Cetearyl Alcohol	50-54°C		Fatty Alcohol. Acts as consistency factor O/W co-emulsifier
<b>ALCOLTEX 1618 F&amp;B (50:50)</b>	Cetearyl Alcohol	48-53°C		Fatty Alcohol. Acts as consistency factor O/W co-emulsifier
<b>ALCOLTEX 1618 F&amp;B (70:30)</b>	Cetearyl Alcohol	47-52°C		Fatty Alcohol. Acts as consistency factor O/W co-emulsifier
<b>ALCOLTEX 1898 F&amp;B</b>	Stearyl Alcohol	56-60°C		Fatty Alcohol. Acts as consistency factor O/W co-emulsifier
<b>TEMEST CTP</b>	Cetyl Palmitate	54°C		Increase viscosity, impart a dry feeling and results in dense white emulsion used to build structure in cosmetic stick
<b>TEMEST GMS V40</b>	Glyceryl Stearate	57°C	3,4	Used in cosmetic O/W emulsion for the viscosity adjustment; Acts as a consistency giving agents
<b>TEMEST GMS ST</b>	Glyceryl Stearate and Sodium Stearate	57°C	3,4	Acts as an emulsifier
<b>TEMEST EGMS</b>	Glycol Distearate	62°C	1,5	Acts as pearling agent

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## EMULSIFIERS MAKE EASIER YOUR FORMULATIONS

Emulsifiers are the most common type of delivery system used in cosmetics. They enable a wide variety of ingredients to be delivered quickly to skin and hair.

Water plays two main roles in cosmetic formulation:

- Solvent and vehicle for hydro-soluble active ingredients
- Fresh feeling due to evaporation

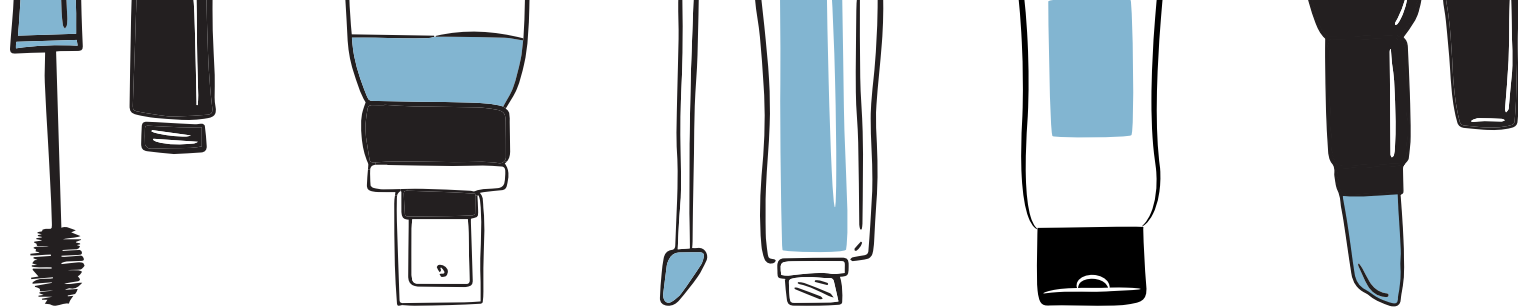
The best-known cosmetic products are based on emulsion. In these emulsions, small droplets of oil are dispersed in water (O/W) or small droplets of water are dispersed in oil (W/O).

Since oil and water are incompatible, emulsifiers were added to produce the small droplets and to prevent the oil and water phase from separating. Depending on the nature of the alcohol used in the esterification process, they may be predominantly hydrophobic or hydrophilic, and thus suitable as W/O or O/W respectively.

Non-ionic emulsifiers are not affected by water hardness or pH levels.

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## HAIR CARE

COMMERCIAL NAME	INCI	APPLICATIONS
<b>ETOMIX HCS</b>	Cetearyl alcohol, PEG-40 hydrogenated castor oil, Behentrimonium chloride, Stearalkonium chloride	Conditioning base for hair care: ideal for balm and hair mask formulations
<b>ETOWAX PO</b>	Laureth-3 phosphate, Cetearyl Alcohol, laureth-3, lauryl myristyl alcohol	Effective emulsifier for peroxide emulsions stable in a wide range of pH
<b>ETOWAX AB</b>	Cetearyl Alcohol, Sodium Cetearyl Sulfate, Sodium lauryl Sulfate	Emulsifier for hair balms and creams
<b>ETOWAX AB/W</b>	Cetearyl Alcohol, Sodium Lauryl Sulfate	Emulsifier for hair balms and creams
<b>ETOWAX AB/N</b>	Cetearyl Alcohol, Sodium Cetearyl Sulfate	Emulsifier for hair balms and creams
<b>ETOWAX NB</b>	Cetearyl alcohol, Ceteareth-20	Emulsifier for skin care and hair care
<b>ETOWAX NB10</b>	Cetearyl alcohol, Ceteareth-25	Emulsifier for skin care and hair care
<b>ETOWAX NB30</b>	Cetearyl alcohol, Ceteareth-30	Emulsifier for skin care and hair care

## SPECIALTIES

COMMERCIAL NAME	INCI	APPLICATIONS
<b>ETOWAX LC</b>	Steareth-21, Steareth-2, PPG/PEG-4/14 Dimethicone	Emulsifier for Liquid Crystals emulsions
<b>ETOWAX DC</b>	Cetearyl alcohol, lanolin, peg-8 stearate, ceteareth-25, glyceryl stearate	Emulsifier for acids and basics emulsions: suitable in a wide range of pH and at high level of salts in particular for depilatory system

## SKIN CARE

COMMERCIAL NAME	INCI	APPLICATIONS
<b>ETOWAX SP</b>	Glyceryl Stearate, Ceteareth-20, Ceteareth-12, Cetearyl Alcohol, Cetyl Palmitate	Self emulsifier for O/W emulsions: stable in a wide range of pH
<b>ETOWAX EB</b>	Cetearyl Alcohol, Ceteareth-25, Polysorbate 60, PEG-100 Stearate	Self emulsifier for O/W emulsions: stable in a wide range of pH
<b>TEMCARE SG</b>	Sodium Stearoyl Glutamate	TEMCARE SG is an anionic O/W amino acid type emulsifier with an excellent emulsifying ability
<b>ETOWAX GMPG</b>	Glyceryl Stearate, PEG-100 Stearate	Emulsifier for skin care: it gives more consistency to the emulsions
<b>ETOWAX CGP60</b>	Cetearyl Alcohol, Glyceryl Stearate, PEG-100 Stearate	Self emulsifier for O/W emulsions: stable in a wide range of pH
<b>ETOWAX EB2</b>	Cetearyl Alcohol, PEG-20 Stearate	Self emulsifier for O/W emulsions: stable in a wide range of pH
<b>TEMEST GMS V40</b>	Glyceryl Stearate	Co-emulsifier and emollient
<b>TEMEST GMS ST</b>	Glyceryl Stearate, Sodium stearate	Self emulsifier for skin and hair care
<b>ETOWAX OLY</b>	Cetearyl alcohol, Sorbitan Stearate, Glyceryl Stearate, Cetearyl Alcohol	Self emulsifier for O/W emulsions: stable in a wide range of pH



## OUR HAIR AND BODY CARE SOLUTIONS

According to our philosophy, we offer surfactants based on renewable sources and a wide range of traditional surfactants, which completes the portfolio and allows us to satisfy each customer's request.

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## MILD SURFACTANTS

COMMERCIAL NAME	INCI	APPLICATIONS
<b>HYDROPHILIC ESTERS</b>		
<b>TEMEST HE</b>	PEG-7 Glyceryl Cocoate	Hydrophilic ester
<b>TEMEST CC6</b>	PEG-6 Caprylic/capric glycerides	Hydrophilic ester
<b>ANIONIC SURFACTANTS</b>		
<b>TEMCARE LS</b>	Sodium Lauroyl Sarcosinate	Primary surfactant for mild formulation
<b>TEMCARE CG</b>	Sodium Cocoyl Glutamate	Secondary and mild surfactant for personal care applications
<b>TEMCARE GLY</b>	Sodium Cocoyl Glycinate	Primary surfactant for mild formulation in personal care applications
<b>TEMCARE S3</b>	Sodium Laureth Sulfosuccinate	Secondary mild surfactant for personal care application





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