

PALMESTER | PLANTERA

Medium Chain Triglycerides

Made in Germany

Personal Care



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Medium Chain Triglycerides

MCTs, our brand names PLANTERA and PALMESTER, are 100% natural and derived from renewable resources. Our MCTs are strictly manufactured in production lines dedicated to MCT. KLK OLEO is fully backwards integrated.

KLK OLEO offers different types of MCT. MCTs are categorized according to the vegetable feedstock and ratio of caprylic/ capric acid, offering a variety of properties and benefits.

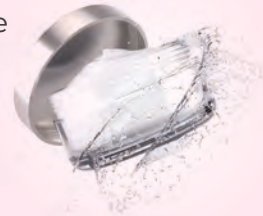
- + **Emollient and skin conditioning agent**
- + **Skin hydration**
- + **Provide good spreadability and skin penetration**
- + **Pigment dispersing in colour cosmetics and sunscreen solubility**
- + **Carrier and solubiliser for oil soluble actives**
- + **Viscosity modifier**



Multifunctional Solutions

Emollient

Excellent emollient and carrier oil in leave-on skin care formulations requiring high solvent concentration.



21-Day Cumulative Irritancy Grade*

	Propylene Glycol	MCTs
Total	72.0	4.0
p Value	0.0077	0.0077

* 25 subjects

MCTs have significantly less potential for causing irritation ($p < 0.01$) than propylene glycol.

The 21-Day Cumulative Irritancy Assay was performed by Derma Test Labs, Inc., Long Island, New York.

MCTs are a suitable carrier for topical formulations. They are preferred over propylene glycol in optimised formulations requiring high solvent concentration.

Skin Hydration

MCTs improve skin hydration and are suitable for hypoallergenic formulations for sensitive and dry skin.



Hydration Effect (Corneometry)

Formulation A - Cream (MCTs at 5 - 8.5%)

Formulation B - Milky Lotion (MCTs at 8 - 15%)

Reference Products (Commercially available w/o emulsion)

Hydration Improvement on Day 29 (%)

32.1

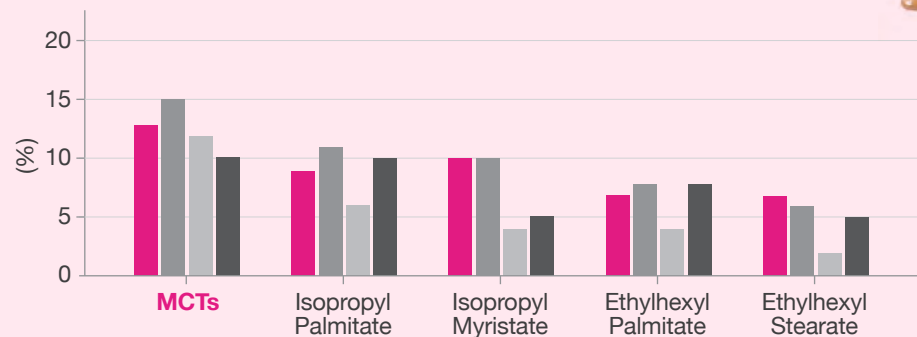
42.2

29.7

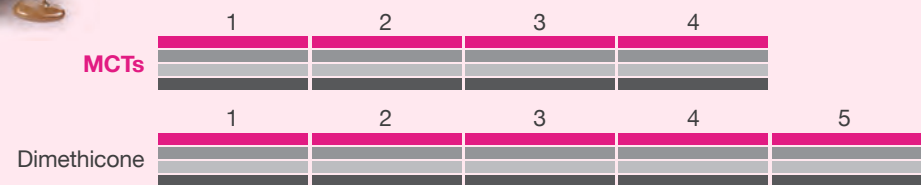
Test done on atopic and non-atopic subjects

Spreadability and Dispersing

MCTs have better UV filter solubility for Benzophenone-3, BMDM, EHT, BEMT vs Isopropyl Esters and Ethylhexyl Esters.



■ Benzophenone-3
■ Butyl Methoxydibenzoylmethane (BMDM)
■ Ethylhexyl Triazone (EHT)
■ Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine (BEMT)



■ Yellow Iron Oxide, CI 77492
■ Red Iron Oxide, CI 77491
■ Black Iron Oxide, CI 77499
■ Carbon Black, CI 77266

*Pigment tested are coated with dimethicone except Carbon Black (CI 77266)

Score values are based on the difference of viscosity of pigment / emollient dispersion relative to the viscosity of the pure emollient. Lower score reflects higher pigment wetting capability.

Product Range

PALMESTER I PLANTERA MCTs are resynthesized neutral oils with a glycerol backbone esterified with mainly Caprylic- and Capric acid. Due to their unique nutritional and diverse properties, they are used in a wide range of applications within the personal care industry.

INCI Name	Brand Name	Feedstock	C8 : 10	CAS No.	Appearance
Caprylic / Capric Triglyceride	PALMESTER 3595	Palm	60 : 40	65381-09-1 73398-61-5	Liquid
Caprylic / Capric Triglyceride	PALMESTER 3585	Palm	70 : 30	65381-09-1 73398-61-5	Liquid
Caprylic / Capric Triglyceride	PALMESTER 3590	Non-palm	60 : 40	65381-09-1 73398-61-5	Liquid
Caprylic / Capric Triglyceride	PALMESTER 3595 NE	Vegetable	60 : 40	65381-09-1 73398-61-5	Liquid
Caprylic / Capric Triglyceride	PLANTERA ES10	Coconut	60 : 40	65381-09-1 73398-61-5	Liquid
Tricaprylin	PALMESTER 3550	Palm	95 : 0	538-23-8	Liquid
Tricaprylin	PLANTERA ES15	Coconut	95 : 0	538-23-8	Liquid

Application Areas



Skin Care Leave-on

- + Facial Creams and Masks
- + Hair Oils
- + Lip Creams and Balms
- + After Shave Creams and Oils
- + Beard Oil and Balms
- + Shaving Creams and Oils
- + Body Butter, Lotion, Cream and Oil
- + Hand and Foot Care



Sun Care

- + Sunscreens
- + After Sun
- + Self Tanning



Skin Care Rinse-Off

- + Make-Up Remover
- + Bath and Shower Oil



Colour Cosmetics

- + Eyeshadow
- + Blush Powder
- + Primer
- + Concealer
- + Lipsticks
- + Lip Gloss



Antiperspirant

- + Deodorant
- + Perfume

Guideline Formulations



High Performance Sunscreen SPF 30

Ingredients	% by weight	Functions
Aqua	53.0	Diluent
Dibutyl Adipate	10.0	Emollient
Aqua, Bis Ethylhexyloxyphenol Methoxyphenyl Triazine, Acrylates/C12-22 Alkyl Methacrylate Copolymer, Coco Glucoside, Arginine, Disodium Lauryl Sulfosuccinate	10.0	Broad Spectrum UV Filter
Propylheptyl Caprylate	5.0	Emollient
PALMESTER MCTs	5.0	Emollient
Ethylhexyl Salicylate	5.0	UV-B Filter
Diethylamino Hydroxybenzoyl Hexyl Benzoate	2.5	UV-A Filter
Cetearyl Glucoside, Cetearyl Alcohol	2.0	Emulsifier (o/w)
Ethylhexyl Triazone	2.0	UV-B Filter
Bis Ethylhexyloxyphenol Methoxyphenyl Triazine	2.0	Broad Spectrum UV Filter
Glycerine (PALMERA G995U)*	2.0	Humectant
Disodium Cetearyl Sulfosuccinate	1.0	Emulsifier (o/w)
Xanthan Gum	0.3	Stabiliser
Disodium EDTA	0.2	Complexing Agent



Hydrating and Renewing Night Cream

Ingredients	% by weight	Functions
Aqua	75.90	Diluent
Ethylhexyl Stearate (PALMESTER 1545)*	4.00	Emollient
Burtyrospermum Parkii Butter	3.50	Emollient
Glycerine (PALMERA G995U)*	3.00	Humectant
Isopropyl Myristate (PALMESTER 1512)*	3.00	Emollient
PALMESTER MCTs	3.00	Emollient
Myristyl Myristate (PALMESTER 1300)*	2.50	Emollient
Cetearyl Alcohol (PALMEROL 6850)*	2.00	Consistency Agent
Pentaerythryl Distearate	1.00	Consistency Agent
Behenyl Alcohol	1.00	Consistency Agent
Dimethicone	0.50	Defoamer
Sodium Polyacrylate	0.40	Stabiliser
Disodium Cetearyl Sulfosuccinate	0.20	Emulsifier (o/w)
Preservative	q.s	Preservative



Luminous Lip Gloss

Ingredients	% by weight	Functions
Polybutene	42.0	Binder
Polyglyceryl-3 Diisostearate	18.0	Emulsifier (w/o)
Hydrogenated Dimer Dilinoleyl / Dimethylcarbonate Copolymer	12.0	Water Resistance Agent
PALMESTER MCTs	9.5	Emollient
Octyldoecanol	6.0	Emollient
Dicaprylyl carbonate	5.0	Emollient
Silica Dimethyl Silylate	4.2	Viscosity Modifier
Mica, Titanium Dioxide, Silica	2.0	Colour Pigment
Tocotrienol (DavosLife E3 DVL 95)*	0.5	Active Ingredient
Calcium Sodium Borosilicate, Titanium Dioxide	0.4	Colour Pigment
Mica, Titanium Dioxide, Iron Oxides	0.3	Colour Pigment
Benzotriazolyl Dodecyl p-Cresol	0.1	Light Stabiliser



Revitalising Hair Treatment Oil

Ingredients	% by weight	Functions
PALMESTER MCTs	60.0	Carrier Oil
Mineral oil	14.0	Moisturiser
Coconut oil	25.0	Emollient
Ylang Ylang Oil	0.65	Active Ingredient
Centella Asiatica Extract	0.05	Active Ingredient
Dipropylene Glycol	0.15	Solubiliser
BHT	0.15	Anti-oxidant

*Ingredients offered by KLK OLEO

Quality Assurance

Quality is our priority – PLANTERA | PALMESTER MCTs come along with the compliance to leading quality management systems and qualifications:

To meet the requirements of our customers our manufacturing sites in Europe are producing MCT according to current standards such as ISO9001, ISO 14001, ISO22000 as well as ISO 45001.



All our MCTs are Kosher and Halal certified.

KLK OLEO is in close contact with our certification bodies while training employees regularly to ensure awareness and importance of those certifications.

KLK Emmerich GmbH is part of Kuala Lumpur Kepong Berhad (KLK), a leading plantation group based in Malaysia. Consequently, all European manufacturing sites are backwards integrated for most of the oleochemicals produced.

KLK was amongst the founding members of the Roundtable on Sustainable Palm Oil (RSPO) in 2004 and substantially involved in the development of a comprehensive Sustainability Policy in 2014, adopting the principles and criteria of RSPO. The crust of the policy is related to the commitment towards no deforestation, no peat and no exploitation (NDPE). The Roundtable on Sustainable Palm Oil (RSPO), established in 2004, is a global, non-profit, multistakeholder initiative on sustainable palm oil that unites more than 4000 members worldwide who represent all links along the palm oil supply chain. Members of RSPO, and participants in its activities come from many different backgrounds, including plantations, processors, traders, consumer goods manufacturer and retailers of palm oil derived products, financial institutions, environmental and social non-governmental organisations.

Beyond that, KLK Emmerich GmbH is EcoVadis audited and approved.



About KLK OLEO

As a global oleochemical producer, KLK OLEO is committed to supplying sustainable ingredients. Vertically integrated and a member of the Roundtable of Sustainable Palm Oil (RSPO), we ensure a highly transparent supply chain. Headquartered in Kuala Lumpur, KLK OLEO contains various sites in Europe. The close proximity to customers and our aptitude allows us to meet the needs of the market. By thinking globally and acting locally, we are one of the leading oleochemical producers in Europe. We offer an extensive product portfolio, essential for different applications in diverse industries.

Based in Emmerich am Rhein and with further production site in Düsseldorf, the KLK Emmerich GmbH product portfolio ranges from Derivatives such as Isostearic Acid, MCTs and Triacetin to a variety of fatty acids and glycerine.

Be assured by
PALMESTER



KLK OLEO in the
Global Arena



