

# Advances In Green Chemistry



PHOENIX CHEMICAL, INC.





# Functional Specialties

**Innovative. Sustainable. Plant Derived.**

When it comes to what types of natural cosmetic products that are in demand, those that are developed to provide specialized functional results are at the top of the list. Utilizing plant derived materials such as rapeseed, soy, castor, coconut, and corn, **Phoenix Chemical** continues to produce materials that deliver proven unique performance characteristics while focusing on sustainability and reducing environmental impact. These products can directly replace and improve upon petroleum based ingredients and provide cosmetics with a real functional edge.



## Pelemol 3G22 *(INCI: Polyglyceryl-3 Behenate)*

- 100% Active, 100% Vegetable Derived,
- Hydrophilic
- PEG/PPG Free Ester, Self Emulsifying Properties
- Improves Rinse-Off Characteristics
- Excellent Water-in-Oil Emulsifier
- Broad Solubility Profile
- Melting Point 74°C

## Pelemol 6GPR *(INCI: Polyglyceryl-6 Polyricinoleate)*

- 100% Active, Liquid, 100% Vegetable Derived, Polymeric Octapolyester
- Very Substantive to Skin, Lubricious and Glossy
- Functions as a Pigment Wetting and Dispersing Agent
- Useful in Lipstick, Skin and Make-Up Products
- Also Useful in Physical Sunscreen Dispersions of TiO<sub>2</sub>/ZnO
- Functional PEG/PPG Free Replacement for PEG-30 Dipolyhydroxystearate

## PELEMOL 10GHO *(INCI: Polyglyceryl - 10 Hexaoleate)*

- Hexaester of Oleic Acid and Polyglyceryl-10
- 100% Vegetable
- 100% Active
- Contributes to Shine
- Water resistant
- REACH Registered

## Pelemol BB *(INCI: Behenyl Behenate)*

- 100% Vegetable Derived
- 100% Active, Oil Soluble Flake
- Melting Point 64-74°C
- Provides Richness While Building Viscosity with Low Solid Levels
- Helps to Stabilize Emulsions

## Pelemol BE *(INCI: Behenyl Erucate)*

- 100% Vegetable Derived
- 100% Active Solid
- Low Melting Point 46°C
- Occlusive Skin Conditioner
- Useful in Lipsticks

## Pelemol CCC *(INCI: Coco-Caprylate/Caprate)*

- 100% Vegetable Derived Liquid
- It is Clear, Non-Tacky
- RSPO, COSMOS and ECOCERT Certified
- Soft and Luxurious on Skin
- Emollient Nature Derives from its Fatty Straight Chain Structure

## Pelemol CP *(INCI: Coco-Caprylate/Caprate)*

- 100% Vegetable Derived
- Vegetable Replacement for Spermaceti Wax
- RSPO, COSMOS and ECOCERT Certified
- Solid Ester That Provides Emolliency as well as Thickening Properties to Emulsions and Stick Products



## Pelemol CCT

(INCI: Caprylic /Capric Triglyceride)

- 100% Vegetable Derived Triester
- Short Chain Fatty Acid Triglyceride
- RSPO & COSMOS Certified
- Halal and Kosher Certified
- Light in Color, Low Viscosity
- Silky Smooth on Skin, Tack-Free

## Pelemol CR

(INCI: Cetyl Ricinoleate)

- 100% Vegetable Derived Ester
- Soft Paste That Melts at Skin Temperature
- RSPO Certified
- Halal and Kosher Certified
- Polarity Broadens its Compatibility in Cosmetic Preparation
- Useful in Color Cosmetics

## Pelemol D3GP

(INCI: Dimerdilinoleyl Dilinoleate & Propanediol Dicaprylate/Caprate & Polyglyceryl-3 Behenate)

- 100% Active, Amorphous Paste
- 100% Vegetable Derived
- Functional Equivalent to Animal Based Mixed Cholesterol and Lanosterol Esters
- Mixed Esters for Lipstick Applications
- Biodegradable
- Melting Point 35°C, Easily Blendable in many Oil Phases
- All Components can be Described as Hypoallergenic
- RSPO Certified

## Pelemol D5R-V

(INCI: Propanediol Dicaprylate/Caprate & Diisostearyl Malate)

- 98.7% Vegetable Derived, 1.3% Synthetic, Replacement for Cyclomethicone D5
- Identical Flow, Spreadability, Initial Feel, Softness and Cushion on Rub-In that is Associated with Cyclomethicone D5
- Identical Solubility Characteristics to D5
- The Refractive Index Pelemol D5R-V (1.4435) vs. Cyclomethicone D5 (1.3895) Results in a more Glossy Appearance on Skin
- RSPO Certified

## Pelemol DD

(INCI: Dimer Dilinoleyl Dimer Dilinoleate)

- 100% Active, 100% Vegetable Derived
- Tasteless and Odorless
- Features High Gloss and Cushion
- Substantive and Occlusive
- Broad Solubility Profile

## Pelemol DISD

(INCI: Diisostearyl Dimer Dilinoleate)

- 100% Active, 100% Vegetable Derived
- Light Yellow Clear Liquid at Ambient Temperatures
- Extremely Emollient Diester
- Useful in Color Cosmetics

## Pelemol DO

(INCI: Decyl Oleate)

- 100% Active, 100% Vegetable Derived, Slightly Yellow Liquid Emollient
- Excellent Spreading Aid
- Imparts Cushion Reducing Tack
- Solubilizer for Hair Dye Systems

## Pelemol DP-144B

(INCI: Dipentaerythryl Tetrabehenate/Polyhydroxystearate)

- 93% Vegetable Derived, 7% Synthetic
- Holds Three Times its Weight in Water
- Superior Lipstick Ester
- Provides Moisturization and Occlusive Humectancy
- Demolds Easily
- Tasteless and Odorless
- Increases Melting Point of Lipstick

## Pelemol EA

(INCI: Ethyl Arganate)

- 100% Vegetable Derived
- Good wetting agent on skin
- Self spreadable
- Extremely dry

## Pelemol EC

(INCI: Ethyl Canolate)

- Clear, 100% Vegetable Derived
- Composed of ethyl esters of canola oil acids
- Exhibits a distinct silicone-like feel on skin

## Pelemol EE

(INCI: Octyldodecyl Erucate)

- 100% Active, 100% Vegetable Derived Liquid Ester
- Very Low Viscosity
- Clarity at Low Temperatures
- Readily Absorbed into Skin

## Pelemol GMB

(INCI: Glyceryl Behenate)

- 100% Active, 100% Vegetable Derived Granule
- Improves Emulsion Stability and Gels Oils
- Builds Viscosity and Provides Richness
- Co-Emulsifier, PEG/PPG Free and Non-EO Based
- Low HLB Emulsifier
- Broad Solubility Profile
- Melting Point 70°C

## Pelemol GMLA

(INCI: Glyceryl Mono Laurate)

- 100% Vegetable Derived
- Monoester of Glycerol and Lauric Acid
- Soluble in oils and most organic solvents
- Functions as a conditioner and an emulsifying agent
- RSPO Certified

## Pelemol GMR

(INCI: Glyceryl Ricinoleate)

- 100% Active, 100% Vegetable Derived Clear Liquid to Pasty Product
- Halal and Kosher Certified
- Excellent Moisturizer and Skin Protectant
- Water-In-Oil Emulsifier or Co-Emulsifier
- Refatting Agent
- RSPO Certified

## Pelemol GTB

(INCI: Tribehenin)

- 100% Active, 100% Vegetable Derived Triester
- Functions as an Emulsion Stabilizer
- Builds Viscosity and Provides Richness
- Offered as a Hydrophobic, Granular Powder



## Pelemol GTHS

*(INCI: Trihydroxystearin)*

- 100% Vegetable Derived
- Off White Powder
- Effective Rheology Modifier
- Low Melting Point

## Pelemol GTIS

*(INCI: Triisostearin)*

- 100% Active, 100% Vegetable Derived Liquid Triester
- Exhibits Excellent Cushion and is Uniquely Suited For Use in Lipstick Products
- Useful in Modifying Melting Points
- Leaves the Skin with a Lubricious and Glossy Appearance
- Exhibits Broad Solubility Properties
- Excellent Spreadability and Cushion

## Pelemol II

*(INCI: Isostearyl Isostearate)*

- 100% Vegetable Derived, Clear Liquid
- Imparts Shine, Spreadability, and Emolliency
- Suitable for Color Cosmetics and Skin Products

## Pelemol ISAO

*(INCI: Isostearyl Argan Glycerides)*

- 100% Vegetable Derived
- Exhibits More Cushion and Spreadability than Argan Oil
- More Elegant than Argan Oil
- Provides Non-Greasy Conditioning in Hair, Skin and Make-Up Products

## Pelemol ISB

*(INCI: Isostearyl Behenate)*

- 100% Active, 100% Vegetable Derived Ester
- Soft Opaque, Off White Paste at Ambient Temperatures
- Melts at Skin Temperature
- Extremely Emollient and Effective as a Moisture Barrier

## Pelemol ISHS

*(INCI: Isostearyl Hydroxystearate)*

- 100% Vegetable Derived
- Soft Solid to Flowable Paste
- Occlusive Emollient to Help Reduce Transepidermal Water Loss
- Provides Gloss in Lipsticks
- Melting Point 20-30°C
- Suitable for Color Cosmetics
- Extremely Emollient

## Pelemol JEC

*(INCI: Triisostearin and Glyceryl Behenate)*

- 100% Vegetable Derived
- Effective Replacement for Petrolatum to which it has Identical Stability Characteristics
- Extremely Lubricious
- Soft Paste that Melts at Room Temperature

## Pelemol MOR-1

*(INCI: Dilinoleic Acid / Propanediol Copolymer (and) Propanediol Dicaprylate/Dicaprate)*

- 100% Vegetable Derived
- Comparative Properties to Drakeol 10LT Mineral Oil
- REACH compliant
- Mimics Solubility Characteristics, Viscosities, and Sensory Properties of Mineral Oil

## Pelemol MOR-3

*(INCI: Dilinoleic Acid / Propanediol Copolymer (and) Propanediol Dicaprylate/Dicaprate)*

- 100% Vegetable Derived
- Comparative Properties to Drakeol 600 Mineral Oil
- REACH compliant
- Mimics Solubility Characteristics, Viscosities, and Sensory Properties of Mineral Oil

## Pelemol MOR-4

*(INCI: Coco-Caprylate/Caprate (and) Dimer Dilinoleyl Dimer Dilinoleate)*

- 100% Vegetable Derived
- Comparative Properties to Drakeol 10LT mineral oil
- RSPO Certified
- Chinese and REACH compliant
- Mimics Solubility Characteristics, Viscosities, and Sensory Properties of Mineral Oil

## Pelemol MOR-5

*(INCI: Coco-Caprylate/Caprate (and) Dimer Dilinoleyl Dimer Dilinoleate)*

- 100% Vegetable Derived
- Comparative Properties to Drakeol 600 mineral oil
- RSPO Certified
- Chinese and REACH compliant
- Mimics Solubility Characteristics, Viscosities, and Sensory Properties of Mineral Oil

## Pelemol OL

*(INCI: Oleyl Lactate)*

- 100% Vegetable Derived
- Slightly Yellow Light Viscous Liquid
- RSPO Certified
- Provides a Soft, Supple, and Silky Feel to Skin
- Conditions Hair by Imparting Softness, Sheen and Manageability

## Pelemol P3D

*(INCI: Dilinoleic Acid/Propanediol Copolymer)*

- 100% Vegetable Derived Polyester
- 100% Active, Slightly Yellow, Pourable Liquid
- Slightly Tacky, Substantive, Glossy
- Tasteless and Odorless
- Ideal for Lipsticks, Lip Balms and other Lip Products

## Pelemol P-99

*(INCI: Propanediol Dipelargonate)*

- 100% Active Liquid
- 100% Vegetable Derived
- Easily Pourable, Clear, Water-White, Virtually Odorless
- Extremely Dry Emollient
- Substitute for Dry Esters of Synthetic Origin
- Useful in Creams, Lotions, Fragrances and Make-Up Products



## Pelemol P-810

*(INCI: Propanediol Dicaprylate/Caprate)*

- 100% Active, 100% Vegetable Derived
- Easily Pourable, Clear, Water White, Virtually Odorless Liquid
- RSPO Certified
- Extremely Dry Emollient
- All Vegetable Derived Replacement for Synthetically Derived Dry Esters

## Pelemol P-1263

*(INCI: Polyglyceryl-10 Hexaoleate & Polyglyceryl-6 Polyricinoleate)*

- A Versatile Polymeric Water-in-Oil Emulsifier for Creams and Lotions
- 100% Active, Easy to Handle Liquid, 100% Vegetable Derived Polyester
- Carefully Selected Structure Balanced Combination
- Excellent PEG/PPG Free Water-in-Oil Emulsifier
- Primarily a W/O Emulsifier: Suitable as a Co-Emulsifier with High HLB Emulsifiers for O/W Emulsions
- A PEG/PPG Free Replacement for PEG-30 Dipolyhydroxystearate

## Pelemol PHS-8

*(INCI: Polyhydroxystearic Acid)*

- 100% Active, 100% Vegetable Derived Liquid Polyester
- Viscous, Yellow Liquid with High Gloss
- Pigment Wetting and Grinding Agent
- Binds Water via Hydrogen Bonding for Conditioning and Humectancy
- Superior Liquid Crystal Emulsification Properties
- Halal and Kosher Certified

## Pelemol PTIS-V

*(INCI: Pentaerythritol Tetraisostearate)*

- 100% Vegetable Derived
- Rapidly Absorbs into the Skin
- Suitable for Lipsticks and Lip Treatment
- Clear straw colored liquid
- China Compliant (IECIC)

## Pelemol SnO

*(Stearyl Caprylate)*

- 100% Active, 100% Vegetable Derived
- Extremely Emollient
- Melts on Skin Contact

## Pelemol SR-100

*(INCI: Coco Caprylate /Caprate (and) Dimer Dilinoleyl Dimer Dilinoeate)*

- 100% vegetable derived
- Ester replacement for Silicone Fluids
- Improved stability and higher refractive index
- RSPO Certified
- REACH and China compliant
- No harmful solvents used during production
- Suitable for Ecocert and Comos certification



## Pelemol SR-350

(INCI: Coco Caprylate /Caprate (and) Dimer Dilinoleyl Dimer Dilinoeate)

- 100% vegetable derived
- Ester replacement for Silicone Fluids
- Improved stability and higher refractive index
- RSPO Certified
- REACH and China compliant
- No harmful solvents used during production
- Suitable for Ecocert and Comos certification

## Pelemol SR-1000

(INCI: Coco Caprylate /Caprate (and) Dimer Dilinoleyl Dimer Dilinoeate)

- 100% vegetable derived
- Ester replacement for Silicone Fluids
- Improved stability and higher refractive index
- RSPO Certified
- REACH and China compliant
- No harmful solvents used during production
- Suitable for Ecocert and Comos certification

## Pelemol T-91854

(INCI: Triisostearyl Trilinoleate)

- 100% vegetable derived
- Dark amber viscous liquid
- Tasteless
- Strong properties for use in all lip products and as a pigment dispersant

## Pelemol TISC-V

(INCI: Triisostearyl Citrate)

- Facilitates Emulsification and Wettability
- Imparts Spreadability and Gloss in Lipsticks
- Odorless and tasteless

## Pelemol TT

(INCI: Tribehenin and Caprylic/Capric Triglyceride)

- 100% Active, 100% Vegetable Derived
- Mimics Tactile Properties of Shea Butter
- RSPO Certified
- Melts at Skin Temperature
- Butter-Like Lubriciousness and Spreadability

## Pelemol VL

(INCI: Dimer Dilinoleyl Dimer Dilinoeate and Triisostearin)

- 100% Vegetable Derived
- 100% Active, Liquid Mixed Ester
- Solubilities and Characteristics Provide an Excellent Replacement for Lanolin Oil



## BIOGEL® Argan Butter

(INCI: Hydrogenated Argania Spinosa Kernal Oil)

100% vegetable derived . Has a mild odor and excellent melting properties suitable for skin care. Argan Butter is also known to have inflammation reduction and anti-aging properties. Used in formulations to deliver intense moisturization, quick absorption and exquisite skin feel.

## BIOGEL® Canola Butter

(INCI: Hydrogenated Canola Butter)

- 100% vegetable based
- Off white soft paste
- Ideal emollient for skin conditioning
- Melt point 40° C
- Used as a diluent in soap bars containing higher cost oils such as argan butter

## BIOGEL® Canola Butter/FH

(INCI: Hydrogenated Canola Oil)

- 100% vegetable based
- Derived from the rapeseed plant
- Ideal emollient for skin conditioning
- Off white hard flake
- Melt point 70° C
- Used as a diluent in soap bars containing higher cost oils such as argan butter

Derived from the rapeseed plant Canola Butter is used as an emollient for skin conditioning that has barrier repair and anti-inflammatory properties.

## BIOGEL® Moringa Butter

(INCI: Hydrogenated Moringa Oleifera Seed Oil)

Moringa Oil demonstrates a relatively high oxidative stability. Evidence exists for skin related applications such as treating topical wounds and skin conditions that require antibacterial activity. In Central American countries the moringa leaves are applied as a poultice on sores and seed oil externally for skin.

## BIOGEL® Olive Butter

(INCI: Hydrogenated Olive Oil)

Derived from olive oil and obtained from cold pressing followed by a full refining process. Olive Butter has slightly higher melting properties and better stability than shea butter. Exhibits excellent spread ability on the skin, making it ideal as a massage butter or body balm.

## BIOGEL® VLHS

(INCI: Dimerdilinoleyl Dimer Dilinoleate (and) Triisostearin (and) Hydroxystearic Acid)

- 100% Vegetable Based
- Solid gel @ 30° C
- Melt point 42° C
- Useful in lip gloss, lip balms, lipstick, make-up, and skin products.





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