High Performance
Skin Care Products
Phoenix Chemical

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When it comes to skin care, Phoenix has you covered with a range of functional specialties proven to unleash some pretty amazing cosmetic alchemy. At Phoenix, we refer to this as Phoenache! Enhanced functionality builds momentum, excitement, and new opportunities. Phoenix Chemical continues to produce materials that deliver proven unique performance characteristics for creative cosmetic formulations as featured on the following pages.

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Silky Skin Softening Agent

Catemol™ is a cationic conditioning agent that is rich in silky conditioning. This substantive quaternary imparts an intensely silky touch and leaves skin or hair with a very soft feel.

• Catemol™ WPC (Steapyrium Chloride)

Applications: Creams, lotions, hair conditioning, and hair grooming aids.
Suggested use level: 2-5%

Skin Treatment Solvents

Coupling solvents are excellent for water based actives while also being completely soluble in castor oil.

• Coscap® G7-MC (Glycereth-7 Trimethyl Ether)
• Pelemol® G7-A (Glycereth-7 Triacetate)
• Phoenoxol® BD-10P (PPG-10 Butanediol)

Applications: Cosmeceuticals, skin care, treatments.
Suggested use level: 5-10%

SPF Enhancement

The Pecosil® PS series are anionic silicone phosphate esters that delivers superior emulsifier efficiency. They also have excellent wetting characteristics to provide SPF enhancement, and act as a counter-irritant. Pecogel® S-1120 is a nonionic silicone based film former.

• Pecosil® PS-112 (Dimethicone PEG-7 Phosphate)
• Pecosil® PS-100 (Dimethicone PEG-7 Phosphate)
• Pecogel® S-1120 (VP Dimethiconylacrylate/ Polycarbamyl Polyglycol Ester)

Applications: All products with SPF’s, moisturizers, creams, and lotions.
Suggested Use Level: 5-10%

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Rheological Modifier

The Penemol® castor derived thixotrope is an efficient thickening agent and rheology modifier. For use in oils or the oil phase of a cosmetic formula.

• Penemol® GTHS (Trihydroxystearin)

Applications: Lotions, make-up, sunscreens and creams.

Suggested Use Level: 5-10%

Self Foaming Cleansing Active

PhenoMulse™ CE-2A is a volatile perfluoroalkane loaded micellar emulsion derived from PhenoMulse™ 100. Its function is to facilitate the rapid development of products which require the addition of volatile perfluoroalkanes. “Foam Burst Technology” offers continuous and self foaming products contained in a non-pressurized traditional package and produced with traditional manufacturing equipment. These products and PhenoMulse™ CE-2A are non-flammable and zero VOC.

• PhenoMulse™ CE-2A (Polyhydroxystearic acid (and) Isononyl Isononanoate (and) Ethylhexyl Isononanoate (and) Sodium Cocamidopropyl PG-Dimonium Chloride Phosphate (and) Perfluorohexane (and) Butylene Glycol)

Applications: Shower gels, facial cleansers, shaving preparations, and shampoo.

Suggested Use Level: 10-25%

Silky Light Esters

Penemols®

The Penemol® silky, light, esters achieve an innovative light skin feel. They also offer the ability to solubilize an array of lipophilic cosmetic materials, decrease tack, and improve spreadability.

• Penemol® 899 (Isononyl Isononanoate / Ethylhexyl Isononanoate)
• Penemol® C25EH (C12-15 Alkyl Ethylhexanoate)
• Penemol® P-810 (Propanediol Diacrylate/Caprate)-100% Plant Derived
• Penemol® IN-2 (Isononyl Isononanoate)
• Penemol® 89 (Ethylhexyl Isononanoate)
• Penemol® EE (Octyldodecyl Erucate)-100% Plant Derived
• Penemol® NGDO (Neopentyl Glycol Diethylhexanoate)
• Penemol® DO (Decyl Oleate)-100% Plant Derived
• Penemol® P-49 (Pentaerythritol Tetraisononanoate)

Applications: Useful to enhance the after-feel and characteristics of an array of applications including: make-up remover, eye cream, moisturizer, facial moisturizer/treatment, foundation, sunscreen, make-up, anti-aging, concealer, and fragrant lotion.

Suggested use level: 2-10%

Barrier Products

Phoenix barrier products are designed to provide a strong barrier and/or improve the wear characteristics of cosmetics.

• Pecosil® FSH-1500 (Perfluoronyl Dimethicone)
• Pecosil® DB (Dimerhiconal Behenate)
• Pecosil® AS-26 (Ceroyl Dimethicone)
• Pecosil® AS-22 (Behenyl Dimethicone)
• Penemol® BB (Behenyl Behenate)
• Penemol® SB (Stearyl Behenate)
• Penemol® DP-144B (Dipentaerythrityl Tetrabehenate/Polyhydroxystearate)

Applications: Lotions, make-up, anti-aging, and sunscreens.

Suggested use level: 5-10%

Conditioning Esters

Penemol® conditioning esters are highly effective for fattening the skin and is useful for facilitating skin healing.

• Penemol® OL (Oleyl Lactate)
• Penemol® EE (Octyldodecyl Erucate)
• Penemol® ODL (Octyldodecyl Lactate)
• Penemol® OE (Oleyl Erucate)

Applications: Moisturizing treatment, anti-aging, eye cream.

Suggested Level: 5-10%

Cosmetic Butters

The Penemol® cosmetic butter-like esters are valued for their melting point and lubricious virtues. Each buttery ester has its own unique physical and sensory properties that will affect the feel of the formulation.

• Penemol® JEC (Triisostearin (and) Glyceryl Behenate)
• Penemol® ISB (Isostearyl Behenate)
• Penemol® ISHS (Isostearyl Hydroxystearate)
• Penemol® TT (Tribehenin (and) Caprylic / Capric Triglyceride)

Applications: Provides body and slip to an array of products including skin lotions, creams, salves and lip products.

Suggested use level: 2-10%

Cyclomethicone D5 Functional Replacements

The Penemol® D5 cyclomethicone replacements are designed to mimic the sensory properties of Cyclopentasiloxane D5 to enhance the sensory benefits of cosmetics.

• Penemol® D5R-1 (Ethylhexyl Isononanoate (and) Cetyl Dimethicone)
• Penemol® D5R-V (Propanediol Diacrylate/Caprate (and) Diisostearyl Malate)

Applications: Provides cushion and spreadability: useful for moisturizing lotions, and lipsticks.

Suggested use level: 2-10%
**Emulsifier and Emulsion Stabilizers**

Phenomulse™ and other stabilizing products help to create innovative cosmetic products with a pleasant feel and appearance. Phenomulse™ 100 is the ultimate emulsion aid to help create highly stable and novel Structured Micelle Aggregate (SMA) external phase emulsions, using high shear warm or cold processing.

- **Phenomulse™ 100** (Polyhydroxyocteic Acid/Isomonyl Isononanoate/ Ethanoxyl Isononanoate/Sodium Cocamidopropyl PG-Dimethonium Chloride Phosphate)

**Applications**: Lotions, cleansers, fragrances, treatment products.

**Suggested Use Level**: 30-45%

- **Pecogel® P1263** (Polyvinyl-6 Polyvinolionate and Polyglycerol-10 Hexaololate) water-in-oil
- **Pecogel® GMB** (Glycerol Behenate) water-in-oil
- **Pecogel® 3G22** (Polyglyceryl-3 Behenate) water-in-oil
- **Phoenoxol® STA-21** (Polyoxyethylene 21 Stearyl Ether) oil-in-water
- **Phoenoxol® PW** (Cetearyl Alcohol/Polysorbate 60) oil-in-water

**Applications**: Lotions, treatment products, sunscreens, anti-aging, make-up.

**Suggested Use Levels**: 2-10%

**Film Formers**

Pecogel® Cosmetic Ingredients are a family of patented aqueous hydrogels comprised of vinylpyrrolidone polymers or copolymers and hydrophilic polyurethane. These breathable, flexible and pleasant feeling film formers enhance wear characteristics in skin care products.

- **Pecogel® H-12/PF** (VP/Polycarbylamyl Polgylycol Ester)
- **Pecogel® S-1120** (VP/Dimethiconol Acrylate/Polycarbylamyl Polgylycol Ester)

The Giovarez® Water Soluble Film Former is a unique solvent free 35% polyurethane emulsion, which forms a tough and flexible film.

- **Giovarez® P-0580** (Polyurethane-21)

The Giovarez® Oil Soluble Film Formers are a family of acrylic polymers in a 50% solution of Isododecan. They are clear and dry to a water-insoluble and flexible film.

- **Giovarez® BDB-50** (Behenyl Methacrylate/h-Butyf Methacrylate Copolymer)
- **Giovarez® AC-5099M** (Isododecan and Acrylates Copolymer)
- **Giovarez® AC34M** (Acrylic Acid/Isobornyl Methacrylate/Isobutyl Methacrylate Copolymer (and) Isododecan)

**Applications**: Breathable films to enhance wear characteristics, skin firming, and water resistance.

**Suggested use level**: 5-10%

**Humectancy and Hydration**

Our bi-functional humectants, provide both occlusive humectancy and external moisturization at the same time.

- **Pecogel® H-12/PF** (VP/Polycarbylamyl Polgylycol Ester)

**Panthenol Hydraters**

The panthenol hydraters are silicone phosphates to which we have covalently bound panthenol to deliver moisturizing benefits. In skin care, panthenol is effective as a moisturizer helping to reduce the scaling and cracking associated with dry skin. Also designed to offer panthenol penetration into the hair shaft providing slickness and body to the hair.

- **Pecosil® SPP-50** (Potassium Dimethicone PEG-7 Panthenyl Phosphate) - Pro-vitamin B5 Dimethicone Copolyol Phosphate with 4 panthenol groups covalently bonded to dimethicone PEG-7.
- **Pecosil® PAN-418** (Steardimonium Hydroxypropyl Panthenyl PEG-7 Dimethicone Phosphate Chloride) - a quaternized (cationic) version of Pecosil® SPP-50.
- **Pecosil® PAN-400** (Dimethicone PEG-7 Panthenyl Phosphate) - functions like Pecosil SPP-50, is suitable for anhydrous applications.
- **Pecosil PAN-12** (Potassium Dimethicone PEG-7 Panthenyl Phosphate) - 12 panthenol groups covalently bonded to dimethicone PEG-7.
- **Pecosil PAN 1218Q** (Steardimonium Hydroxypropyl Panthenyl PEG-7 Dimethicone Phosphate Chloride) - quaternized (cationic) version of Pecosil PAN-12, an extremely mild silicone-panthenol derivative.

**Applications**: Moisturizing lotions, skin treatments.

**Suggested Use Level**: 5-10%

**Lubricious Massage Esters**

The Pecosil® massage esters are designed to be lubricious and have ultra long playtime during rub-in.

- **Pecosil® TMPO** (Trimethylolpropane Triethexanoate)
- **Pecosil® TGC** (Trioclyldodecyl Citrate)
- **Pecosil® P-49** (Pentaerythrityl Tetraoxonanoate)

**Applications**: Massage oils, creams, and lotions.

**Suggested Use Level**: 5-10%

**Luxurious Satin Silicone Gels**

**Pecosil® G Series**

Pecosil® G series of silicon gels have been formulated to deliver a luxurious satin feel and impart a feather light sati softness to an array of cosmetic compositions.

- **Pecosil® G** (Dimethicone/Cyclomethicone/Phenytrimethicone/Trimethysiloxysilicate)
- **Pecosil® G-5** (Dimethicone/Pheny Merichicone Poly C30-45 Olefin)
- **Pecosil® G-10** (Dimethicone and Isododecan and Trimethosilsilicate and Ethylhexyl Hydroxysestearate and C50-45 Polyolfolin)

**Applications**: Useful to improve the sensory benefits of cosmetic applications including: fragrant lotion, moisturizer, facial moisturizer/treatment, make-up, foundation, concealer, blush and long-wear lip products.

**Suggested use level**: 10-90%
Our bi-functional humectants, provide both occlusive humectancy and external moisturization at the same time.

**Humectancy and Hydration**

Suggested use level: 5-10%

Applications: Lotion, treatment products, sunscreen, anti-aging, make-up.

**Film Formers**

Pecogel® Cosmetic Ingredients are a family of patented aqueous hydrogels comprised of vinylpyrrolidone polymers or copolymers and hydrophilic polyurethane. These breathable, flexible and pleasant feeling film formers enhance wear characteristics in skin care products.

- Pecogel® H-12/PF (VP/Polycarbamyl Polyglycol Ester)
- Pecogel® S-1120 (VP/Dimethiconyl Acrylate/Polydimethylsiloxane/Dimethyl Siloxane)

The Giovarez® Water Soluble Film Former is a unique solvent free 35% polyurethane emulsion, which forms a tough and flexible film.

- Giovarez® P-0580 (Polyurethane-21)

The Giovarez® Oil Soluble Film Formers are a family of acrylic polymers in a 50% solution of Isododecane. They are clear and dry to a water-insoluble and flexible film.

- Giovarez® BTB-50 (Behenyl Methacrylate/6-Butyl Methacrylate Copolymer)
- Giovarez® AC-5099M (Isododecane and Acrylates Copolymer)
- Giovarez® AC34M (Acrylic Acid/Isobornyl Methacrylate/Isobutyl Methacrylate Copolymer and Isododecane)

Applications: Breathable films to enhance wear characteristics, skin firming, and water resistance.

**Lubricious Massage Esters**

The Pecosil® massage esters are designed to be lubricious and have ultra long playtime during rub-in.

- Pecosil® TMPO (Trimethylolpropene Triethyleneglycolate)
- Pecosil® TGC (Triocytldodecyl Citrate)
- Pecosil® P-49 (Pentaxythryl Hexaethanolate)

Applications: Massage oils, creams, and lotions.

Suggested use level: 5-10%

**Luxurious Satin Silicone Gels**

Pecosil® G Series

Pecosil® G series of silicone gels have been formulated to deliver a luxurious satin feel and impart a feather light satin softness to an array of cosmetic compositions.

- Pecosil® G (Dimethicone/Cycloheximide/Phenyltrimethicone/Trimethylsiloxysilicate)
- Pecosil® G-5 (Dimethicone/Phenyl Methicone/ Poly C30-45 Olefin)
- Pecosil® G-10 (Dimethicone (and) Isododecane (and) Trimethoxysilicate (and) Ethylhexyl Hydroxyisostearate (and) Cyclopentasiloxane)

Applications: Useful to improve the sensory benefits of cosmetic applications including; fragrant lotion, moisturizer, facial moisturizer/treatment, make-up, foundation, concealer, blush and long-wear lip products.

Suggested use level: 10-90%
Rheological Modifier

The Pelemol® castor derived thixotrope is an efficient thickening agent and rheology modifier. For use in oils or the oil phase of a cosmetic formula.

• Pelemol® GTH5 (Trihydroxystearin)

Applications: Lotions, make-up, sunscreens and creams.

Suggested Use Level: 5-10%

Self Foaming Cleansing Active

PhoenoMulse™ CE-2A is a volatile perfluoralkane loaded micellar emulsion derived from PhoenoMulse™ 100. Its function is to facilitate the rapid development of products which require the addition of volatile perfluoralkanes. “Foam Burst Technology” offers continuous and self foaming products contained in a non-pressurized traditional package and produced with traditional manufacturing equipment. These products and PhoenoMulse™ CE-2A are non-flammable and zero VOC.

• PhoenoMulse™ CE-2A (Polyhydroxystearic acid (and) Isononyl Isononanoate (and) Ethylhexyl Isononanoate (and) Sodium Cocamidopropyl PG-Dimonium Chloride Phosphate (and) Perfluorohexane (and) Butylene Glycol)

Applications: Shower gels, facial cleansers, shaving preparations, and shampoo.

Suggested Use Level: 10-25%

Silky Light Esters

Pelemols®

The Pelemol® silky, light, esters achieve an innovative light skin feel. They also offer the ability to solubilize an array of lipophilic cosmetic materials, decrease tack, and improve spreadability.

• Pelemol® 899 (Isononyl Isononanoate / Ethylhexyl Isononanoate)
• Pelemol® C25EH (C12-15 Alkyl Ethylhexanoate)
• Pelemol® P-810 (Propanediol Diacrylate/Caprate)-100% Plant Derived
• Pelemol® IN-2 (Isononyl Isononanoate)
• Pelemol® 89 (Ethylhexyl Isononanoate)
• Pelemol® EE (Octyldodecyl Erucate)-100% Plant Derived
• Pelemol® NGDO (Neopentyl Glycol Diethylhexanoate)
• Pelemol® DO (Decyl Oleate)-100% Plant Derived
• Pelemol® P-49 (Pentaerythrityl Tetraisononanoate)

Applications: Useful to enhance the after-feel and characteristics of an array of applications including: make-up remover, eye cream, moisturizer, facial moisturizer/treatment, foundation, sunscreen, make-up, anti-aging, concealer, and fragrant lotion.

Suggested use level: 2-10%

Barrier Products

Phoenix barrier products are designed to provide a strong barrier and/or improve the wear characteristics of cosmetics.

• Pecosil® FSH-1500 (Perfluoronyl Dimethicone)
• Pecosil® DB (Dimethiconal Behenate)
• Pecosil® AS-26 (Cerostyl Dimethicone)
• Pecosil® AS-22 (Behenyl Dimethicone)
• Pelemol® BB (Behenyl Behenate)
• Pelemol® SB (Stearyl Behenate)
• Pelemol® DP-144B (Dipentaerythrityl Tetraheptanol/Polyhydroxystearate)

Applications: Lotions, make-up, anti-aging, and sunscreens.

Suggested use level: 5-10%

Conditioning Esters

Pelemol® conditioning esters are highly effective for fattening the skin and is useful for facilitating skin healing.

• Pelemol® OL (Oleyl Lactate)
• Pelemol® EE (Octyldodecyl Erucate)
• Pelemol® ODL (Octyldodecyl Lactate)
• Pelemol® OE (Oleyl Erucate)

Applications: Moisturizing treatment, anti-aging, eye cream.

Suggested Level: 5-10%

Cosmetic Butters

The Pelemol® cosmetic butter-like esters are valued for their melting point and lubricious virtues. Each buttery ester has its own unique physical and sensory properties that will affect the feel of the formulation.

• Pelemol® JEC (Triisostearin (and) Glyceryl Behenate)
• Pelemol® ISB (Isostearyl Behenate)
• Pelemol® ISHS (Isostearyl Hydroxystearate)
• Pelemol® TT (Tribehenin (and) Caprylic / Capric Triglyceride)

Applications: Provides body and slip to an array of products including skin lotions, creams, salves and lip products.

Suggested use level: 2-10%

Cyclomethicone D5 Functional Replacements

The Pelemol® D5 cyclomethicone replacements are designed to mimic the sensory properties of Cyclopentasiloxane D5 to enhance the sensory benefits of cosmetics.

• Pelemol® DSR-1 (Ethylhexyl Isononanoate (and) Cetyl Dimethicone)
• Pelemol® DSR-V (Propanediol Diacrylate/Caprate (and) Diisostearoyl Malate)

Applications: Provides cushion and spreadability: useful for moisturizing lotions, and lipsticks.

Suggested use level: 2-10%
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- **Catemol® WPC** (Steapyrium Chloride)
  - Applications: Creams, lotions, hair conditioning, and hair grooming aids.
  - Suggested use level: 2-5%

Skin Treatment Solvents

Coupling solvents are excellent for water based actives while also being completely soluble in castor oil.

- **Coscap® G7-MC** (Glycereth-7 Trimethyl Ether)
  - Applications: Cosmeceuticals, skin care, treatments.
  - Suggested use level: 5-10%

- **Phoenoxol® BD-10P** (PG-10 Butanediol)

SPF Enhancement

The Pecosil® PS series are anionic silicone phosphate esters that delivers superior emulsifier efficiency. They also have excellent wetting characteristics to provide SPF enhancement, and act as a counter-irritant. Pecogel® S-1120 is a nonionic silicone based film former.

- **Pecosil® PS-112** (Dimethicone PEG-7 Phosphate)
  - Applications: All products with SPF’s, moisturizers, creams, and lotions.
  - Suggested Use Level: 5-10%

- **Pecosil® PS-100** (Dimethicone PEG-7 Phosphate)
  - Applications: All products with SPF’s, moisturizers, creams, and lotions.
  - Suggested Use Level: 5-10%

- **Pecogel® S-1120** (VP Dimethiconylacrylate/ Polycarbamyl Polyglycol Ester)
  - Applications: All products with SPF’s, moisturizers, creams, and lotions.
  - Suggested Use Level: 5-10%

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