

*High Performance*  
**Hair Care Products**



**PHOENIX CHEMICAL, INC.**



# Phoenix Chemical

## High Performance Hair Care Products

### A History of Healthy Hair Innovation

Healthy hair starts with using the right products. Tapping into innovative technology is essential for developing customized hair care product platforms. For 35 years, *Phoenix products* have been recognized for their superior performance. Whether targeting shine or developing multi-functional products to condition and strengthen hair, there is much new hair care technology under development. The science behind our high performance products is designed to nurture hairs core structure and allow it to emerge with manageability, softness and shine. We are also committed to developing unique new prototype formulations to provoke new ideas and solutions to hair care challenges. Our leading innovations will continue to help you meet the latest consumer demands.

***Pecosil® Water Soluble Fluorosilicone Series*** for Hair Detangling

<b>Pecosil FDM-30</b>
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***Pecosil® FluoroSilicone Series*** for Anti-Frizz Treatment

<b>Pecosil FSH-1500</b>
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***Neopro® & Pecosil® Silicone Panthenol Series*** for Conditioning

<b>Neopro W-40</b>	<b>Pecosil PAN-400</b>
<b>Pecosil SPP-50</b>	<b>Pecosil PAN-418</b>
<b>Pecosil PAN-12</b>	<b>Pecosil PAN-1218Q</b>

***Catemol® Series of Conditioning Pecosil® Silicone Phosphate Series Pecosil® Silicone Panthenol Series*** for Silky & Manageable Hair

<b>Catemol 220-B</b>	<b>Catemol MMM</b>
<b>Catemol S-180</b>	<b>Catemol WPC</b>
<b>Catemol S-180-S</b>	<b>Pecosil PS-100</b>
<b>Catemol HBC-18</b>	<b>Pecosil PS-112</b>

***Pecosil® Silicone Panthenol Series*** for Restorative Conditioning

<b>Pecosil PAN-1218Q</b>
<b>Pecosil SPP-50</b>
<b>Pecosil PAN-418</b>
<b>Pecosil PSQ-418</b>

***Phoenotaine® Amido Phosphobetaine Series*** for Color Preservation & Daily Care

<b>Phoenotaine C-35</b>
<b>Phoenotaine D-35</b>

***Pecosil® Alkyl Aryl Polydimethylsiloxane Wax Series*** for Brilliant Shine

<b>Pecosil ARS-09</b>
<b>Pecosil ARS-12</b>
<b>Pecosil AS-18</b>

## High Performance Conditioning Actives

**Phoenotaine® Amido Phosphobetaine Series** consists of an advanced mono alkyl phosphobetaine providing the gentle cleansing benefits of an amphoteric surfactant while imparting conditioning. Phoenotaine products are propylene glycol free.

- **Phoenotaine C-35** (Sodium Cocamidopropyl PG-Dimonium Chloride Phosphate)

Suggested use level: 5.0% - 10.0%

Applications: Sulfate-free shampoos, color treatment shampoos, mild body washes and the daily regimen.

- **Phoenotaine D-35** (Sodium Dilinoleamidopropyl PG-Dimonium Chloride Phosphate)

Suggested use level: 5.0% - 10.0%

Applications: Sulfate-free shampoos, color treatment shampoos, mild body washes and the daily regimen.

### *Phoenix Hair Dye Products that Deliver Extra Added Value*

PRODUCT	INCI NAME	FUNCTION
Phoenamid 70-Extra	Cocamide MEA	Higher melt point than cocamide MEA made from coconut oil. Adds viscosity, stabilizes and thickens surfactant based systems, foam enhancer. Prevents dyes from “running”. Made from coconut oil acid rather than coconut oil.
Pelemol DO	Decyl Oleate	Emollient to prevent hair from drying out. Keeps hair soft during and after dye process.
Pecosil PS-112	Dimethicone PEG-7 Phosphate	Protects hair surface during dye process. Leaves cuticle smooth and less damaged.
Phoenate OL-4	Oleth-4	Low HLB emulsifier.
Pelemol OPG	Octyl Pelargonate aka Ethylhexyl Pelargonate	De-dusting agent for hair bleach powder.
Catemol HBC-18	Hydroxypropyl Bisstearildimonium Chloride	Cationic conditioning agent during dye process. Prevents hair from frizzing out after rinsing. Helps with wet and dry comb detangling.
Pecogel H-115/A	VP/Polycarbamyl/Polyglycol Ester	Nonionic film former. Forms non-tacky film. Holds hair in place while adding softness.

### *Pecosil® Silicone Phosphates*

**Pecosil® Silicone-Panthenol Series** of shampoo and conditioning actives have been developed to covalently bind both silicone and panthenol together to enhance the properties of silicone (substantivity, softness and sheen) and panthenol (hydration and volume). Hair becomes strengthened and its strength is sealed into revitalize hair.

- **Pecosil PAN-12** (Potassium Dimethicone PEG-7 Panthenyl Phosphate)

Suggested use level: 2.0% - 5.0%

Applications: This product is a dimethicone PEG-7 phosphate molecule to which 12 units of panthenol have been covalently bound. It is suitable for shampoos, conditioners, styling gels, body washes, fortified treatment conditioning for dry or chemically treated hair.

- **Pecosil SPP-50** (Potassium Dimethicone PEG-7 Panthenyl Phosphate)

Suggested use level: 2.0% - 5.0%

Applications: Same as **Pecosil PAN-12**. This product is a lower molecular weight version of **Pecosil PAN-12**.

- **Pecosil PAN-400** (Dimethicone PEG-7 Panthenyl Phosphate)

Suggested use level: 2.0% - 5.0%

Applications: The product functions like **Pecosil PAN-12** except that it was designed for anhydrous systems.

- **Pecosil PAN-1218Q** (Steardimonium Hydroxypropyl Panthenyl PEG-7 Dimethicone Phosphate Chloride)

Suggested use level: 2.0% - 5.0%

Applications: This product is a dodecapanthenol quaternary, as it contains 12 panthenol groups and 12 quaternary groups. It is suitable for shampoos, conditioners, styling gels, body washes, fortified treatment conditioning for dry or chemically treated hair.

- **Pecosil PAN-418** (Steardimonium Hydroxypropyl Panthenyl PEG-7 Dimethicone Phosphate Chloride)

Suggested use level: 2.0% - 5.0%

Applications: Same as **Pecosil PAN-1218Q**. This product is a lower molecular weight version of **Pecosil PAN-1218Q**.

***Pecosil® Silicone Phosphate Series*** of gentle water soluble conditioning surfactants infuse lather with high foam and soothing silky comfort.

- **Pecosil PS-100** (Dimethicone PEG-7 Phosphate) Lower molecular weight analog of Pecosil PS-112. It contains 4 ionizable phosphate groups.
- **Pecosil PS-112** (Dimethicone PEG-7 Phosphate). Contains 12 ionizable phosphate groups.

Suggested use level: 2.0% - 5.0%

Applications: This anionic surfactant contains 12 ionizable phosphate groups. It is quite versatile and can function as a foam stabilizer, foaming agent, counter-irritant and silky conditioner for shampoos and both rinse-off and leave in-conditioners.

- **Pecosil PSQ-418** (Steardimonium Hydroxypropyl PEG-7 Dimethicone)

Suggested use level: 2.0% - 5.0%

Applications: This product is a silicone phosphate tetrastearyl quaternary. The base for this material is Dimethicone PEG-7 Phosphate. It has been quaternarized to increase substantivity to hair. It is suitable for use in shampoos, conditioners, styling gels, blow dry sprays and hair glossing products.

***Pecosil® Silicone Protein Copolymer Series*** combine the benefits of silicone and protein to deliver a beneficial trifecta: **hair restoration** (wheat protein easily penetrates the hair shaft to both restore elasticity through hydration and impart shine), **hair conditioning** (silicone softens and imparts a silky compatibility) and **hair strengthening** (polymers strengthen the hair shaft to impart body). This repertoire results in improved performance at lower concentrations for more cost effective products.

- **Neopro W-40** (Hydrolyzed Wheat Protein/PEG-20 Acetate Copolymer)

Suggested use level: 2.0% - 4.0%

Applications: This product is outstanding for moisturizing hair as its PEG-1000 component assures moisture retention.

***Pecosil® Fluorosilicone Series*** are unique fluorinated organo-functional silicones that have an occlusive nature and feature oleophobic and hydrophobic characteristics.

- **Pecosil FSL-300** (Perfluorononyl Dimethicone)

Suggested use level: 2.0% - 5.0%

Applications: Excellent conditioner for the anti-frizz treatment and for two-in-one shampoos.

***Pecosil® Water Soluble Fluorosilicone Series*** imparts a silky feel and improves combability at very low use levels.

- **Pecosil FDM-30** (Perfluorononyl ethyl Carboxydecyl PEG-10 Dimethicone)

Suggested use level: 2.0% - 5.0%

Applications: Excellent hair detangler. Intensifies the silky feel of shampoo and body wash products.

***Pecosil® Silicone Quaternaries Series*** feature ultra mild conditioning agents.

- **Pecosil CA-1240** (Silicone Quaternium 12)

Suggested use level: 1.0% - 4.0%

Applications: Excellent for treated hair and the daily regimen.

- **Pecosil AD-3640** (Silicone Quaternium 8)

Suggested use level: 1.0% - 4.0%

Applications: Same as **Pecosil CA-1240**. **Pecosil AD-3640** will tend to give heavier conditioning than **Pecosil CA-1240**.

***Pecosil® Alkyl Aryl Polydimethylsiloxane Wax Series*** imparts a shine barrier to hair products.

- **Pecosil ARS-09** (Phenylisopropyl Dimethicone) **Refractive Index:** 1.5195
- **Pecosil ARS-12** (Lauryl Phenylisopropyl Dimethicone) **Refractive Index:** 1.4675

Suggested use level: 2.0% - 4.0%

Applications: Suitable for hair glossing products, blow dry sprays, styling gels and conditioners.

***Catemol® Series of Conditioning and Gelling Agents*** are cationic conditioners that are rich in silky conditioning but with an elegant light feel.

- **Catemol 220-B** (Behenamidopropyl Dimethylamine Behenate)

Suggested use level: 2.0% - 5.0%

Applications: Conditioners and Shampoos. It is also useful as a w/o emulsifier and gelling agent.

- **Catemol S-180-S** (Stearamidopropyl Dimethylamine)

Suggested use level: 2.0% - 5.0%

Applications: Same as **Catemol 220-B**.

- **Catemol WPC** (Steapyrium Chloride)

Suggested use level: 2.0% - 5.0%

Applications: A Conditioner that imparts an intensely silky essence and leaves hair with a very soft feel.

- **Catemol MMM** (Cocamidopropyl Dimethylamine) Suggested use level: 1.5-3.0%

- **Catemol HBC-18** (Hydroxypropyl Bisstearyldimonium Chloride)

Suggested use level: 2.0% - 5.0%

Applications: This conditioning active is a distearyl quaternary that gives softer hair conditioning compared to monoquats. It reduces static charge to provide the conditioner with outstanding static control, to prevent static flyaway.

### ***PECOGEL COSMETIC HYDROGELS***

These film formers overcome the negative attributes of PVP. PECOCEL Cosmetic Hydrogels provides the following functionality:

- Smooth continuous polymer films
- Are not tacky when dry
- Are in equilibrium with water under high humidity conditions and retain a tack free surface.
- Contains re-wet and re-set properties
- Impart manageability and conditioning to hair
- Are suitable for use in water or hydro alcohol based systems

PECOCEL Cosmetic Hydrogels are all water based and are described below:

- PECOCEL H/A Series (INCI: VP/Polycarbamyl Polyglycol Ester)
- PECOCEL GC/A Series (INCI: VP/Dimethylaminoethylmethacrylate Polycarbamyl Polyglycol Ester)
- PECOCEL S/A Series (INCI: VP/Dimethiconylacrylate/Polycarbamyl Polyglycol Ester)
- PECOCEL HS-501/A (INCI: VP/Dimethiconylacrylate/Polycarbamyl Polyglycol Ester)

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