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High Performance Hair Care Products

Phoenix Chemical

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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 28 years, *Phoenix products* have been recognized for their superior performance. Whether targeting shine or developing multi-functional products to hydrate 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

Pecosil FDM-30

Neopro® & Pecosil® Silicone Panthenol Series for Moisture Recovery

Neopro W-40
Pecosil SPP-50
Pecosil PAN-12
Pecosil PAN-400
Pecosil PAN-418
Pecosil PAN-1218Q

Pecosil® Silicone Panthenol Series for Restorative Conditioning

Pecosil PAN-1218Q
Pecosil SPP-50
Pecosil PAN-418

Pecosil® Alkyl Aryl Polydimethylsiloxane Wax Series for Brilliant Shine

Pecosil ARS-09
Pecosil ARS-12
Pecosil PSQ-418

Dicopamine® Series for Hot Oil Treatment

Dicopamine DPN

Pecosil® FluoroSilicone Series for Anti-Frizz Treatment

Pecosil FSL-300

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

Catemol 220-B
Catemol S-180
Catemol S-180-S
Catemol HBC-18
Catemol WPC
Pecosil PS-112
Pecosil PAN-12

Pecosil® Silicone Natural Moisturizer Series for Restorative Moisturizing

Pecosil SO-9

Phoenotaine® Amido Phosphobetaine Series for Color Preservation & Daily Care

Phoenotaine C-35
Phoenotaine D-35

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

- **Catamol 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.

- **Catamol S-180** (Stearamidopropyl Dimethylamine)
- **Catamol S-180-S** (Stearamidopropyl Dimethylamine Stearate)

Suggested use level: 2.0% - 5.0%

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

- **Catamol 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.

- **Catamol 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.

High Performance Conditioning Actives

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

- **Phenotaine 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.

- **Phenotaine 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.

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 copolyol 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** (Stearidimonium 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.

09/20/12

- **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-112** (Dimethicone PEG-7 Phosphate)

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 Natural Moisturizer Series combine the properties of dimethicone co-polyol with phosphated olive oil or grape seed oil lipids to produce 100% active water-soluble conditioning systems.

- **Pecosil SO-9** (PEG-9 Dimethicone/PEG-9 Olive Phosphate)

Suggested use level: 2.0% - 5.0%

Applications: This silicone-olate has well established benefits as a conditioner for preventing split ends.

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** (Perfluoronyl 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.

Dicopamine® Series features a silicone anhydrous conditioner that is also water soluble.

- **Dicopamine DPN** (Dilinoleamidopropyl Dimethylamine Dimethicone PEG-10 Phosphate/1,3-Butylene Glycol)

Suggested use level: 2.0% - 5.0%

Applications: This conditioner has been uniquely developed for anhydrous systems. It is extremely effective for hot oil formulations. However, it is also water soluble and is useful as a conditioner in shampoos and in rinse-out and leave-in conditioners.

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.