

A scenic landscape at sunset. The sky is filled with soft, colorful clouds in shades of purple, pink, and orange. The sun is low on the horizon, casting a warm glow. In the foreground, a field of vibrant pink flowers, likely rhododendrons, is in full bloom. The middle ground shows rolling green hills and a valley. In the background, a range of mountains is visible, with a prominent, sharp peak. The overall atmosphere is peaceful and natural.

# SonneNatural™

Perfectly Natural, Naturally Perfect

**sonneborn™**

AN HF SINCLAIR BRAND



## SonneNatural™

**NATURAL AND PERFECT.** Let's face it. Everything that is "perfectly natural" is not always "naturally perfect." Consider the most valuable and precious diamond, colorless and brilliantly scintillating. Perfectly natural? Yes. Naturally perfect? No, it takes highly skilled experts to transform what nature provides into the perfect finished product. Products that are "all natural" are oftentimes inferior substitutes regarding quality, odor, color and performance. That is why Sonneborn SonneNatural™ products are your best choice for 100% plant-based emollients. As the global leading supplier of the highest-quality petrolatum, we utilize our expertise in petrolatum development, hydrocarbon formulating and manufacturing capabilities to make the finest range of natural emollients imaginable.

**EXPERTISE AND INNOVATION.** Since 1903, Sonneborn, an HF Sinclair brand, has been synonymous with the world's highest-quality refined hydrocarbons for personal care and pharmaceutical applications. Our goal is to

provide customers with premium products made in the USA, progressive technical capabilities and dependable service so they receive the very best value in the industry. Together with continued growth in our fundamental product lines, the Sonneborn brand has applied core strengths to transcend traditional technologies and deliver exciting new products to the market.

**ELEGANT AND EFFECTIVE.** While the demand for high-performing emollients and moisture retention ingredients prevails, the desire for elegant, yet all plant-based alternatives continues. The SonneNatural line offers a full range of 100% natural alternatives to traditional petrolatum used in personal care and pharmaceutical formulations by adding exceptional lubricity and moisture protection to lotions, creams, ointments and hand cleaners. The chart on page 5 summarizes the physical properties of SonneNatural products compared to petrolatum product White Protopet™ 1S.



The Sonneborn family of products has been soothing people since they were babies. We continue to build on our innovation, developing new and better products that deliver a natural fit in today's world. The company that has brought

you the purest, highest quality ingredients now brings you the finest plant based emollients. Together, we can work to develop new, innovative product formulations.

**SonneNatural and SonneNatural 200 Series Products:  
Nature's Finest Emollients.**

## SonneNatural™ Product Portfolio

Product	Key Attributes	Cushion	Gloss	Slip	Playtime	Spreadability
SonneNatural	Best in most formulations	+++	+++	+++	+++	++++
SonneNatural H-203	Ideal for hair styling & lip balms	+++	++	+	+	+
SonneNatural J-207	Ideal for replacing petrolatum	+++	++++	+++	+++	++++
SonneNatural NXG	Occlusive w / excellent emolliency	++++	++	++	++	++
SonneNatural PF-1	Palm free	+++	+++	++	+++	++++
SonneNatural CB19	Best w / cannabinoids (e.g., CBD)	+++	++	+	+	++++

+ = low    ++ = low-medium    +++ = medium    ++++ = high

**SonneNatural** is a soft, translucent-yellow, medium-gloss product. It has a creamy application, excellent spread, low slip and nice cushiony feel. The combination of softness and luxurious feel makes this product an excellent natural alternative to petrolatum in cosmetic formulations.

SonneNatural also has almost no odor and is color stable.

**SonneNatural PF-1** is the palm free version of SonneNatural.

**SonneNatural 200 Series** offers two distinctly unique products: **SonneNatural H-203** and **SonneNatural J-207**.

**SonneNatural H-203** offers a firm base product for your formulations.

- Medium cushion, medium to low gloss, low slip, short play time and minimal spreadability
- The short play time delivers body and tack to formulations
- Ideal for hair styling products such as putty and pastes, and for lip balms that require a more compact feel

**SonneNatural J-207** offers the natural, classic look and feel of neat petroleum jelly.

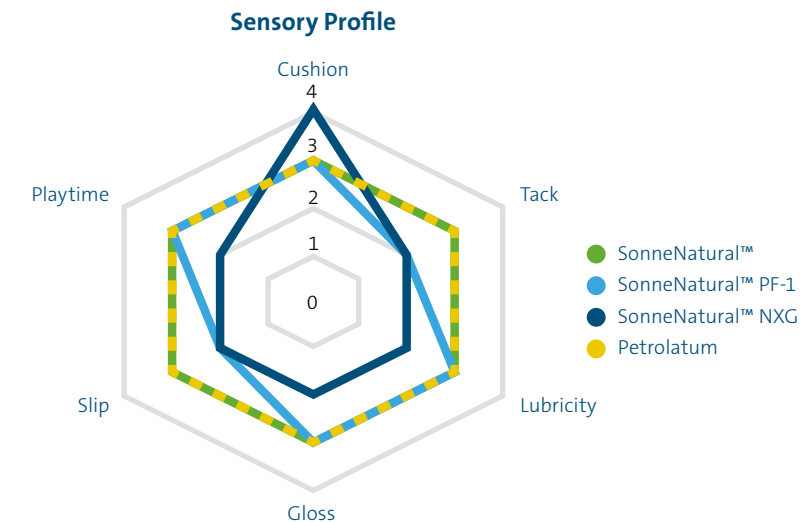
- Soft with medium cushion, very glossy with medium slip and playtime, and high spreadability
- Its properties and appearance fit best for a neat petroleum jelly replacement, or for use in elegant lip moisture balms or high-end hair pomades

**SonneNatural CB19** is a soft, translucent off-white, medium gloss product. It has a creamy application, excellent spread, low tack and cushiony feel. It is designed to provide a stable delivery emollient for cannabinoids and hemp oils. Using human skin tissue samples, a formulation of CB19 + CBD modified the expression of 10 genes important to skin biology. Affected genes were related to antioxidant / stress response, barrier formation, and inflammatory responses. This activity profile significantly differed from other commercially available CBD delivery vehicles. Taken together, these results show that not all carriers have the same efficacy or activity profile, and that CB19 may provide unique benefits for CBD delivery.

**SonneNatural NXG** is the firmest emollient in the SonneNatural line. It offers a unique combination of properties. It is very firm upon initial feel, but works down nicely. Additionally, it is non-greasy and exhibits excellent moisture retention and humectant properties with unmatched emolliency. Its low odor may lower your fragrance loading and its occlusive after-feel leaves skin feeling soft and luxurious. Its firm texture could benefit in anhydrous formulas by reducing the amount of thickeners or waxes needed in the end formulation.

### THE 100% PERFECTLY NATURAL SOLUTION.

SonneNatural products impart optimal moisture retention, with a wide range of emolliency and rheological properties to fit your specific formulation requirements. SonneNatural products are ideal natural and renewable options for use in cosmetic applications where an emollient, moisturizer, solubilizer or dispersing agent is required.



### SonneNatural Property Comparison to Petrolatum

Property	Test Method	White Protopet™ 1S	SonneNatural	SonneNatural H-203	SonneNatural J-207
Cone Penetration	ASTM D937	180–210	170	195	210
Drop Melting Point, °C (°F)	ASTM D127	54–60 (129–140)	52 (126)	49 (120)	46 (115)
Color, Lovibond 2"	IP 17	1.5 Y Max	2.0 Y	1.3 Y	1.0 Y
Viscosity @ 100°C, cSt	ASTM D445	~12.0	~16.5	~14.6	~11.8
Natural Index	ISO 16128	0	0.7	0.6	0.6
Natural Origin Index	ISO 16128	0	1	1	1

Information on natural index and natural origin index as per ISO 16128 is available upon request.

### SonneNatural Features and Benefits

Features	Benefits
All-natural, Vegetable Product	INCI Name: Vegetable Oil (U.S.), Olus Oil (EU)
Physical Properties / TEWL Comparable to Petrolatum	Excellent Moisture Retention
Stringent Quality Control	Consistent Quality
Excellent Color and Microbial Stability	Naturally Preserved, Long Shelf Life
USP 51 Compliant	Does Not Support Microbial Life
CTFA Compliant: E. coli, S. aureus and P. aeruginosa	Good Safety Profile
Global Supplier	Supply Chain Management

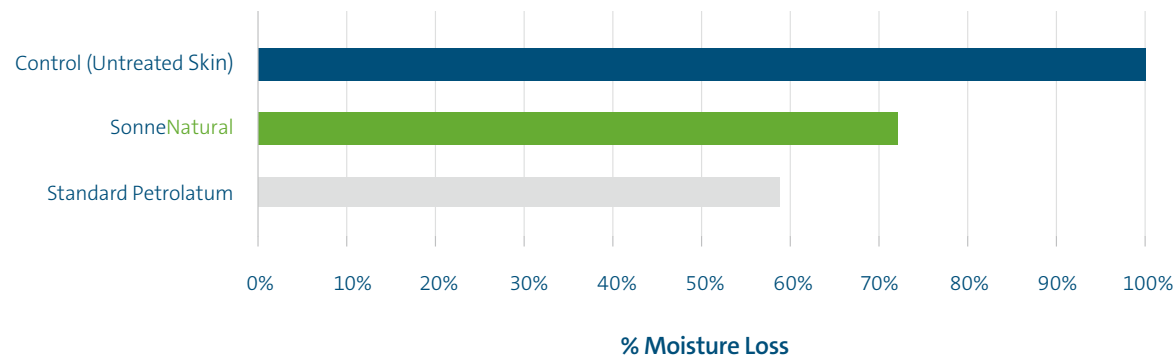


**APPLICATIONS.** The SonneNatural™ portfolio of products is applicable to many skin and hair products. In skin care, SonneNatural is an excellent moisturizer and skin protectant, keeping skin soft, supple and pliable. In hair care applications, SonneNatural is used in conditioning shampoos, rinse-off and leave-on conditioners, and hair treatment formulas. In styling and finishing products, SonneNatural adds anti-static properties, good combability and defrizzing, and it provides luster plus shine. In color cosmetics, specifically for anhydrous formulations, SonneNatural offers solubilizing, emolliency and color dispersion properties.

Other applications include soap, shaving cream, body scrub, antiperspirant, deodorant, wipes and other products. The uses for SonneNatural are limitless and offer unique properties that enhance personal care products naturally.

**MOISTURE RETENTION AND EMOLLIENCY.** Ideal skin care formulas typically contain an ingredient that improves barrier function while helping to supplement the natural epidermal lipids. Keeping the skin supple and pliable is very important for creams and lotions. Since petrolatum has long been the benchmark for preventing moisture loss through the skin, we have focused on developing products with similar skin protection. Transepidermal water loss (TEWL) data is available showing that SonneNatural products deliver substantial skin moisturization.

**SonneNatural TEWL Comparison to Petrolatum**



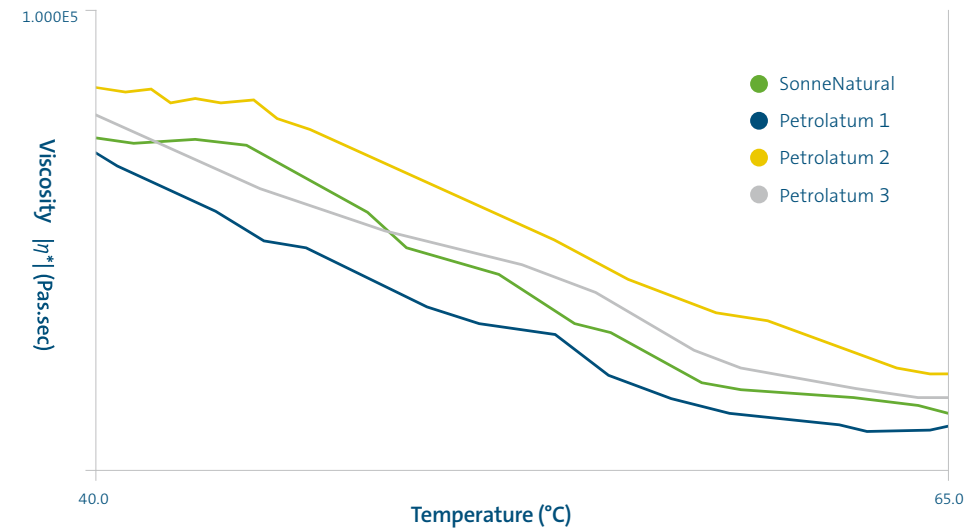
**RHEOLOGY.** SonneNatural’s rheology, shown below, is similar to our standard petrolatum, so it behaves in formulations like petrolatum and therefore makes a great natural alternative. SonneNatural products add substantive feel and body to formulations without the negative attributes associated with fillers, such as starch or clay.

**THE SONNENATURAL CHOICE.** We recognize the importance of even the most subtle, yet specific differences that are often crucial to defining a finished formula. As such, we continue to apply our technical expertise in growing our line of 100% naturally derived emollients. Despite the notion that there is only “one petrolatum,” there are in fact numerous combinations of attributes that lead to uniquely different petrolatum products. Similarly, we apply this same developmental

expertise in creating a range of plant-based, natural emollients. Together, SonneNatural and SonneNatural 200 Series products offer new benchmarks, delivering optimal moisturization and emolliency benefits of petrolatum along with a wide range of sensory characteristics, appearance and spreadability to best meet any formula objective.

Choosing the right product for your specific formulation depends upon both the desired aesthetic and sensory attributes. Key sensory properties to consider in choosing the right SonneNatural product are desired cushion, gloss, slip, playtime and spreadability.

**SonneNatural Complex Viscosity**



## CUSTOMER SERVICE

### North America, Latin America, Asia / Pacific

Phone: 877-948-2688

Email: [specialties.info@hfsinclair.com](mailto:specialties.info@hfsinclair.com)

### Europe, Africa, Middle East

Phone: 877-948-2688

Email: [specialties.info@hfsinclair.com](mailto:specialties.info@hfsinclair.com)

## TECHNICAL SERVICE AND LITERATURE REQUESTS

### North America, Latin America, Asia / Pacific

Phone: 877-948-2688

Email: [techspecialties@hfsinclair.com](mailto:techspecialties@hfsinclair.com)

### Europe, Africa, Middle East

Phone: 724-756-9595

Email: [qehs@hfsinclair.com](mailto:qehs@hfsinclair.com)

## PRINCIPAL LOCATIONS

### North America

100 Sonneborn Lane

Petrolia, PA 16050

Phone: 877-948-2688

### Latin America and Caribbean

Sonneborn Brasil LTDA.

Pref. Luis Latorre, 5.300 A113B2

13209-430 Jundiaí, SP, Brasil

Phone: +55(11)97548-8899

### Europe, Africa, Middle East

Sonneborn Refined Products B.V.

Mainhavenweg 6

1043 AL Amsterdam

The Netherlands

Phone: +31-20-611-7475



All SonneNatural products are certified to contain 100% natural ingredients of vegetable origin.

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