







Our commitment to quality and innovation

At Sonneborn, HollyFrontier Specialty Products and Petro-Canada Lubricants (HF Sinclair brands), we define the benchmark for quality and purity. We have a history of pioneering specialty products - including personal care, pharmaceutical and industrial ingredients - that deliver precision, stability, reliability and regulatory compliance to meet ever-evolving market demand.

Advanced wax production across a range of applications

At the heart of our capability is our range of specialty waxes. Bringing optimum performance to an ever-broadening spectrum of applications - from candle-making to chewing gum, pharmaceutical and personal care products, to adhesives and protective coatings - they define performance and formulation possibilities.

The benefits of HF Sinclair's specialty waxes

Through rigorous investment in research and development, we continue to push the boundaries of what's possible in wax-based formulations. Our specialty waxes - including fully-refined microcrystalline wax, semi-refined paraffin wax, blended specialty wax and slack wax - offer high purity, consistent quality and excellent stability. They're safe, versatile and customizable, with strong performance in texture, stability, adhesion and controlled release.

offer tailor-made and hybrid solutions; our experts stake their reputation on being able to formulate very specific, and sometimes extremely niche, solutions for customers.

Our expertise and global reach

We are one of the largest microwax suppliers in the world, with three production sites - Pennsylvania, Oklahoma and Ontario - offering a global supply and reliable availability. At HF Sinclair, microwaxes are a primary focus. And with chemists and chemical engineers specializing in microwax refining and customization, we can apply any of our resources to meet any need.

Regulatory and industry standards compliance

Most of our high-purity specialty waxes meet the requirements for Microcrystalline Wax NF as per the National Formulary (current revision) and comply with the requirements of U.S. FDA 21 CFR 172.886 for food grade petroleum waxes.

Learn more

For more information about our specialty waxes, please reach out to our knowledgeable and experienced sales team.

MAKING A DIFFERENCE WHERE IT COUNTS

CANDLES

Sonneborn's Multiwax™ and Sono Jell™ Candle Base products are ultra-purified to ensure the perfect color, appearance and performance of top-quality candles. It's no surprise that our waxes have developed a reputation across the industry for absolute reliability.

Delivering a smooth surface, excellent fragrance retention, reduced shrinkage and superior flexibility between them, Sono Jell™ candle ingredients and our Multiwax™ range give candle manufacturers top-tier performance and aesthetics.

Find them in:

- Container Candles
- Taper Candles
- Pillar Candles
- Extruded Candles



PACKAGING

Sonneborn's Multiwax™ line is a range of microcystalline waxes that are widely used in packaging applications, particularly for food-related products. These waxes are known for their purity, flexibility and compliance with food safety regulations

Find them in:

- Wax Impregnated Paper and Board
- Hot Melt Adhesives
- Coatings for Food Products

Our Multiwax™ product range display excellent moisture-resistance and adhesive properties. Their high purity and safety standards are underscored by their compliance with U.S. FDA regulations, specifically 21 CFR 172.886 and 21 CFR 178.3710.



PHARMA

HF Sinclair's pharmaceutical grade waxes and petrolatum offer exceptional purity, consistency and functionality, making them ideal excipients for a variety of drug delivery and topical applications.

We offer a portfolio of highly refined waxes and petrolatum products, whose regulatory compliance and performance reliability support global use across major pharmaceutical markets. Their low reactivity and stability ensure safe, inert performance in critical formulations, meeting stringent USP/NF, Ph. Eur. and FDA requirements. Welcome to unmatched consistency, reliability and peace of mind.

Find them in:

- Ointments, Creams
- Dental Floss, Denture Adhesives
- Skin Protectants, Lip Care, Wound Care
- Tablet Coatings and Topicals



BOARD SIZING & PARTICLE BOARD APPLICATIONS

With consistent quality, supply reliability and proven hydrophobic performance, HF Sinclair's Hollywax $^{\text{TM}}$ product line provides a robust selection of slack and paraffin waxes that serve as effective internal sizing agents for particle board, MDF and OSB applications.

But it's not just their excellent moisture protection that makes them ideal for board sizing and particle board applications. The uniform melting behavior and consistent molecular structure enhances dimensional stability, contributing to higher board quality and longevity. This is precision-engineered performance – trusted for consistency, they bring strength and smoothness to every panel.

Find them in:

- Particle Board
- MDF (medium density fiberboard)
- OSB (oriented strand board)

COSMETICS & PERSONAL CARE

For more than 120 years, we have been a trusted name behind some of the world's most iconic personal care products. Backed by Kosher Pareve and Halal and vegan certifications our ingredients are known for their unmatched consistency, dependable quality and forward-thinking innovation.

Whether you're looking for a proven formulation or a custom solution, our technical experts are ready to craft products tailored precisely to your needs. Sonneborn's innovative Multiwax™ range consists of microcrystalline waxes offering a range of skin-feels, providing formulators with solutions in an almost limitless range of applications.

Find them in:

- Color Cosmetics
- Lipsticks and Lip Balms
- Moisturizing Creams
- Moisturizers

Sonneborn offers a range of 100% plant-based waxy emollients that could also act as petrolatum alternatives in final applications. SonneNatural™ Affinity One, Palm-Free and Duro are specially developed as natural solutions for cosmetic and personal care applications.

ADHESIVES& HOT MELTS

Find them in:

- Packaging
- Bookbinding and Product Assembly Adhesives
- Pressure-Sensitive Adhesives
- Labelling and Envelope Glues
- Food Packaging Adhesives

Known for their consistency, purity and thermal stability, HF Sinclair's Multiwax™ microcrystalline waxes and paraffin waxes help control tack, improve viscosity and enhance overall bond strength.

Petro-Canada Lubricants, Sonneborn and HollyFrontier Specialty Products' range of high-purity microcrystalline and paraffin waxes are frequently used in packaging adhesives, pressure-sensitive adhesives (PSAs) and hot melt glues.

Some of our microcrystalline waxes offer consistent performance and regulatory compliance, including Kosher, Halal and FDA approvals; they consistently set the standard for innovation

MULTIWAX[™] MICROCRYSTALLINE WAXES FORMULATED FOR PERFORMANCE & HIGH-PURITY

As a global leader in fully refined microcrystalline waxes, we offer the Multiwax™ product line – recognized for its exceptional purity, consistency, extreme white color and functional versatility. Promoted under Sonneborn, an HF Sinclair brand, our advanced production facility in Petrolia, Pennsylvania, USA produces Sonneborn branded microcrystalline waxes that ensures product supply and availability worldwide.

Why Choose Microcrystalline Waxes?

Microcrystalline waxes are high molecular weight, white color, odorless and nonpolar hydrocarbons with superior structural integrity, adhesion and moisture resistance. Our Multiwax grades are optimized for controlled crystallization, enhanced stability and customizable hardness – making them ideal for high-performance formulations.

Key Applications

- Personal Care and Cosmetics Enhances texture, stability and formulation aesthetics in lipsticks, creams and ointments
- Pharmaceuticals Functions as a carrier for active ingredients and excipients
- Industrial and Specialty Applications Provides lubrication, sealing, rustproofing and moisture barrier protection
- Food-Grade Uses Utilized in chewing gum, baking and coatings for superior texture and consistency
- Candles Reduced cracking, with enhanced aesthetics.
 These highly refined waxes are safe and consistent for premium candle applications

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TYPICAL PROPERTIES OF MULTIWAX MICROCRYSTALLINE WAXES

PRODUCT	MELTING POINT ASTM D127A		NEEDLE PENETRATION @ 77°F (25°C)	VISCOSITY		COLOR			FLASH POINT COC ASTM D92
	°F	°C	ASTM D1321	ASTM D2161 SUS	ASTM D445 cSt	Visual	Test Method	Limits	°F (°C)
W-445	170/180	77/82	25/35	75/90	14.3/18.0	White	ASTM D156	+16 Min.	530 (277) Min.
W-555	170/180	77/82	25/35	75/90	14.3/18.0	White	ASTM D156	+16 Min.	530 (277) Min.
ML-445	170/180	77/82	25/35	75/90	14.3/18.0	Light Yellow	ASTM D1500	2.0 Max.	530 (277) Min.
7545	170 / 185	77/85	35/70	75/100	14.3/20.4	White	ASTM D156	+16 Min.	500 (260) Min.
W-835	165/175	74 / 79	60/80	75/90	14.3/18.0	White	ASTM D156	+16 Min.	500 (260) Min.

The above waxes meet the requirements for Microcrystalline Wax NF as per the National Formulary (current revision) and comply with the requirements of U.S. FDA 21 CFR 172.886 for food grade petroleum waxes.

Multiwax™ Microcrystalline Wax Portfolio

PRODUCT	KEY PROPERTIES AND APPLICATIONS
MULTIWAX™ W-445	Pure white, flexible, consistent quality, uniquely low aromatic content and flexibility, consistent quality year-after-year due to high pressure and high temperature hydrogenation – characteristics that can't be found in any other product offering. Used in personal care, sealing and candles.
MULTIWAX™ W-555	High-quality and purity from advanced hydrogenation. Ideal as a wax crystal modifier in container candles and for curtain coating in corrugated packaging.
Multiwax™ 7545	Pure white microcrystalline wax ideal for economic wax blend formulations.
Multiwax™ W-835	Soft, tacky wax; excellent for personal care, sealing and candle formulations.

Did you know?

- Microcrystalline wax (1-10%) is commonly added to container candles to reduce polymorphism and prevent surface cracking
- Multiwax[™] is globally recognized for its superior purity, controlled crystallization and consistent performance making it the preferred choice for high-precision formulations
- Microcrystalline wax has a higher molecular weight, which makes it tougher, more flexible and more resistant to heat, moisture and cracking
- Sonneborn offers 100% plant-based waxy emollients, including SonneNatural™ Affinity Duro, which might be of interest to you



HOLLYWAX[™] PARAFFIN WAX & BLENDED SPECIALTY WAX

Our Hollywax™ line of paraffin and blended specialty waxes, promoted under HollyFrontier Specialty Products, an HF Sinclair brand, are semi-refined to ensure excellent performance, making them suitable for a wide range of applications. Our production facility in Tulsa, Oklahoma, USA ensures reliable supply and product availability for formulators worldwide.



Paraffin Waxes

Hollywax[™] paraffin waxes are available in a broad spectrum of melting points and are characterized by their low oil content. This composition gives them superior moisture barrier properties.

Blended Specialty Waxes

For applications requiring specific performance characteristics not met by standard grades, we offer custom blending capabilities. These blended specialty waxes can be tailored to exact specifications and enhanced by incorporating polymeric additives during the blending process. This customization ensures the wax meets precise requirements, such as specific flash points or hardness levels, suitable for diverse applications.

Key Applications

Hollywax[™] paraffin and blended specialty waxes are utilized in numerous industries, including:

- Adhesives and hot melts for improved bonding strength
- Asphalt, caulks and binders for enhanced durability
- Concrete cures for superior surface protection
- PVC lubrication
- Rubber processing for improved formulation consistency
- Mold release agents for precise and effortless separation
- Ski wax and performance coatings for optimized glide and durability
- Candles for consistent, smooth and stable performance
- Tire anti-check
- Gypsum emulsion

HOLLYWAX™ PARAFFIN WAX AND BLENDED SPECIALTY WAX PORTFOLIO

PRODUCT	VISCOSITY, cSt @ 100C METHOD ASTM D445	OIL CONTENT, MASS% METHOD ASTM D721	COLOR, ASTM METHOD ASTM D1500
HOLLYWAX™ DP 116	2.6	<2.5	L1.0
HOLLYWAX™ LP 125	3.0	<1.5	L0.5
HOLLYWAX™ LP 127	3.4	<0.75	L0.5
HOLLYWAX™ SP 127	3.5	<2.5	L1.0
HOLLYWAX™ SP 137	4.5	<1.5	L1.0
HOLLYWAX™ LP 155	6.8	<0.75	L1.0
HOLLYWAX™ SP 155	6.9	<2.5	L2.0





HOLLYWAX™ SLACK WAX

Hollywax™ Slack Waxes are premium-grade waxes known for their excellent performance and adaptability in various industrial and commercial applications. Our high-quality slack waxes are derived from carefully refined petroleum sources, offering a balance of oil content and wax that formulators can leverage for diverse product formulations, making it more widely available.

Our advanced production facilities in Tulsa, Oklahoma, USA and Mississauga, Ontario, Canada ensure reliable supply and product availability for formulators worldwide.

Slack Wax is specifically produced in Oklahoma under the HollyFrontier Specialty Products, an HF Sinclair brand.

Key Applications

Hollywax™ Slack Waxes are an essential ingredient in industries where wax-based formulations require controlled oil content, smooth consistency and reliable performance. It is commonly used in:

- Oriented Strand Board (OSB) Sizing
- Medium-Density Fiberboard (MDF) Sizing
- Particleboard Sizing
- Plywood Sizing
- Lumber End-Cap Waterproofing
- Composite and Lumber Shipping Water Resistance
- Candles
- Caulking Compounds
- Dust Control
- Explosives
- Form Release Agents
- Matches
- Toilet Bowl Ring



PRODUCT	VISCOSITY, cSt @ 100C METHOD ASTM D445	OIL CONTENT, MASS% METHOD ASTM D721	COLOR, ASTM METHOD ASTM D1500
HOLLYWAX™ PR 21	3.5	17.6	L0.5
HOLLYWAX™ PR 22	3.3	17.5	L0.5
HOLLYWAX™ PR 23	3.6	17.6	L1.0
HOLLYWAX™ SW 137	4.5	18.4	L1.0
HOLLYWAX™ PR 48	4.5	20.0	L1.0
HOLLYWAX™ 57	7.6	15.0	L1.5
PUREWAX*	7.5	14.0	L1.5
HOLLYWAX™ MS 165	18.1	9.0	L1.5

^{*}Purewax is manufactured in Canada, under the Petro-Canada Lubricants brand, while Hollywax is produced in Oklahoma under the HollyFrontier Specialty Products brand.





Did you know?

- Slack wax is known for its moisture and corrosion protection properties. It also improves adhesion properties and laminating strength.
- This makes it a perfect protective treatment for particle board, Oriented Strand Board and Medium-Density Fiberboard to reduce water absorption while enhancing durability and strength in construction and household applications.

SOFT WAX

Our range of soft waxes are produced during the de-oiling stage of the paraffin wax and microcrystalline waxes. There are five grades of soft wax, four of which are paraffin in nature and one that is microcrystalline in nature. Produced in Oklahoma under the HollyFrontier Specialty Products brand, an HF Sinclair brand.

MELT POINTS OF OUR SOFT WAX - FROM LOWEST TO HIGHEST

PRODUCT	
HOLLYWAX™DS116	De-dusting applications for fertilizer, grain and roads – paraffin in nature
HOLLYWAX™DS127	Particle Board slack wax modification, concrete curing, board release agents – paraffin in nature
HOLLYWAX™DS137	Slack wax modification and board release – paraffin in nature
HOLLYWAX™DS155	OSB sizing, slack wax modification, Petrolatum feed – paraffin in nature
HOLLYWAX™DS80	Rust preventative, candle base feedstock production – microcrystalline in nature

Key Applications

- Polishes and Coatings providing a protective, glossy finish
- Adhesives and Sealants improved flexibility and thermal resistance
- Particle Board
- Concrete Form Release
- Petrolatum Feed

Produced in our Tulsa, Oklahoma, USA, facility they range in molecular weight by base oil grade [normally between 10% and 40%] – the lowest melt point wax has the highest oil content and the highest melt point has the lowest oil content.



HF Sinclair is an evolving energy company with an enduring family of brands providing lubricants and specialty products that are essential to life now and in the future.

Your partner in innovation

We're committed to helping formulators create superior solutions for a diverse range of applications. With world-class expertise, exceptional service, flexible manufacturing capabilities and state-of-the-art production, you've got a confident, capable partner on your side.

Get in touch

For technical support or to learn more about our high-performance wax formulations, contact:

Sonneborn: sonneborn.com

PCL: petrocanadalubricants.com **HFSP:** hollyfrontierspecialties.com



SONNEBORN



PETRO-CANADA LUBRICANTS



HOLLYFRONTIER SPECIALTY PRODUCTS





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HF SINCLAIR BRANDS