



# Raising the bar for starch technology for Personal Care

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**Nouryon**

# Not all starches are created the same

For more than 40 years, we have been at the forefront of innovation and setting the standard in starch technology for personal care, redefining texture, touch, and performance.

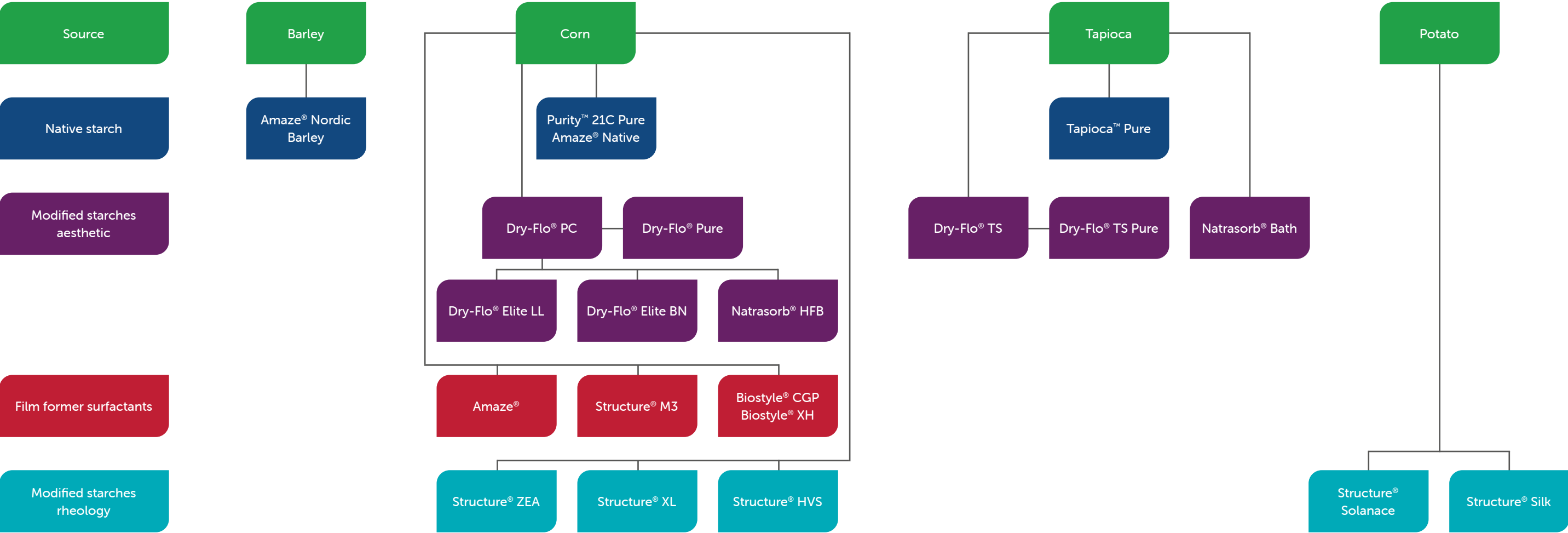
Our versatile range of essential naturally derived ingredients – tailor made for the personal care market – deliver high performing sensory, aesthetic, and rheology modification, enhancing the overall performance and skin feel of cosmetic and personal care products.

Our products influence factors like flow, stability, and spreadability; deliver highly efficient and effective film-forming polymers for hair sprays, gels, mousses and styling aids; and enable personal care products with excellent environmental and regulatory profiles.

Our deep understanding of the science behind crafting appealing texture and aesthetics help transform a standard skin or hair care cream into a luxurious product and experience for consumers. Our teams of R&D and technical experts, located in our innovation centers across the globe, understand regional needs.

They are authorities in processing and manufacturing and have a keen understanding of how to incorporate starches into the types of personal care products consumers are demanding.

Nouryon starch map





# Specialty aesthetic modifiers

Superior form, function and consumer appeal are within reach with our offering of premium native and modified starches for aesthetic enhancement. The aesthetic modifiers provide excellent oil adsorbency properties and help enhance product aesthetics by reducing the greasiness and tackiness in formulations, while improving slip and lubricity.

Create elegant creams, lotions, antiperspirants/deodorants, sun care, color cosmetic products and dry shampoos with these ingredient options that promise unique sensory experiences.



## Aesthetic modifier performance

Trade name	Source	% natural	Skin care	Hair care		Skin care				
				Hair care	Oil absorption	Hair feel	Friction reduction	Skin feel	Gloss reduction	Tack reduction
Purity™ 21C Pure	Corn	99	•	•	+	+++	+	+	++	+
Tapioca™ Pure	Tapioca	100	•	•	++	+++++	++++	++	+	+
Amaze® Nordic Barley	Barley	100	•	•	+	++	++	+	+	+
Dry-Flo® TS / Dry-Flo® TS Pure	Tapioca	98	•	•	+++	+++++	+++++	+++	+++	+++
Dry-Flo® PC / Dry-Flo® Pure	Corn	96	•	•	+++	++++	++++	+++	+++	+++
Natrasorb® HFB	Corn	81	•	•	++++	+++	+++	+++	++++	++++
Dry-Flo® Elite LL	Corn	94	•	•	++	N/A	N/A	+++++	++++	+++++
Dry-Flo® Elite BN	Corn	92	•	•	++	N/A	N/A	+++++	++++	+++++
Natrasorb® Bath	Tapioca	100	•	•	+++++	+	N/A	+	+	+

More “+” indicates better performance for given property



## Pure grade product for highest quality clean ingredients

Our pure grade products prioritize the highest quality clean ingredients, ensuring each component meets top standards for safety and reliability. With ultra-low micro levels, our pure grade aesthetic modifiers can be used in micro sensitive formulations to enhance formulation performance while meeting the demand for transparency in ingredient sourcing.

This commitment to excellence allows your formulations to maintain a clean label and deliver sophisticated sensory experiences, distinguishing your products in a competitive market.

Our pure grade products deliver the following:

### Preserves natural origin

Irradiation does not alter the botanical source or natural classification of starches, allowing them to remain suitable for natural and clean beauty claims.

### Maintains functional performance

The process does not compromise the starch’s sensory or functional properties—such as oil absorption, mattifying effect, or texture enhancement.

### Microbial control without harsh preservatives

Irradiation significantly reduces microbial load, enabling cleaner formulations with lower preservative requirements, which is especially valuable in minimalist or sensitive skin products.

### Supports premium positioning

The use of irradiated starches contributes to a cleaner, safer, and more refined product profile, aligning with premium and dermatological brands.

### Ideal for sensitive applications

Their enhanced purity and reduced bioburden make irradiated starches well-suited for sensitive skin formulations, including baby care, facial care, and post-treatment products.

# Specialty rheology modifiers

Rheology modifiers define product form and function. They affect the flow and feel of a product, determine application properties, and enable the creation of products with consumer preferred textures and visual appeal.

We provide a variety of naturally derived polymers to help formulators achieve desired and unique textures when developing the finest personal care products.

## Biopolymer – rheology modifier overview

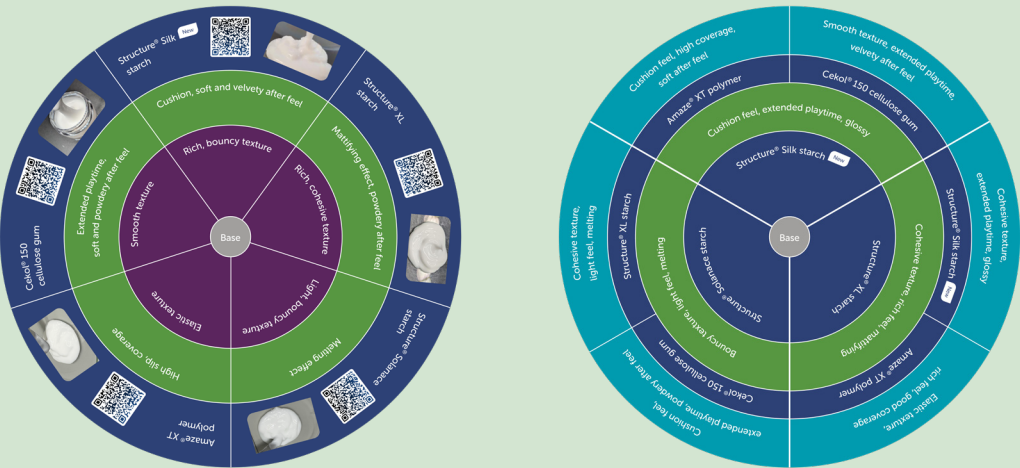
Trade name	Type	INCI name	Source	NOI	Solubility	Sensorial fingerprint	Biodegr	pH
Structure® Silk	Modified starch	Hydroxypropyl Starch Phosphate	Potato	>0.9	Cold water	Glossy, luxurious, soft, velvety	Readily	3-9
Structure® XL / Structure® ZEA	Modified starch	Hydroxypropyl Starch Phosphate	Corn	0.92	Cold water	Rich, creamy with powdery, mattifying effect	Readily	3-9
Structure® Solanace	Modified starch	Potato Starch Modified	Potato	0.95	Hot water	Bouncy texture, melting effect	Readily	3-11

## TextureCompass™

Our TextureCompass™ formulating tool helps formulators create new and innovative textures using our a wide range of biopolymers. It uses a series of concentric circles to guide formulators toward the desired textural outcome.

It features three starch-based biopolymers; Structure® Silk, Structure® XL, Structure® Solanace that can be used as the main rheology modifier and two gum-based ingredients; Amaze® XT polymer and Cekol® 150 cellulose gum that work in combination with starches to provide texture and stabilization.

### TextureCompass™



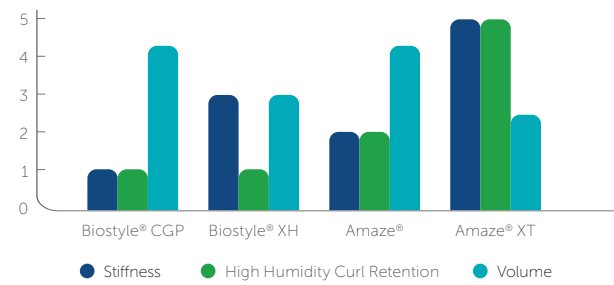
[Click here](#) for more information on our TextureCompass™

# Specialty film formers

Our range of polymers have been setting the standard for film-forming performance in hair and skin care formulations for over 40 years.

Highly efficient and effective film-forming polymers enable formulators to create a variety of performance properties across many product formats including hair sprays, gels, mousses and styling aids.

## Polymer comparison ranking



In skin care applications, our film-forming polymers serve as enabling technologies when formulating sunscreen products for long wear, water resistance and consumer preferred aesthetic properties.

## Hair styling polymer property comparison

Trade name	Recommended neutralization	Clarity in water	Viscosity in formula	Rheology profile	Natural content
Biostyle® CGP	N/A	Clear	Low	N/A	~51%
Biostyle® XH	N/A	Clear	Low	N/A	~20%
Amaze®	N/A	Hazy	Low	N/A	~96%
Amaze® XT	N/A	Transparent	High	Short, gritty	100%

# Specialty surfactants

Starch-based surfactants are innovative ingredients that enhance product performance while prioritizing skin compatibility. These co-surfactants significantly reduce the irritation potential of conventional surfactant systems, providing an optimal balance of mildness, cleansing, and foaming.

With their naturally derived properties, our starch-based surfactants enable the creation of personal care products that deliver effective cleansing without compromising on gentleness.

Structure® M3 is a polymeric surfactant engineered for integration into surfactant systems. Its primary function is to enlarge micelle size within the blend, which reduces surfactant penetration into the stratum corneum. This mechanism significantly lowers irritation potential and enhances overall formulation mildness without compromising cleansing performance.

# A versatile range of essential naturally derived ingredients

Whether it's for skin care, hair care or makeup, our starch ingredient solutions are essential in crafting the perfect formulation to address market trends.

Reach out to your Nouryon Personal Care representative to learn more about our impressive range of starch products. Our teams can partner with you to ensure that together we can innovate in ways that meet consumers' evolving needs.

Contact us directly for detailed product information and sample request  
website | [nouryon.com/markets/personal-care](https://nouryon.com/markets/personal-care)  
email | [PersonalCare.Marketing@nouryon.com](mailto:PersonalCare.Marketing@nouryon.com)



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## Nouryon

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