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When we look at creating the perfect formulation, there has to be an element of tweaking and refining to get it to the desired consistency. In order to achieve this, we'll often look to incorporate rheology modifiers.Rheology modifiers are a common additive used in nearly every industry to alter the flow behaviour, rheology and mechanical properties of materials to meet specific requirements. The introduction of rheology modifiers can have transformative effects on material performance in end-use applications and is therefore a crucial piece of the puzzle when it comes to perfecting your formulations.The RBH Group specialises in supporting businesses to enhance their product performance, through a diverse portfolio of materials which includes a range of high-quality rheology modifiers. In this article, we'll share our knowledge and insights into this process and how modifiers can help to meet the needs of the most unique manufacturing requirements.To understand how these powerful additives work, we first need to understand the science behind rheology modification.Rheology is a fundamental concept in the field of materials science and is the act of studying the behaviour of materials. It's centred around understanding how they flow, deform, or change shape when a force is applied to them.If we take a ball of dough, for example, when you squeeze it, push or pull it, it will change shape. The same scenario can be applied to liquids such as water or honey. A glass of water is thin and fast-moving when poured, but honey is thick and slower-moving when drizzled. Rheology is all about understanding and controlling these kinds of behaviours in materials like liquids, gels, and even solids. Once we have this understanding, we can then manipulate their flow properties for different purposes with the use of rheology modifiers.Rheology modifiers are often referred to as thickening agents, but they offer far more than simply altering the thickness of a formulation. Reliable rheology modifiers can be thickeners, stabilisers, or other additives and allow formulators to bring structure to a formulation whilst controlling factors such as viscosity, thixotropy, sag resistance, and film formation.The main goal here is to improve the end product and ensure it performs as it should in specific conditions when used by the consumer. For example in skincare, rheology modifiers will affect how a cosmetic product feels, how easy it is to pour, how it sinks into the skin and how long its shelf-life is. With the right modifier in place, these factors can all be controlled to ensure a high-quality end product that consumers are likely to re-purchase.When it comes to the development of polymer-based products such as paints, adhesives, coatings and personal care products, rheology is a key consideration.Polymers naturally have diverse structures and properties with complex rheological behaviour influenced by factors such as molecular weight, chain architecture, temperature, and processing conditions. Understanding the rheological properties of polymers is essential for predicting how they will behave under different processing and application scenarios. Performing rheological studies on polymers typically involves measuring parameters such as viscosity, elasticity, shear stress, shear rate and viscoelastic properties. Through this, we can gain insights into flow behaviour and mechanical performance under different conditions to inform the ideal rheological modification solution required to improve and stabilise a formulation.As we mentioned earlier, rheology modifiers don't just thicken a formulation. They can significantly change the entire formulation of a product, essentially dictating how it looks, feels, performs, and how long it lasts.Some key advantages of using rheology modifiers include having the ability to:Modify viscosity: Does the formulation need to be thicker or thinner for the application? Depending on the purpose it will be used for, rheology modifiers can dictate the fluid's resistance to flow.Alter thickness: Once the viscosity is set the formulation's thickness can be fine-tuned to ensure it flows smoothly and has the desired texture or spreadability.Control flow behaviour: Rheology modifiers can also control how a product flows to ensure easy pumping or pouring in applications. For example, they may be used to prevent paint dripping or enhance the sprayability of coatings to ensure even coverage. Prevent settling: If a formulation has solid pigments or particles, rheology modifiers can help to suspend these evenly throughout the product to prevent any settling or sedimentation.Enhance texture: They can help to create smoother, creamier textures where the look and feel of a product is a priority, for example in cosmetic formulations.Improve stability: Rheology modifiers help products remain stable by preventing the separation of particles and ensuring longevity.The types of rheology modifiers available are as diverse as the applications and industries in which they can be used. There's no one-size-fits-all solution, from proprietary additives and reactive compounds to naturally occurring minerals, each modifier has unique benefits and functionalities for controlling the rheological behaviour of materials in various applications. Below are some of the rheology modifiers that RBH can supply.Acti-gel 208® is a highly purified form of magnesium aluminium silicate. It serves as a multifunctional additive which can be used in various applications including paints, coatings and construction materials, and can also be used as a reinforcing filler.In water-based products, Acti-Gel® forms a three-dimensional network structure through hydrogen bonding and electrostatic interactions, leading to fast viscosity enhancement. It can improve stability, sag resistance, and suspension properties, and is particularly effective in controlling rheology at low to moderate shear rates.Min-U-Gel® is a range of specially processed colloidal gelling agents in powdered form, derived from attapulgite clay. At their core, they are rheology modifiers with thixotropic thickening suitable for a vast array of applications. They can function as thickeners, stabilisers, and viscosifiers, with the ability to increase viscosity and enhance adhesion properties amongst many other benefits. Applications range from paints, coatings and adhesives to mortars, seed coatings and many more.Organic peroxides are a class of compounds often used as crosslinking agents in polymerisation reactions to create crosslinked polymer networks. Whilst they're not typically considered traditional rheology modifiers, they can indirectly influence the rheological properties of materials by affecting the polymerisation and curing processes.For example, if a formulation contains reactive polymers or resins, organic peroxides can initiate crosslinking reactions which can lead to changes in viscosity and mechanical properties.We supply the Luperox® brand of organic peroxides from Arkema, a unique range that helps to increase mechanical strength and resistance to chemicals or weather.Rheology modification plays a critical role in the development of advanced materials, allowing formulators to develop products with specific functionalities. In order to achieve these desired properties, choosing the right rheology modifier and striking the perfect balance is essential.At RBH, we offer a diverse range of rheology modifiers that equip our clients with the ability to control viscosity in both aqueous and non-aqueous systems. Our expert team of market managers specialise in offering technical support and guidance on the right product for your application.To find out more about how our range of modifiers can improve your product performance, get in touch with us. Back Essential Analytical Marketing Cookie Policy Privacy Policy Essential Essential cookies are strictly necessary to guarantee the proper functioning of the website. Analytical With this you allow us to collect anonymous data about the use of the website with third party cookies, such as the number of clicks and the behavior of visitors on the website. In addition, we can also perform marketing-related actions via this option. By activating this cookie, you help us to further improve your experience. Marketing With this you allow us to collect marketing-related data via third party cookies. By activating this cookie, you help us to further improve your experience Cookie Policy To make our website even better, we use functional and analytical cookies. Information from this website and your preferences are stored in these cookies by your browser. Privacy Policy Read more about the use of cookies on this website in our privacy policy. Rheology modifiers are substances used in cosmetic products to control the consistency, flow, and texture of the product. They play an important role in determining the feel of a product on the skin and how easily it spreads and absorbs.Thickeners are rheology modifiers used in cosmetics to increase the viscosity of products, making them thicker and more viscous. They enhance the texture and consistency of formulations, leading to improved spreadability and adherence. Thickeners are essential for various cosmetic products, including creams, lotions, and gels. Common examples of thickeners include:Carbomer: Carbomers are synthetic polymers that can absorb and retain water, forming a gel-like consistency. They are commonly used in formulations to create stable gels and thickened products.Xanthan Gum: Xanthan gum is a natural polysaccharide derived from fermented sugars. It forms a stable gel when mixed with water and is used to increase the viscosity of emulsions and suspensions.Cellulose: Cellulose derivatives, such as hydroxyethyl cellulose (HEC) and methylcellulose, are water-soluble polymers that can enhance the viscosity of aqueous solutions. They are used in a variety of cosmetic products, including shampoos and body washes.Thinners, also known as solvents, are used to decrease the viscosity of cosmetic products, making them thinner and more fluid. They are often used to adjust the consistency of formulations or to dissolve other ingredients. Examples of thinners in cosmetics include:Alcohol: Alcohol is a common thinner used in cosmetic formulations. It can help solubilize ingredients and create a lighter texture in products like toners and sprays.Glycerin: Glycerin is a humectant that can lower the viscosity of formulations by attracting water. It is often used in moisturizers and other skincare products to improve spreadability.Emulsifiers are substances that facilitate the mixing of oil and water, creating stable emulsions. They play a crucial role in formulations that combine immiscible ingredients, such as oil-in-water or water-in-oil emulsions. Emulsifiers prevent phase separation and contribute to the overall stability of the product. Examples of emulsifiers used in cosmetics are:Lecithin: Lecithin is a natural emulsifier derived from sources like soybeans. It helps create stable emulsions by reducing the surface tension between oil and water.Polysorbate 20: Polysorbate 20 is a surfactant that acts as an emulsifier and solubilizer. It is commonly used to create stable oil-in-water emulsions in various cosmetic products.Stabilizers are additives used to maintain the stability of cosmetic products over time. They prevent phase separation, settling, or changes in texture that can occur during storage. Stabilizers are particularly important for products containing suspended particles or multiple phases. Examples of stabilizers in cosmetics include:Polyvinyl Alcohol: Polyvinyl alcohol is a water-soluble polymer that can form a protective film around suspended particles, preventing them from agglomerating and settling.Sodium Polyacrylate: Sodium polyacrylate is a synthetic polymer that can absorb and retain large amounts of water. It is used to thicken and stabilize formulations, particularly those containing high water content.Rheology improvers enhance the flow and spreadability of cosmetic products, making them easier to apply and use. They can improve the sensory experience of a product and contribute to its overall performance. Examples of rheology improvers in cosmetics include:Dimethicone: Dimethicone is a silicone-based polymer that imparts a silky and smooth texture to formulations. It enhances the slip of products and provides a luxurious feel during application.Polyethylene Glycol (PEG): Polyethylene glycol is a water-soluble polymer that can improve the spreadability of formulations. It can be used to adjust the viscosity of products while maintaining their stability.Rheology modifiers play a vital role in the formulation and performance of cosmetic products, influencing their texture, stability, and user experience. Their careful selection and incorporation are essential to achieving the desired product properties.The type and amount of rheology modifier used in a cosmetic product can have a significant impact on its performance and feel on the skin. For example, a product that contains too much thickener may be difficult to spread, while a product that contains too much thinner may be too runny. It's important to use the right amount and type of rheology modifier to achieve the desired consistency and texture of a cosmetic product. Final Year B Pharm Notes, Syllabus, Books, PDF Subjectwise/TopicwiseSuggested readings: 1. RHEOLOGY MODIFIERS Dnyanda R. Bopche, Divya P. Janbandhu Subject: Cosmetic Science, B. Pharm Final Year Guide Name: Chandrashekhar M. Chakole Bajiraoji Karanjekar College OF Pharmacy, Sakoli, Dist. Bhandara M.S.-441802 Rashtrasant Tukadoji Maharaj Nagpur University 2. • Definition • Types Of Rheology Modifiers • Function Of Rheology Modifiers • Ingredients • Compatibility & Formulation Consideration • Application CONTENTS: 3. RHEOLOGY MODIFIERS: Rheology modifiers play a crucial role in cosmetic formulations by controlling the • Flow Properties • Stability • Texture of product Definition: Rheology modifiers are substance added to cosmetic to adjust their flow behaviour, viscosity & texture. They influence the products thickness, spreadability & stability. 4. TYPES OF RHEOLOGY MODIFIERS: Thickeners: Increase viscosity to enhance product stability & provide a desired texture. Ex. Carbomer, xanthan gum, hydroxyethyl cellulose (HEC) Gelling Agent: Form gels to stabilize emulsion & improve product consistency & structure. Ex. Carbomer, agar , gelatin. Emulsion Stabilizers: Maintain the stability of o/w or w/o emulsion. Ex. Lecithin, sorbitan esters, polysorbates Suspension Agents: Prevent settling of particles on formulation like suspension or scrubs. Ex. Bentonite, Magnesium , Aluminium silica Film Formers: Create thin film on the skin, enhancing product adherence & durability. Ex. Acrylates copolymer & polyvinyl pyrrolidone (PVP) Viscosity Modifiers: These adjust viscosity without significantly altering other properties. Ex. Include glycols such as propylene glycol and polyethylene glycol 5. FUNCTIONS OF RHEOLOGY MODIFIERS: Viscosity control: Adjust the thickness and flow property of the product for easier application & better adherence to the skin. Texture Modification: Enhance the sensory experience by imparting smoothness, creaminess or richness to the formulation. Stability enhancement: Improve product stability by preventing phase separation, syneresis or crystallization. Suspension & Dispersion: Keep solid particles evenly distributed within the formulation to ensure uniform application & appearance. 6. COMMONLY USED INGREDIENTS: Polymer - Carbomer - Cellulose Derivatives - Acrylates copolymer Clays -Bentonite -Hectorite Silicon Based Compound - Dimethicone -Cyclomethicone Natural ingredients -Gum - seaweed extract -starches Other functional ingredients - Cross linking agents -Hydrating Agents - Surfactant 7. 1. Polymer: a) Cellulose derivatives: Examples include hydroxyethyl cellulose (HEC), Hydroxypropyl cellulose (HPC), Methyl cellulose (MC). They offer thickening properties and are often used in creams, lotion, & hair care products. b) Acrylates copolymer: These versatile polymers provides viscosity control & film forming properties. They are used in various cosmetic formulation such as hair gels, styling products & sunscreens . c) Carbomers: These synthetic polymer are highly effective thickness used in emulsion & gels. They provide excellent viscosity control & stabilize emulsion by forming a network of polymer chains. 2. Clays: a) Bentonite: A natural clay mineral with excellent thyrotrophic properties, bentonite thickness formulation & provide stability to emulsions. It is commonly used in masks, creams & body wraps. b) Hectorite: Similar to bentonite, hectorite is a clay mineral that imparts viscosity & stabilizes emulsion. It is known for it`s shear-thinning behaviour, making it ideal for suspension & gels. 8. 3. Silicone-based compound: a) Dimethicone: A widely used silicone oil with excellent lubricating properties, dimethicone improves spredability and provides a silky, non- greasy feel to formulations. Its commonly found in skincare products, hair conditioners & making primers. b) Cyclomethicone: A volatile silicone fluid that evaporates quickly upon application, cyclomethicone enhance the texture and sensory feel of products, especially in hair care & skincare formulations. 4.Natural ingredients: a) Gums : Natural gums like xanthan gum , and gun agar are polysaccharides derived from plants. They act as effective thickness and stabilizers in cosmetics formulation providing a creamy texture and enhancing product stability. b) Seaweed Extracts: Alginate, derived from seaweed, is a natural gelling agent use in products like masks & creams. It forms a flexible film on the skin , imparting a smooth & moisturizing . c) Starches: Commonly derived from corn tapioca, starches like corn starch are used as natural thickness & adsorbents in powders, dry shampoo and body powders. 9. 5. Other Functional Ingredients a) Crossing agents: These substance enhances the network structure of polymers, improving the stability & rheological properties of formulation. b) Surfactant: Some surfactants have rheology-modifying properties, altering the viscosity & texture of formulation while also serving as emulsifier or cleansing agent . c) Hydrating agents: Ingredients like glycerine and hyaluronic acid not only moisturize the skin but also contribute to the rheology of formulations by affecting their viscosity & spreadability. 10. Compatibility & Formulation Consideration Interaction with other ingredients: Rheology modifiers should be compatible with modifiers should be compatible with other components in the formulation to avoid destabilization or alteration of product performance. Processing condition: Some modifiers may require specific processing condition like temperature or pH for optimal performance. Regulatory & Safety considerations: Ensure selected modifiers comply with regulatory standards & are safe for use in cosmetics . 12. a) Skincare: Rheology modifiers help to control the viscosity of creams and lotions, ensuring smooth application, easy spreadability and desirable texture. They contribute to the overall sensory experience and absorption of the product into the skin. b) Hair care: Rheology modifiers are used in haircare products such as shampoos, conditioners & styling products to enhance texture, manageability & performance. They help to control product flow, improve adherence to hair strands & provide desired styling effects. c) Makeup: Rheology modifiers help to control viscosity and texture of mascaras & eyeliners, alloying for precise application & adherence to lashes & eyelids. They contribute to the formulation`s ability to coat & define lashes & create desired effects. d) Sunscreen Formulation: In sunscreen product, rheology modifiers help achieve the desired consistency & spreadability, ensuring even application & effective coverage. They contribute to the formulation ability to adhere to the skin & provide protection against UV rays. e) Emulsions: Emulsifiers, which are a type of rheology modifier, stabilize emulsion in cosmetic formulation. They ensure the uniform dispersion of oil & water phases, preventing phase separation & enhancing products stability. Emulsion include creams, lotions, serum & moisturizers. 13. References 1. Braun , D. B., & Rosen , M. R. (2013). Rheology modifiers Handbook. East Norwich, New York: William Andrew. difiers&f=false 2. Mittal , B. M., & Saha, R. N. (2000). A Handbook Of Cosmetics . Delhi: Delhi Vallabh Prakashan . 3. Nanda, S., Nanda, A., & Khar, R. (2022). Cosmetic Technology. Birla. 4. Velasquez, J., Forsberg, O., Zuberbuehler, A., & Muresan, S. (2017). Surfactants as Rheology Modifires - Cationic Thickeners. Sofw Journal, 10/17. Rheology refers to the how materials flow, the more vicious (thick) a product is the more resistant it is to flow. For example think of the difference between juice and clotted cream, because juice is less vicious than clotted cream it will flow more easily than clotted cream will. When force is applied to a product this is known as 'shear' for example if you tip a container of clotted cream upside down it will not flow out of the container, however if you scoop it out with a spoon the force of spoon will cause it move this is an example of using shear to use or move a product. Watch the video below to see an example of how we use shear force in cosmetics.What is a rheology modifier A rheology modifier in basic terms is a material used to thicken or thin a formula. Remember the resistance to flow, the more viscous a product is the more resistant it is to flow. Sometimes resistance to flow in a cosmetic product is desired such as a cream and sometimes it is less desired for example a toner.Why is this relevant in cosmetics products?Different cosmetic products have different viscosities. For example consider the difference between a cream and lotion. Generally speaking the main difference between the two is the viscosity. So then if that is the only difference why do we have both creams and lotions. Great question! The main reason is consumer perception, we perceive a cream to be more moisturising than a lotion, although strictly speaking this isn't true but consumers believe it is and there's no changing that. Another reason rheology is important in cosmetic formulation is the consumer experience. For example, we expect our shower gels to have a gel like viscosity not because it cleans us better but how annoying would it be if our shower gels flowed as freely as water - think of all the waste. Whilst technically it would wash us just as well, consumers would be a lot less inclined to buy the product because it would decrease the overall experience of using it.Now with that said shear is another important aspect to consider. Whilst a cream must be thick to meet consumer expectations it must easily rub into the skin. Think about cocoa butter, it's seldom used as a sole moisturiser because it requires extreme force to apply. So thinking back to our cream example whilst it must be viscous or resistant to flow, it shouldn't be so viscous that the shear force of our fingers couldn't rub it into our skin as that would decrease the consumer experience. Take a moment to think about all the cosmetic products you use - toothpaste, moisturiser, shampoo, conditioner, shower gels etc, consider their viscosity what do you expect from the experience of using these products you will then see how important rheology is in cosmetics and why it matters.The rheology of a product also impacts the type of packing we use, for instance why wouldn't we put a shower gel in a wide neck jar? Whilst shower gel isn't as free flowing as water is, it is free flowing enough to make using it in a wide neck jar a pain and decrease the consumer experience. Why wouldn't we put a cream is a serum bottle? Because it would be a pain to get out of the bottle and reduce the consumer experience.Different types of rheological modifiers in cosmetic formulation Xanthan Gum - This is one of the most common and versatile rheological modifiers if you look at the ingredients list you will find it listed on many products. Xanthan gum has no significant benefit to the skin, it does not greatly increase the effectiveness of a formula it does however greatly impact the consumer experience. It's cheap, easily available and a natural material.Guar Gum - Guar gum and its derivatives is another extremely common rheological modifier. It's worth noting that whilst guar gum is a natural ingredient many of its derivatives on the market are synthetically produced to enhance its properties.Emulsifiers - Whenever you mix oil and water you need to use an emulsifier. There are different types of emulsifiers used for different purposes depending on what type of formula you are trying to achieve. Emulsifiers such as BTMS 50 or Olivem 1000 tend to increase the viscosity of a product these are commonly used in conditioners and creams where a vicious finish is desired. Polysorbate 20 is also an emulsifier these are commonly found in toners, or room sprays where we want a small amount of oil to suspend in a large amount of water the finished viscosity tends to be quite thin and free flowing as is desired in products such as toners or room sprays.How do we use rheology modifiers Usually in cosmetic formulation when we use a rheology modifier we tend to use either xantham gum or guar gum and its derivatives. When using these gums we do not add it straight into the water phase we first make a slurry by mixing a humectant such as glycerin with the gum, before adding it to the water phase. This makes it a lot easier to disperse. Try adding 1g of xantham gum to distilled water and you will see it sits in small clumps at the top as opposed to dissolving in the water. Now try mixing 1g of xantham gum with 5g of vegetable glycerin, make sure its throughly mixed through and the xanthan gum has fully combined with the glycerin. Then add this mixture to 94g of distilled water and you will see how it forms a gel like consistency. This is probably the most common method used to change a products rheology - turning liquid water into gel. In this blog we have introduced what rheology is and why it is important in cosmetic formulation. We have given some examples of rheological modifiers and how we use them. We have explained the concept of shear and how it relates to rheology. I hope this blog has answered your questions on rheology in cosmetic formulation, why and when it is relevant and how we modify the rheology of our cosmetic products. The cosmetics and personal care products we all use every day are complex formulations containing numerous active ingredients. The average consumer may not understand the purpose of all those ingredients, but each one has been carefully selected to fulfill a specific role. In today's post, we will take a close look at one category of personal care ingredients: rheology modifiers. What are they, how do they work, and how do they enhance the performance of the products in which they are used? What is Rheology? Before we can dive into the purposes of rheology modifiers, it is important to understand what rheology actually is. In short, it is a branch of physics that pertains to the deformation and flow of materials (solids, liquids, and gasses). When enough force or stress is applied to a material, it eventually begins to flow in response. Therefore, when we refer to the rheological properties of a material, we are referring to several key areas including its yield stress (the stress point at which the material begins to flow), relaxation time (the time taken for the material to return to its pre-stress equilibrium), viscosity (the material's resistance to flow), and compliance (how tolerant the material is to undergoing deformation). Rheology has applications in numerous different fields including engineering, physiology, biology, pharmaceuticals, and, of course, the personal care and cosmetics industry. Viscosity is a particularly important rheological property in the context of cosmetics. What Are Rheology Modifiers? Rheology modifiers, therefore, are substances that alter the rheological properties of a material. They are added to formulations to increase viscosity and to control the finished product's properties and characteristics in a desired manner. In the cosmetics world, you may hear certain ingredients referred to as "thickeners". This is another, more commonplace term for rheology modifiers and essentially means the same thing. Thickeners provide increased consistency and improve the appearance and sensory properties (how the formulation feels on the skin) of the finished product. They can also improve stability and enhance performance. Different Types of Rheology Modifiers There are many kinds of rheology modifiers available, and different ingredients will be appropriate for different applications. For example, rheology modifiers may be hydrophilic (attract water), hydrophobic (repel water), or ambiphilic (able to perform in either manner). Hydrophilic modifiers act as humectants, keeping the product moist by attracting and retaining water, which makes them ideal for use in skin and hair moisturizers. Broadly speaking, thickeners can be grouped into three categories: Natural Polymers Natural polymers are the most common rheology modifiers and are long chain polysaccharides from natural sources such as trees, plants, and algae. Common examples include xanthan gum, carrageenan, guar gum, and alginates. Natural polymers have the advantage of meeting the environmentally-friendly "green" credentials that more and more manufacturers are striving towards as consumers become more eco-conscious. However, they do not always boast the same levels of functionality as their synthetic counterparts. They can also result in the end product having a sticky or tacky consistency. Synthetic Polymers Synthetic polymers come in two major classes: Polyethylene glycol derivatives (PEGs) and acrylic polymers. PEG thickeners are hydrophilic and thicken by uncoiling and taking up a large volume. Acrylic polymers swell in water-based systems and open to fill the space. The advantage of synthetic polymers, particularly acrylic polymers, is that they are more functionally efficient in thickening and provide improved, more shear-thinning sensory. They are also less prone to bacteria growth than their natural counterparts. That said, some are also non-renewable and therefore less environmentally friendly. Inorganic Materials Inorganic materials are those not derived from living material. In other words, those that contain no or very small amounts of carbon. Common inorganic rheology modifiers include clays, which are hydrophilic and thicken by volume exclusion, and silica, which thickens oils by forming inter-particle hydrogen bonds. Inorganic rheology modifiers tend to have a high yield stress point, good thixotropy (the property of being viscous under normal circumstances but flowing under stress), and good stability. Our Rheology Modifiers We offer a number of high quality rheology modifiers to our clients in the cosmetics and personal care industries. Sensogel Our Sensogel series consists of light, pre-neutralized, acrylamide-free liquid thickeners with soft, skin-friendly sensory properties. Sensogel is highly versatile, suitable for products ranging from thin sprays to thick butters. It is suitable for use through a wide pH range and particularly well suited to low-pH applications. OleoFLEX OleoFLEX is our hybrid rheology modifier, making use of both natural oils and premium synthetic components. OleoFLEX Elastomer Gel (EG) 200 is typically used in skincare and "stick" applications and provides a soft and cushioned feel, while the OleoFLEX Flowing Gel (FG) 100 series is most suited to haircare and lip care products. Sorbithix L-100 Sorbithix L-100 is the most powerful non-ionic surfactant thickener currently on the market and is suitable for use in all kinds of surfactant formulations including soaps, shower gels, and shampoos. Unlike its competitors, Sorbithix L-100 boosts and sustains viscosity in products containing high amounts of fragrance, without compromising on the foaming properties valued by consumers. G-GEL G-Gel is a series of bentonite clay master gels and provides an extremely stable thickener which will not separate over time. Highly versatile, G-Gel is used to improve thixotropic viscosity in a wide array of cosmetic and personal care products and can be used to thicken any class of oil. Our unique formulation offers almost twice the suspension and thickening efficacy as other bentonite gels in the same class. Learn More Do you have additional questions about rheology modifiers? Are you interested in samples to find out whether any of our thickeners and rheology modifiers are right for your products? If so, please get in touch. We believe in providing samples generously and offering best in class customer service. Therefore, when you reach out to us, you will receive a rapid response from a member of our friendly, highly knowledgeable team. We look forward to working with you.