

who has
sparkling solutions
for home care?

—
we do.

home care product guide



ashland.com / efficacy usability allure integrity profitability™

ingredients for cleaning superiority

Ashland is a leading provider of performance polymers, rheology modifiers, encapsulation technologies, and specialty wetting agents for cleaning products. Our home care solvers, located throughout the world, provide expert technical assistance to help formulators create differentiated products with superior efficiency and efficacy.

Ashland's ingredients solve formulation challenges in laundry, dishwashing, toilet care, hard surface cleaning and hand sanitizers in both consumer and professional industrial and institutional cleaning. This guide is designed to introduce our broad portfolio of ingredients and our capabilities to support your formulation development.

Our customers are vital to our business, and we want to engage with you.

To contact us, request samples or receive more information, visit us at

[ashland.com/homecare](https://www.ashland.com/homecare)

innovations to reimagine the future of cleaning

Ashland solvers are committed to developing novel technologies and new innovations to address end-user needs in cleaning. To show our commitment to innovation, Ashland has launched new technology platforms aligned to our core markets with new and differentiated capabilities to unlock organic growth for us and for our customers worldwide. Ashland’s platform solutions bring “new to the world,” sustainable innovations. Our technology platforms enable our solvers working with our customers to address consumer needs; reshape global megatrends and respond to various regulatory landscapes. To learn more about our innovation platforms, visit ashland.com or contact us to meet and learn more.



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global capabilities

primary laboratories in the Americas, Europe, and Asia support global and local needs

polymer synthesis solvers create new technologies and understand structure-function relationships

technical service solvers help formulators create new/improved end-product benefits

cleaning product formulation solvers translate benefits to starter formulations

consumer science solvers identify where and how these benefits may be leveraged in the marketplace

formulation solutions from Ashland

Did you know Ashland is a leading supplier of commercial technologies that solve some of the most complex formulation challenges in laundry, dishwashing and hard surface cleaning applications? These technologies address an ongoing need to improve soil removal from various substrates and hold it in suspension, as well as emerging needs such as lending protective properties to clothes, surfaces and dishes. Ashland's formulation solutions include:

solutions in laundry care

- improved product sustainability profiles with efficient cold-water cleaning
- anti-redeposition of soil for better cleaning
- encapsulation of ingredients in formulation
- rheology modification of liquid laundry care products for improved consumer experience

solutions in dishwashing

- superior automatic dishwashing cleaning performance
- more effective disintegration of tablets and solids
- encapsulation of ingredients for actives delivery or visual cues
- reduced surfactant level resulting in milder and affordable hand dish wash solutions
- improved foam and cleansing properties
- rheology modifiers

solutions in hard surface cleaning

- improved wetting on ceramic, wood, steel and glass surfaces
- soil release technologies to prevent permanent soiling on surfaces
- comprehensive rheology modifier portfolio for a wide range of formulations
- improved foam and rheology
- polymers for long-lasting disinfection



bringing sustainability to cleaning

Living sustainably is imperative to our planet and for the health and wellbeing of future generations. As consumers, we want cleaning products that are efficacious, but we also want to know the products we choose are good for the planet.

At Ashland, environment, social and governance (ESG) is imbedded in our strategy. Under our commitment to the Paris Climate Accord and Science Based Targets, and the United Nations Global Compact and Sustainable Development Goals, we're operating with greater transparency and focusing on launching products that have sustainable benefits. We have taken an inside-out view, working up and down our value chains to solve complex environmental challenges and ensure our operations are safer, more sustainable, use less energy and have a smaller carbon footprint. We're working with customers and suppliers to lay bare the entire product lifecycle from raw materials to end-of-life management because we understand that there is no Plan B.

And, Ashland's conscious-to-cutting-edge innovation strategy includes increasing the speed and impact of new product innovations while embracing and integrating ESG in all that we do. Our solvers rethink science to help our customers formulate more sustainably, with future generations in mind.

For more information on ESG at Ashland, please visit [ashland.com/esg](https://www.ashland.com/esg)

Ashland home care ingredient portfolio

	biodegradability	natural origin ¹	not a synthetic polymer microparticle (microplastic) ²	EU ecolabel suitable ³	U.S. EPA safer choice ingredient ⁴ list	dishwashing	fabric care	hard surface cleaning	hand sanitizers	insect repellants	industrial & institutional cleaning	anti-soil redeposition agent	chelating agent	dispersant	dye transfer inhibitor	active color delivery	opacifier	rheology modifier	rinse aid	soil release additive	surface shine enhancer	surface wetting agent	tablet binder	tablet disintegrant	long lasting disinfection
polymers — synthetic																									
antara- 430 polymer							•										•								
disintex- disintegrants						•	•																	•	
easy-wet [†] 20 wetting agent			•			•	•	•			•								•			•			
PVP K-30			•	•	•	•	•	•			•	•	•	•				•			•		•		
sorez- 100 polymer			•	•			•					•								•					
sorez- hs 205 polymer			•	•			•	•			•			•						•					
surfaguard [†] polymers			•					•																•	
surfadone- wetting agents			•		•	•	•	•			•								•			•			
polymers — cellulosic																									
benecel [‡] hydroxypropyl methylcellulose			•	•	•	•	•	•	•		•	•						•							
blanose- carboxymethylcellulose			•	•	•		•	•			•	•						•		•			•		
klucel [†] hydroxypropylcellulose			•		•			•	•	•	•							•					•		
natrosol [†] hydroxyethylcellulose			•	•	•	•	•	•			•	•						•							
polysurf [†] 67 hydrophobically modified HEC			•	•																					
encapsulation technology																									
captivates- encapsulates			•			•	•	•									•								



biodegradable

Has attained a sufficient level of biodegradation that meets the requirements for 'ready' or 'inherent' according to OECD or related methods such as, 301, 302, or 306. Or product has been assessed as being biodegradable based on a read-across to a chemical with similar structure or the product components have been analyzed for biodegradation potential.



not expected to persist in the environment

Defined a level of biodegradation within standard OECD methods where there is evidence of ongoing biodegradation such that we are confident that the substance is not expected to persist in the environment. For example, if there is evidence for ongoing biodegradation on timescales beyond the standard OECD methodologies.



nature-derived

meets ISO 16128-2:2017 50% - 99% natural origin content standard

¹ natural origin content as defined by the ISO Standard 16128-2:2017
² CR (EU) 2023/2055 amending Annex XVII to Regulation (EC) No 1907/2006
³ for selected applications
[†] only applicable to benecel[™] K200M HPMC
[^] only applicable to lp-300



polymers — synthetic

antara- 430 polymer

Antara™ 430 polymer functions as an opacifier in liquid detergents and as a film-forming polymer in waxes, polishes and synthetic starches. With a glass transition temperature of approximately 100 °C, Antara™ 430 polymer enables transparent, thermoplastic films that readily adhere to glass, plastics and metals. The emulsion is compatible with many polymers and surfactants.

Antara™ 430 polymer is a white, 38–41% solids, latex produced as a graft, emulsion copolymer of

polyvinylpyrrolidone and styrene in the presence of an anionic surfactant. About 90% of the particles are <0.5 micron with a maximum 25 °C viscosity of 750 cP at pH 2.0–5.0.

Antara™ 430 polymer is thermally and mechanically stable in the presence of a variety of ionic compounds. The viscosity is unaffected after three freeze-thaw cycles between ambient and –20 °C; the emulsion is unbroken at 25 °C after 1/2 hr at 10,000 rpm and does not coagulate upon the addition of 1% hydrochloric acid, calcium chloride, aluminum or sodium borate.

trade name	chemical description	features and benefits	applications
antara- 430 polymer	PVP/Polystyrene Latex	<ul style="list-style-type: none"> excellent opacifier for liquid detergent products creamy opaque appearance broad compatibility with formulation components 	<ul style="list-style-type: none"> fabric care hard surface cleaning

disintex- disintegrants

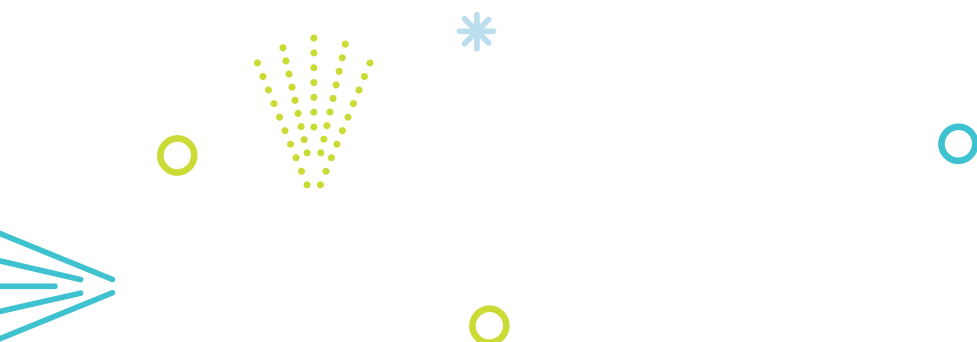
Disintex™ disintegrants series — Disintex™ 75 and 200 disintegrants — are proprietary blends of polyvinyl polypyrrolidone (PVPP), cellulose and/or inert salts. They are used extensively as disintegrants in laundry and

dishwashing detergent tablets because of their high swell volumes. The cross-linked PVPP homopolymers are highly hydrophilic and will rapidly absorb water on contact to swell and create internal stress points that will break up tablets.

trade name	chemical description	features and benefits	applications
disintex- 75 disintegrant	Proprietary blends of Polyvinyl Polypyrrolidone (PVPP)	excellent disintegrants for tablet-based products	<ul style="list-style-type: none"> dishwashing fabric care
disintex- 200 disintegrant		<ul style="list-style-type: none"> swells with high hydrostatic pressure for rapid tablet break-up rapidly dispersed, resulting in low residues minimal effect on tablet friability 	

For more information on disintex™ 75 disintegrant, visit ashland.com/isolve

For more information on disintex™ 200 disintegrant, visit ashland.com/isolve





easy-wet™ 20 wetting agent

Easy-Wet™ 20 wetting agent is a proprietary super-wetting agent based on N-Octyl-2-Pyrrolidone in a convenient-to-use liquid form. Easy-Wet™ 20 wetting agent is a cost-

effective, premium wetter/surfactant suitable for hard surface cleaning, dishwashing, fabric care and industrial and institutional applications where superior wetting and spreading performance is required.

trade name	chemical description	features and benefits	applications
easy-wet™ 20 wetting agent	Patented formulation based on N-Octyl-2-Pyrrolidone	<ul style="list-style-type: none"> readily biodegradable performance-enhancing co-surfactants and coupling solvents powerful wetting at very low use levels use on low-energy, high-energy and polyolefin substrates dynamic and equilibrium surface tension reduction foaming enhanced cleaning performance Not a synthetic polymer microparticle (microplastic)¹ conforms to Detergent Regulation EC 648/2004 	<ul style="list-style-type: none"> dishwashing fabric care household cleaning industrial and institutional cleaning

For more information, visit ashland.com/isolve



¹ CR (EU) 2023/2055 amending Annex XVII to Regulation (EC) No 1907/2006



PVP K-30

Polyvinylpyrrolidone (PVP) is a hygroscopic, amorphous polymer supplied as a white, free-flowing powder or as aqueous solutions. Available in several molecular weight grades, they are characterized by K-value and used in various applications. PVP K-30 polymer, with K-value 26-34 is good starting point for home care applications. PVP can be plasticized with water and most common organic plasticizers. It is considered to be physiologically inert and is listed on U.S. EPA safer chemical ingredient list. The PVP K-series polymers are not synthetic polymer microplastic (microplastic)¹

Applications take advantage of one or more of the following properties inherent in the polymer, typically due to the lactam ring:

- high polarity and the resultant propensity to form complexes with hydrogen donors, such as phenols and carboxylic acids, as well as anionic dyes and inorganic salts

- dispersancy, where components in a mixture are uniformly distributed through the use of polyvinylpyrrolidone
- hydrophilicity, where the substantial water solubility of polyvinylpyrrolidone is its dominant feature and frequently a factor along with other properties valuable to numerous applications
- adhesion, taking advantage of the higher molecular weight polyvinylpyrrolidones formulating in aqueous media, then evaporating sufficient water to generate a solid product for the desired application
- cohesivity, where cohesive strength is achieved through a variety of dry blending and granulation techniques

Polyvinylpyrrolidone is cross-linkable to a water-insoluble, swellable material either in the course of vinylpyrrolidone polymerization, by addition of an appropriate multifunctional comonomer or by post-reaction, typically through hydrogen abstraction chemistry.

trade name	chemical description	features and benefits	applications
PVP K-30	Polyvinylpyrrolidone	used as rheology modifiers in liquid dishwashing formulation compatible in clear liquid, heavy duty detergents excellent binder for tablet formulations stabilize emulsions and structure liquid products	dishwashing
		used as anti-soil redeposition agents, dye transfer inhibitors, rheology modifiers, and/or tablet binders soluble in water and many organic solvents provides dye transfer inhibitor by complexing with dyes provides anti-soil redeposition, enzyme stabilization clay-based soils on range of fabrics provides enzyme stabilization compatible in clear liquid, heavy duty detergents stabilize emulsions and structure liquid products excellent binder for tablet formulations binder and protective coating for enzymes	fabric care
		used as rheology modifiers and/or surface shine enhancers compatible in clear liquid, heavy duty detergents stabilize emulsions and structure liquid products nonionic newtonian rheology surface shine enhancement in cleaning products forms hard, transparent, glossy films	hard surface cleaning
		used as dispersants and/or rheology modifiers uniformly distributes components in a mixture compatible in clear liquid, heavy duty cleaners stabilize emulsions and structure liquid products nonionic newtonian rheology	industrial and institutional cleaning

For more information, visit ashland.com/isolve

¹ by current ECHA definitions, CR (EU) 2023/2055 amending Annex XVII to Regulation (EC) No 1907/2006

sorez[™]- 100 polymer

Sorez[™] 100 polymer is a biodegradable modified polyester copolymer concentrate in water-soluble form. The product imparts wicking properties to hydrophobic textiles. It provides soil release and anti-redeposition properties while

reducing the electrostatic charge of treated polyester. Sorez[™] 100 polymer can be used in laundry detergents, fabric softeners and pre- and post-wash stain removers. The polymer forms a thin film on the substrate, enabling effective soil removal during subsequent wash cycles.

trade name	chemical description	features and benefits	applications
sorez- 100 polymer	Polyethylene Glycol Polyester Copolymer	<ul style="list-style-type: none"> soil release property on cotton-blend and synthetic fabric effective at low temperatures for energy-efficient cleaning anti-soil redeposition properties for synthetic and cotton-blend broad compatibility with all surfactant types miscible with cold water at any ratio prevents deposition of oil-based soils on range of fabrics readily biodegradable not a synthetic polymer microparticle (microplastic)¹ 	fabric care

sorez[™]- hs 205 polymer

Sorez[™] hs 205 polymer can help deliver four sought-after benefits in hard surface cleaning products: soil release, soil repellency, anti-scale performance and hydrophilization. At the recommended use levels of 0.5% to 1.5%, sorez[™] hs 205 polymer is substantive to negatively charged surfaces, reducing the ability of the soil to stay in place and allowing

for easier cleaning. Sorez[™] hs 205 polymer offers a water “sheeting” effect, reducing the amount of energy required in the use of hard surface cleaner formulations. In the bathroom and the kitchen, surfaces cleaned with sorez[™] hs 205 polymer stay cleaner, longer – even after repeated soiling and rinsing phases. In laundry detergents, sorez[™] hs 205 polymer inhibits dye transfer.

trade name	chemical description	features and benefits	applications
sorez- hs 205 polymer	Vinylpyrrolidone/ Dimethylaminoethyl Methacrylate Copolymer	<ul style="list-style-type: none"> highly efficient soil release effective soil repellency inhibits scale formation hydrophilization reduced cleaning time surfaces stay cleaner for longer excellent for oily soils works in anionic and nonionic formulas less spotting and streaking dye transfer inhibitor not a synthetic polymer microparticle (microplastic)¹ 	<ul style="list-style-type: none"> hard surface cleaning industrial and institutional cleaning fabric care

For more information, visit ashland.com/isolve

¹ by current ECHA definitions, CR (EU) 2023/2055 amending Annex XVII to Regulation (EC) No 1907/2006

surfadone™ wetting agents

Surfadone™ wetting agents are linear, N-Alkyl-2-Pyrrolidones. They combine the hydrophilic, dipolar pyrrolidone ring with a hydrophobic alkyl group and exhibit a unique combination of solvency and surface activity. They are hydrophobic in nature, functioning as excellent wetting agents and effective dispersing and cleaning aids.

Surfadone™ LP-100 wetting agent (N-Octyl-2-Pyrrolidone) is a low-foaming, nonionic rapid wetting agent with an HLB of 6 and having no critical micelle concentration (CMC). Due to the electron delocalized lactam ring, Surfadone™ LP-100 wetting agent interacts with anionic surfactant micelles. This greatly enhances its water solubility, resulting in synergistic surface tension reduction and wetting enhancement at low concentrations.

Surfadone™ LP-300 wetting agent (N-Dodecyl-2-Pyrrolidone) is sparingly soluble in water (0.002 weight percent) and soluble in most organic solvents. With 66% natural origin

content by ISO 16128-2:2017, it is a low-foaming, nonionic surfactant with an HLB of 3 and has no critical micelle concentration (CMC). Like its lower alkyl chain homolog, Surfadone™ LP-300 wetting agent interacts with anionic surfactants, forming mixed micelles, which greatly enhances its solubility, resulting in synergistic surface tension reduction and wetting enhancement. Appropriate combinations of Surfadone™ LP-300 wetting agent and anionic surfactants produce viscous solutions and gels.

key features:

- powerful surface tension reduction at low levels
- synergistic performance with anionics or nonionics
- powerful wetting
- non-foaming
- conform to Detergent Regulation EC 648/2004
- listed on U.S. EPA Safer Chemical Ingredient List
- not a synthetic polymer microparticle (microplastic)¹

trade name	chemical description	features and benefits	applications
surfadone- lp-100 wetting agent	N-Octyl-2- Pyrrolidone	used as a rinse aid reduces drying time acts as a protein soil defoamer provides rapid/effective wetting and low foam exhibits minimal filming and spotting	automatic dishwashing
		provides rapid/effective wetting facilitates the removal of oily soil and grease stains from cotton, polyester and cotton-polyester fabrics	fabric care
		biodegradable, performance-enhancing co-surfactants and coupling solvents used in institutional/household, bathroom, glass, and all-purpose cleaners dynamic surface activity promotes rapid wetting, penetration and softening of oily/greasy soils, soap scum and mineral scale, to facilitate removal from a variety of substrates minimizes streaking on glass	hard surface cleaning
		provides high surface activity and wetting combines broad-spectrum solvent capability with favorable safety features safer alternative to hazardous solvents and provides solvency for a wide range of organic materials and resins in aqueous metal cleaners, 1%–2% surfadone lp-100 wetting agent facilitates cleaning performance and interacts with alkoxyated thiol surfactants to minimize odor	industrial and institutional cleaning
surfadone- lp-300 wetting agent	N-Dodecyl-2- Pyrrolidone	biodegradable, performance-enhancing co-surfactants and coupling solvents used in institutional/household kitchen, bathroom, glass, and all-purpose cleaners dynamic surface activity promotes rapid wetting, penetration and softening of oily/greasy soils, soap scum and mineral scale to facilitate removal from a variety of substrates particularly effective as a coupling solvent for fragrances	hard surface cleaning
		provides high surface activity and wetting combines broad-spectrum solvent capability with favorable safety features safer alternatives to hazardous solvents and provide solvency for a wide range of organic materials and resins	industrial and institutional cleaning

For more information on surfadone™ lp-100 wetting agent, visit [ashland.com/isolve](https://www.ashland.com/isolve)

For more information on surfadone™ lp-300 wetting agent, visit [ashland.com/isolve](https://www.ashland.com/isolve)

¹ by current ECHA definitions, CR (EU) 2023/2055 amending Annex XVII to Regulation (EC) No 1907/2006

surfaguard™ polymers

Surfaguard™ polymers are sprayable polymers with the ability to form substantive films and significantly extend the effect of common biocides.

Our tests using EPA RSS protocol 01-1A demonstrate long lasting disinfection enabled by polymers in combination with quaternary ammonium compounds, which are the

most common disinfecting agent used worldwide in household applications.

This also reduces the need for repeated application, thereby improving the sustainability profile and cost efficiency of the product. This technology also helps improve the efficacy of existing disinfectant formulations significantly by addition of commercially available polymeric film formers.

trade name	chemical description	features and benefits	ionic nature	applications
surfaguard™ dv-5 polymer	VP (vinyl pyrrolidone) copolymer	forms substantive films to various surfaces, such as glass, plastic, and metals delivers clear, uniform films that entrap antimicrobial actives on surfaces, enabling long lasting disinfection broad surfactant compatibility compatible with commonly used quat antimicrobial actives suitable for wipes, sprayable and dilutable formulations not a synthetic polymer microparticle (microplastic) ¹	pseudo-cationic	hard surface cleaning industrial and institutional cleaning
surfaguard™ al-9 polymer	modified VP polymer		non-ionic	
surfaguard™ va-6 polymer	VP copolymer		non-ionic	
surfaguard™ mv-6 polymer	maleic acid (MA) copolymer		anionic	

For more information on surfaguard™ dv-5 polymer, visit ashland.com/isolve

For more information on surfaguard™ al-9 polymer, visit ashland.com/isolve

For more information on surfaguard™ va-6 polymer, visit ashland.com/isolve

For more information on surfaguard™ mv-6 polymer, visit ashland.com/isolve



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polymers — cellulosic

benecel™ hydroxypropyl methylcellulose

Multifunctional benecel™ hydroxypropyl methylcellulose (HPMC) products are nature-derived rheology modifiers that enhance the sensory experience. Benecel™ HPMC is available in a wide range of grades to suit all your thickening challenges.

Derived from cellulose, a natural, abundant and renewable resource, benecel™ HPMC products are

water-soluble, non-ionic polymers. Benecel™ HPMC is an efficient thickener and film former that enhances foam production and foam stabilization in surfactant systems for improved foam quality that is longer lasting. Due to its non-ionic character, benecel™ HPMC is compatible with most commonly used surfactants, enabling optical clarity in formulations.

trade name	chemical description	features and benefits	applications
benecel™ hpmc	Hydroxypropyl methylcellulose	rheology control/thickening/stabilizing foam boosting mildness listed on listed on U.S. EPA safer chemical ingredient list not a synthetic polymer microparticle (microplastic) ¹	fabric care hard surface cleaning industrial and institutional cleaning hand dish wash hand sanitizers

For more information on benecel™ e10m HPMC, visit ashland.com/isolve

[†] Only applicable to benecel™ K200m HPMC

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blanose™ carboxymethylcellulose

Carboxymethylcellulose (CMC) is a cellulose ether. It is an anionic, water-soluble polymer. Specific grades of this

range can be used as rheology modifiers in fabric care and household cleaning applications.

trade name	chemical description	features and benefits	applications
blanose- cmc	Carboxymethylcellulose	cold-water solubility rheology control/thickening/stabilizing effect anti-redeposition property listed on listed on U.S. EPA safer chemical ingredient list not a synthetic polymer microparticle (microplastic) ¹	fabric care hard surface cleaning industrial and institutional cleaning air fresheners

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klucel™ hydroxypropylcellulose

Klucel™ hydroxypropyl cellulose (HPC) is a nonionic water-soluble cellulose ether with unique combination

of properties, soluble in cold-water and polar organic solvents, surface active, forms films of exceptional flexibility without addition of plasticizers.

trade name	chemical description	features and benefits	applications
klucel™ hpc	Hydroxypropylcellulose	film-former cold-water solubility rheology control/thickening/stabilizing effect anhydrous formulations tablet binding listed on U.S. EPA safer chemical ingredient list not a synthetic polymer microparticle (microplastic) ¹	fabric care household cleaning industrial and institutional cleaning hand sanitizers insect repellants

For more information on klucel™ h cs HPC, visit ashland.com/isolve

For more information on klucel™ l cs HPC, visit ashland.com/isolve

For more information on klucel™ g cs HPC, visit ashland.com/isolve

natrosol™ hydroxyethylcellulose

Natrosol™ hydroxyethylcellulose (HEC), a nonionic, water-soluble polymer is a white, free-flowing granular powder. Solutions of natrosol™ HEC are pseudoplastic and shear-thinning. Natrosol™ HEC is easily dissolved in cold or hot

water to give crystal-clear solutions of varying viscosities. Furthermore, low to medium molecular weight types are fully soluble in glycerol and have good solubility in hydro-alcoholic systems containing up to 60 percent ethanol. Natrosol™ HEC is generally insoluble in organic solvents.

trade name	chemical description	features and benefits	applications
natrosol™ hec	Hydroxyethylcellulose	film-former cold-water solubility rheology control/thickening/stabilizing effect r-types easy to disperse anti-redeposition property crystal clear formulations salt tolerant listed on listed on U.S. EPA safer chemical ingredient list not a synthetic polymer microparticle (microplastic) ¹	fabric care hard surface cleaning industrial and institutional cleaning toilet care

For more information on natrosol™ 250 hhr HEC, visit ashland.com/isolve

¹ by current ECHA definitions, CR (EU) 2023/2055 amending Annex XVII to Regulation (EC) No 1907/2006

encapsulation technology

captivates™ encapsulates

captivates™ gl

Captivates™ gl encapsulates have a matrix structure, produced using JetCutter™ Technology — rotating cutting wires that create hydrogel beads from a continuous jet of viscous fluid. The resulting droplets are transformed into solidified beads through various gelation techniques including thermal gelation and ion exchange — producing a uniform bead matrix that can contain high levels of encapsulated material. Naturally derived materials such as agar, gellan gum, alginate and carrageenan are used as the matrix material.

Captivates™ gl encapsulates are produced in sizes ranging from 250 µm to 3000 µm in diameter and can be used to encapsulate a wide range of materials including oils, pigments, abrasives and harmless bacteria. Delivery triggers include dilution, pressure and pH.

captivates™ hc

Captivates™ hc encapsulates are core/shell microcapsules produced via complex coacervation using naturally derived gelatin and acacia (Gum Arabic) as the principal wall materials; they range from 15 µm to 2000 µm in diameter. Captivates™ hc encapsulates with a minimum diameter above 250 µm can be used in otherwise clear or homogeneously opaque carriers to provide a striking visual impact while delivering actives or other ingredients with beneficial properties.

trade name	chemical description	features and benefits	applications
captivates™ gl encapsulates	captivates™ gl are custom-manufactured spherical particles produced in sizes ranging from 250 µm to 3000 µm	creative sensory experience naturally derived formulation creativity	dishwashing hand sanitizers
captivates™ hc encapsulates	captivates™ HC are custom-manufactured microcapsules produced in sizes ranging from 5 µm to 2000 µm	high payloads of lipophilic and insoluble actives protection and delivery of sensitive ingredients targeted delivery and deposition pH, dilution and shear triggering visual differentiation not a synthetic polymer microparticle (microplastic) ¹	

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 / efficacy usability allure integrity profitability™

 **Ashland™**
always solving

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