

# Incrustation Inhibitors & Dispersing Agents



PRODUCTNAME	APPLICATION AREA	DESCRIPTION
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## Green sequestering and dispersing agents - NEW

<b>POLYQUEST ID-PC</b> <b>BIODEGRADABLE</b>	<p>Environmentally friendly, phosphorus-free, peroxide-stable complexing agent based on iminodisuccinate (IDS) in powder form.</p> <p>For household cleaners, automatic dishwashing (ADW), laundry detergents, surface cleaning, vehicle care, metal cleaning, biocidal cleaners, and much more.</p>	<p>Highly effective against alkaline earth metal- and heavy metal ions and remains stable even under strongly alkaline conditions.</p> <p>Suitable for stabilizing hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>), complexing metal ions in textile and paper processes, and improving color stability.</p>
<b>POLYQUEST PA-PC</b> <b>BIODEGRADABLE</b>	<p>Environmentally friendly phosphorus-free complexing agent and dispersant based on polyaspartic acid sodium salt (PASP) in powder form.</p> <p>Ideal for sustainable formulations in technical and consumer goods applications, such as: cooling water, boiler feed water, and reverse osmosis systems, seawater desalination systems, laundry detergents, cleaning agents, dishwashing detergents, industrial cleaners, and much more.</p>	<p>Low foaming behavior as well as anti-scaling, dispersing, and water-softening properties.</p> <p>Shows synergistic effects in combination with phosphonates such as PBTC or HEDP.</p>
<b>POLYQUEST MG-P</b> <b>BIODEGRADABLE</b>	<p>Environmentally friendly, highly effective chelating agent based on amino acids. NTA-free methylglycine acetic acid trisodium salt (MGDA) in powder form; also available as granules.</p> <p>For cleaner formulations such as household cleaners, automatic dishwashing detergents (ADW), laundry detergents, surface cleaners, metal cleaners, and many more.</p>	<p>Non-toxic alternative to conventional chelating agents and works efficiently even at low concentrations in both acidic and alkaline environments.</p> <p>It can effectively dissolve limescale and lime soap and prevents formation of new deposits.</p>
<b>POLYQUEST GL-47C</b> <b>BIODEGRADABLE</b>	<p>Environmentally friendly, highly effective chelating agent based on amino acids. NTA-free tetrasodium glutamate diacetate (GLDA) in 47% solution.</p> <p>For cleaner formulations such as household cleaners, automatic dishwashing detergents (ADW), laundry detergents, surface cleaners, metal cleaners, personal care products, paper industry, and much more.</p>	<p>Non-toxic alternative to conventional chelating agents, with excellent solubility and effectiveness in both acidic and alkaline conditions.</p> <p>It stabilizes formulations, prevents discoloration, and improves cleaning performance.</p>

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## Oligomeric threshold-active sequestering and dispersing agents

<b>HYDRODIS ADW 3814/N</b>	Threshold-active, non-Ca-sensitive sequestering and dispersing agent with pronounced dirt-carrying capacity. In addition to household, commercial and industrial cleaners, it is particularly suitable for machine dishwashers (ADW).	Oligomeric phosphonic acid (patented). Good replacement for polyphosphates and polyacrylates. Partial replacement of NTA. Excellent threshold effect even at very high pH. Excellent dispersing agent. Particularly well suited as inhibitor for CaSO <sub>4</sub> in reverse osmosis in sea water desalination. Good anti-redeposition aid, increases secondary detergency. Stable against hydrolysis. Clear solubility over the whole pH range.
<b>HYDRODIS LW 3875</b>	Threshold-active, non-calcium sensitive sequestering and dispersing agent with pronounced soil release properties. Excels in its very good combination of sequestering and dispersing properties.	Oligomeric phosphonic acid (patented). Combines very good sequestering properties with good dispersing properties. Reduces deposits on the fiber and avoids whites' degradation upon secondary washing. Specific for laundry applications
<b>HYDRODIS WP 3204 G</b>	Powder product. Threshold-active, non-Ca-sensitive sequestering and dispersing agent with pronounced dirt-dissolving properties. The product is recommended for use in dishwashers. Granules.	Oligomeric phosphonic acid (patented). Replaces NTA, EDTA, polyphosphates and polyacrylates. Pronounced threshold effect, even at a very high pH. The product is recommended for use in dishwashers. FOR POWDER PRODUCTS.
<b>HYDRODIS WP 40/N</b>	Threshold active, non-calcium sensitive sequestering and dispersing agent. For household, professional and industrial cleaners.	Oligomeric phosphonic acid (patented). Good replacement for polyphosphates and polyacrylates. Pronounced threshold-effect even at a very high pH. Higher sequestering power than Hydrodis WP 56/N. Good dirt holding capacity.
<b>HYDRODIS WP 56 S</b>	Threshold active, chlorine-free, non-calcium sensitive sequestering and dispersing agent with pronounced soil suspension properties. For household, professional and industrial cleaners.	Oligomeric phosphonic acid (patented). Particularly suitable for metalworking, cooling lubricants and electro-plating.
<b>HYDRODIS WP 56/N</b>	Threshold-active, not calcium sensitive sequestering and dispersing agent with excellent soil suspending properties. For household, professional and industrial cleaners. Also available as free acid (WP 56) and partially neutralized. (WP 56/P)	Oligomeric phosphonic acid (patented). Good replacement for polyphosphates and polyacrylates. Partial replacement of NTA. Excellent threshold effect even at very high pH. Excellent dispersing agent. Particularly well suited as inhibitor for CaSO <sub>4</sub> in reverse osmosis in sea water desalination. Good anti-redeposition aid, increases secondary detergency. Stable against hydrolysis. Clear solubility over the whole pH range.

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PRODUCTNAME	APPLICATION AREA	DESCRIPTION
<b>HYDRODIS WP 562/N</b>	Threshold active, non-calcium sensitive sequestering and dispersing agent. Recommended for use in automated dish washing.	Oligomeric phosphonic acid (patented). Replaces NTA, EDTA, polyphosphate and polyacrylates. Pronounced threshold effect even at very high pH. Combines properties of HYDRODIS WP 56/N and HYDRODIS WP 40/N
<b>POLYQUEST O-630</b>	Threshold-active, non-Ca-sensitive sequestering and dispersing agent with pronounced dirt-carrying capacity. For household, commercial and industrial cleaners. Redeposition of deposits on the fibers is reduced in detergents.	Replaces NTA, EDTA, polyphosphates and polyacrylates. Pronounced threshold effect, even at a very high pH. Good secondary washing power and good graying inhibitor. Resistant to hydrolysis. Clear solubility in the entire pH range.
<b>POLYQUEST OG-305</b>	Threshold-aktive, non-Ca-sensitive sequestering and dispersing agent with pronounced soil-dissolving properties. The product is characterized by its very good combination of sequestering and dispersing properties. Granules.	Oligomeric phosphonic acid (patented). The product combines very good sequestering properties with good dispersing properties. It reduces deposits on the fiber and is a good graying inhibitor. Especially for laundry applications. FOR POWDER PRODUCTS.

## Other threshold-active sequestering and dispersing agents

<b>PERMULSIN SL</b>	Threshold active phosphorous-free sequestering and dispersing agent with pronounced soil suspending properties. For household, professional and industrial cleaners. Also available as free acid.	Stable against active chlorine, H <sub>2</sub> O <sub>2</sub> . Suitable in disinfectants. Completely soluble in water, very good stability from pH 2 to pH 12, very good stability even at temperatures between 120 and 130° C.
<b>POLYQUEST B-194</b>	Threshold active sequestering and dispersing agent. For household, professional and industrial cleaners. Prevents deposition of calcium salts (bottle washing, beverage industry). In combination with TENSAN TEM, excellent corrosion inhibitor in acidic environment.	High sequestering capacity for CaCO <sub>3</sub> , very good at pH 10-12, excellent cost-benefit ratio, good threshold effect, particularly good lime soap dispersing capacity. Used in electroplating to remove interference ions.

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PRODUCTNAME	APPLICATION AREA	DESCRIPTION
<b>POLYQUEST BO-393</b>	Threshold-active sequestering and dispersing agent with pronounced soil suspending capacity. For household, commercial and industrial cleaners based on oxidative media (e.g. hypochlorite).	Stable to active chlorine and H <sub>2</sub> O <sub>2</sub> . Used for disinfectants. Completely soluble in water, very good solubility at a pH value of >7. Good sequestering capacity of Mg ions. Biodegradable without problems.
<b>POLYQUEST E-390</b>	Threshold-active sequestering and dispersing agent for liquid and powder products in automated dishwashing. Part replacement of sodium tripolyphosphates. For I+I as well as household detergents. Inhibits incrustations and stabilises hydroperoxide.	Good CaCO <sub>3</sub> sequestrability in basic media. Its pronounced sequestering capacity for Fe ions makes it an excellent choice at very high to very low pH values. Stable against chloroisocyanurates and hypochlorites.
<b>POLYQUEST FG-423</b>	Threshold-active sequestering and dispersing agent. For household, commercial and industrial cleaners and detergents. Prevents incrustations during bottle cleaning and limescale deposits in brewery kettles. Granules.	High sequestering capacity for CaCO <sub>3</sub> , very good at pH 10-12, good threshold effect. Suitable for electroplating to remove interfering ions, especially zinc ions. FOR POWDER PRODUCTS.
<b>POLYQUEST I-030</b>	Extremely pure threshold active sequestering and dispersing agent. Stabilizes hydrogen peroxide, peracetic acid, perborates and percarbonates. Recommended for all uses where only a minimum of impurities is permitted.	Very good sequestering power to iron ions over the whole pH range. Good CaCO <sub>3</sub> sequestering power in alkaline environment. Very stable in oxidative media.
<b>POLYQUEST I-179</b>	Threshold active sequestering and dispersing agent. Granules. For household, professional and industrial cleaners.	Low hygroscopy. Stabilizer for percarbonates and perborates.
<b>POLYQUEST IG-905</b>	Threshold-active sequestering and dispersing agent. Particularly suitable for dishwasher tabs, as well as household, commercial and industrial cleaners. Stabilizes hydrogen peroxide, peracetic acid, perborates and percarbonates. Granules.	Almost free of Cl and Fe ions. Very good sequestering ability of Fe ions within the entire pH range. Good CaCO <sub>3</sub> sequestering capacity in a basic environment. High purity. Stable in oxidative media. FOR POWDER PRODUCTS.

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PRODUCTNAME	APPLICATION AREA	DESCRIPTION
<b>POLYQUEST IP-385</b>	Threshold active sequestering and dispersing agent. For household, profesional and industrial cleaners. Stabilises e.g. hydrogen peroxide, peracetic acid, perborates and percarbonates.	Very good sequestering capacity of Fe-ions at very high to very low pH values. Good CaCO <sub>3</sub> sequestrability in a basic environment. High purity. Powder. Stable in oxidative media.
<b>POLYQUEST V-103</b>	Threshold active phosphorous-free sequestering and dispersing agent with pronounced soil release properties. For household and I+I cleaners. Good sequestering properties w.r.t. CaCO <sub>3</sub> and CaSO <sub>4</sub> .	Stable against active chlorine and H <sub>2</sub> O <sub>2</sub> . Resistant to hydrolysis, even at high temperatures and at very high to very low pH values.
<b>POLYQUEST V-198</b>	Threshold active phosphorous-free sequestering and dispersing agent with pronounced soil suspension properties. For household, professional and industrial cleaners. Prevents deposits of CaCO <sub>3</sub> , CaSO <sub>4</sub> , BaSO <sub>4</sub> , Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> or the corresponding Mg salts.	Stable against active chlorine and H <sub>2</sub> O <sub>2</sub> . Phosphorus-free alternative in water treatment. Resistant to hydrolysis, even at high temperatures and at very high to very low pH values.
<b>POLYQUEST V-395</b>	Threshold-active sequestering and dispersing agent with pronounced dirt-carrying capacity. For household, commercial and industrial cleaners. Also prevents calcification of high-pressure cleaners and heat exchangers.	Replacement for polyphosphate, EDTA, DTPA and NTA. Also used as a corrosion inhibitor for aluminum and iron in an alkaline environment. It boosts the cleaning effect of surfactants and should only be used at pH> 6.
<b>POLYQUEST V-405</b>	Biodegradable sequestering agent, especially for industrial applications in a basic environment.	Replaces EDTA and NTA at higher pH values. Chelating also for trivalent metal ions (especially Fe <sup>3+</sup> ). Based on renewable raw materials.
<b>POLYQUEST V-616</b>	Threshold-active, non-Ca-sensitive sequestering and dispersing agent. For household, commercial and industrial cleaners.	Combines very good sequestering capacity with good dispersing capacity. Very good complexing properties towards Ca and Mg ions in a very wide pH range. Also very effective under strongly alkaline conditions (pH>12).

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PRODUCTNAME	APPLICATION AREA	DESCRIPTION
<b>POLYQUEST VG-670</b>	Threshold-active sequestering and dispersing agent. Particularly suitable for solid detergents or dishwasher tablets, as well as for household, commercial and industrial cleaners. Granules.	High sequestering capacity for $\text{CaCO}_3$ , very good at pH 10-12, good threshold effect. FOR POWDER PRODUCTS.
<b>SEQUION 10 H 60</b>	Threshold active sequestering and dispersing agent. For household, professional and industrial cleaners. Stabilises hydrogen peroxide, peracetic acid, perborates and percarbonates.	Almost free of chlorine and iron ions. Very good sequestering power for iron ions over the whole pH range. Good $\text{CaCO}_3$ sequestering power in alkaline environment. High purity. Stable in oxidative media.
<b>SEQUION 10 NA 430</b>	Threshold active sequestering and dispersing agent. For household, professional and industrial cleaners. Stabilises hydrogen peroxide, peracetic acid, perborates and percarbonates.	Almost completely chlorine and iron-free. Particularly good sequestering properties for iron ions over the whole pH range. Good sequestering agent for $\text{CaCO}_3$ in alkaline environment. Particularly pure quality. Stable in oxidative environment.
<b>SEQUION 10 NA G</b>	Threshold active sequestering and dispersing agent. For household, professional and industrial cleaners. Stabilises hydrogen peroxide, peracetic acid, perborates and percarbonates. Granules.	Almost free of chlorine and iron ions. Very good sequestering power for iron ions over the whole pH range. Good $\text{CaCO}_3$ sequestering power in alkaline environment. High purity. Stable in oxidative media. FOR POWDER PRODUCTS.
<b>SEQUION 10 NA PDR</b>	Threshold active sequestering and dispersing agent. For household, professional and industrial cleaners. Stabilises hydrogen peroxide, peracetic acid, perborates and percarbonates.	Very good sequestering power for iron ions over the whole pH range. Good $\text{CaCO}_3$ sequestering power in alkaline environment. High purity. Stable in oxidative media. FOR POWDER PRODUCTS.
<b>SEQUION 20 H 45</b>	Threshold active sequestering and dispersing agent. For household, professional and industrial cleaners. Prevents deposition of calcium salts on bottles during washing. Used in breweries to prevent scale. In combination with TENSAN TEM, excellent corrosion inhibitor in acidic environment.	High sequestering power for $\text{CaCO}_3$ , very good at pH 10-12, excellent cost-benefit-ratio, good threshold effect. Also used in electroplating to remove interfering ions.

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PRODUCTNAME	APPLICATION AREA	DESCRIPTION
<b>SEQUION 20 NA 38</b>	Threshold active sequestering and dispersing agent. For household, professional and industrial cleaners. Prevents incrustations during bottle cleaning and scales in brewery boilers. In combination with TENSAN TEM, excellent corrosion inhibitor in acidic conditions.	High sequestering power to $\text{CaCO}_3$ , very good at pH 10- 12, particularly good cost-benefit-ratio. Good threshold effect. Suitable also in electroplating to remove interfering ions.
<b>SEQUION 30 NA 30</b>	Threshold active sequestering and dispersing agent. For household, professional and industrial cleaners. Prevents incrustations during bottle cleaning and scales in brewery boilers.	High $\text{CaCO}_3$ sequestering power, very good at pH 10-12, good threshold effect. Suitable in electroplating to remove interfering ions, particularly zinc ions.
<b>SEQUION 40 NA 32</b>	Threshold active sequestering and dispersing agent. For household, professional and industrial cleaners. Prevents incrustations during bottle cleaning. Stabilises hydrogen peroxide. Also available as granules.	Good sequestering capacity of Fe ions in the entire pH range and also for $\text{CaCO}_3$ under basic conditions. Particularly pure quality (color, smell). Secondary corrosion inhibitor of aluminum in $\text{H}_3\text{PO}_4$ and HCl. Stable against hydrogen peroxide.
<b>SEQUION CLR</b>	Threshold active sequestering and dispersing agent with pronounced soil suspensions properties. For household, professional and industrial cleaners based on oxidative media (e.g. hypochlorite).	Stable against active chlorine and $\text{H}_2\text{O}_2$ . Used in disinfectants. Completely water soluble, very good solubility at pH >7. Good magnesium sequestering power. Readily biodegradable.

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## Dispersing agents

<b>HYDRODIS WP 4837 BIO</b>	A biodegradable, polymeric dispersing agent, especially suitable for automatic textile washing and dishwashing.	Phosphorus-free. Especially suitable as an incrustation inhibitor against $\text{CaCO}_3$ and as a dispersant of dirt particles.
<b>POLYQUEST V-406</b>	Phosphorus-free acrylic copolymer with dispersing properties, especially against inorganic salts such as carbonate, sulfate and phosphate salts and silicates. High-performance inhibitor for use in cleaning processes for industrial plants, reverse osmosis, oil and gas.	Ideal for limescale inhibition. 60ppm can be sufficient to reduce $\text{CaCO}_3$ deposits by dispersing them in solution. At doses above 90ppm, the formation of $\text{CaCO}_3$ precipitates can be completely avoided. Precipitation of calcium or magnesium silicate is prevented from a dosage of 200 ppm.

## Descaling

<b>POLYQUEST V-379</b>	Mixture of organic salts. Dissolves $\text{CaCO}_3$ and similar salts. Non-corrosive to the skin or soft steel. Very suitable for concentrated acid cleaners.	Stronger than vinegar, glycolic, lemon, phosphoric or sulfoamic acids. Substitute for hydrochloric acid and other traditional acids. Free of phosphate and VOC.
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