

INITIA™ 205

overview

INITIA™ 205 is a high performance sulfonated polymer that is designed specifically for calcium phosphate and iron stabilization. INITIA™ 205 is optimized in monomer type, ratio, and polymerization conditions for specific functionality in a wide-range of water treatment applications. INITIA™ 205 has been thoroughly evaluated versus the industry leading specialty copolymers including sulfonated ter-polymers and tetra-polymers.

specifications

| | |
|---------------------|----------------------------------|
| appearance | slightly hazy, pale straw liquid |
| solids content | 44-46% |
| pH (as is) | 2.5-4.0 |
| viscosity at 25° C | <500 cPs |
| density at 20° C | 1.17 ± 0.05 g/ml |
| solubility in water | complete |
| residual monomer | <0.1% |

INITIA™ 205 delivers...

best-in-class calcium phosphate stabilization

exceptional iron stabilization

highly effective particulate and solids dispersion

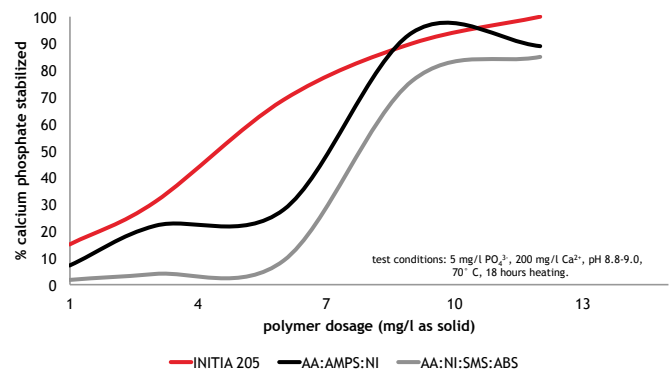
suggested applications

cooling towers
boilers (<400psi)
reverse osmosis
mining
oilfield and natural gas

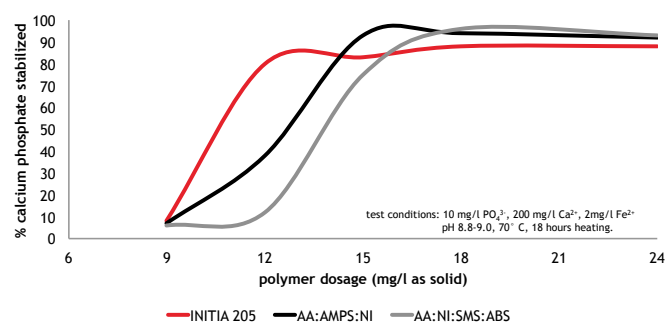
phosphate stabilization

INITIA™ 205 is an exceptional additive for the control of calcium phosphate in water treatment applications such as cooling. INITIA™ 205 has been evaluated versus industry leading sulfonated ter-polymers and tetra-polymers and has demonstrated superior performance under a wide-range of conditions. The graphs below summarize the performance of INITIA™ 205 under stressed conditions at 5, 10, and 15 mg/l ortho-phosphate.

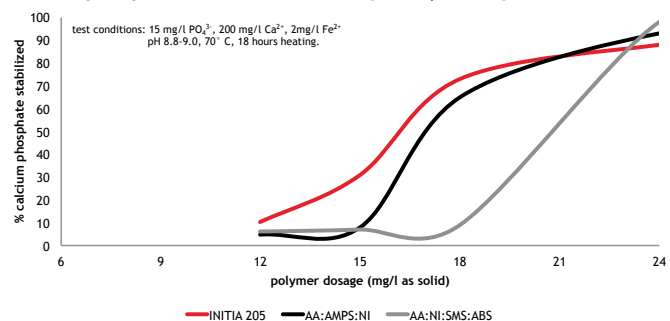
calcium phosphate evaluation - 5 mg/l PO₄³⁻



calcium phosphate evaluation - 10 mg/l PO₄³⁻, 2 mg/l Fe²⁺

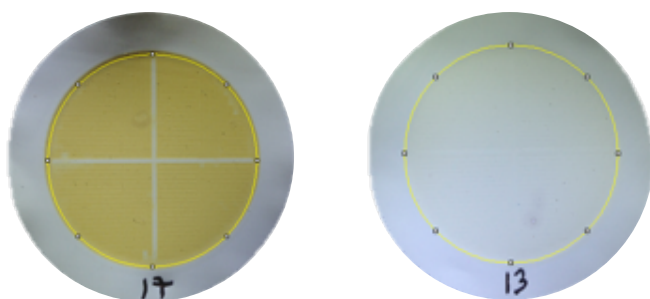


calcium phosphate evaluation - 15 mg/l PO₄³⁻, 2 mg/l Fe²⁺



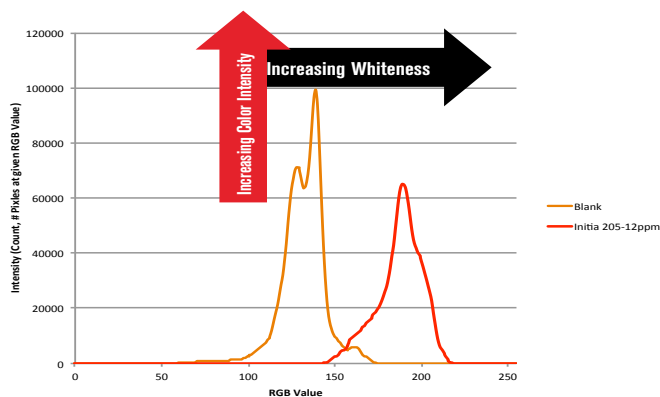
iron stabilization

INITIA™ 205 is an exceptional additive for the stabilization of iron and other transition metals. To demonstrate the efficacy of INITIA™ 205 experiments were conducted using 2 mg/l of ferrous iron that was oxidized and precipitated at a pH of 8.8-9.0. The images below show filtered iron collected on a 0.2µm membrane and subsequent image analysis. The data show INITIA™ 205 to be highly effective at stabilizing colloidal iron.



Blank (No Treatment)

with INITIA™ 205

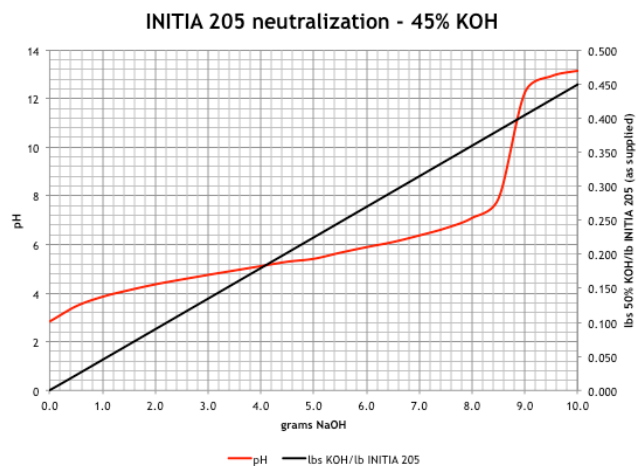
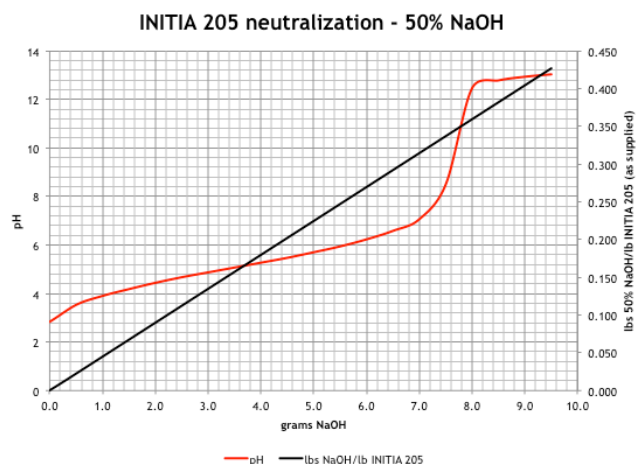


safety use and handling

Consult the Safety Data Sheet (SDS) for further information regarding the safe handling and use of INITIA™ 205. This product should be stored in a cool/dry place and must be protected from freezing. Avoid storage at high temperatures (>90°F), direct sunlight, and exposure to surface, airborne or other common environmental contaminants such as debris, bacteria, yeast, and mold.

product neutralization

INITIA™ 205 is supplied as a concentrated (~45%) sulfonated copolymer at a pH of 2.5-4.0. The neutralization INITIA™ 205 is exothermic and can produce a rapid increase in heat during formulation. INITIA™ 205 should be diluted to the desired final formulation concentration with deionized water prior to adding a neutralizing agent. Neutralizing agents should be added slowly until the desired pH is achieved. Effective neutralization is possible without observing product precipitation using either NaOH or KOH. The graphs below indicate the approximate amount of NaOH or KOH required to neutralize INITIA™ 205 to a given final pH.



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