

DuPont™ *StreaMax*™ coatings

FLOW SOLUTIONS FOR THE OIL AND GAS INDUSTRY



DESCRIPTION

DuPont™ *StreaMax*™ is the family of DuPont coatings and coating services specially developed for the oil and gas industry.

These coatings are specifically designed to *maximize well productivity* and *minimize operating and maintenance costs* by:

1. Minimizing the accumulation and deposition in production tubulars of asphaltenes, paraffins, and scale.
2. Providing superior corrosion protection in extreme sweet and sour environments.

DuPont™ *StreaMax*™ coatings can be a universal solution for all your flow assurance and corrosion protection needs.



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BENEFITS

1. Maximize well productivity and production rates by:
 - Minimizing production interruptions by reducing the number of shutdowns for tubular cleanup.
 - Significantly reducing internal buildup of asphaltenes, paraffins and scale.
 - Reducing fluid flow friction in tubulars.
2. Maximize tubular life by minimizing corrosion from:
 - Sweet and sour gases in the fluid stream.
 - Bacterial accumulation inside tubulars.
3. Reduce overall maintenance costs:
 - May permit use of common steel pipe in place of alloy steels for corrosion. Avoids lengthy delivery times for special alloys.
 - Reduce risk of reservoir damage by minimizing use of chemicals and solvents.
 - Minimize solvent treatment costs.
4. Technology Enabler
 - Marginal wells may now be more economical to operate and be more productive.
 - Excellent thermal and electrical resistance.
 - Fluid is maintained hotter, longer.
5. DuPont™ **StreaMax**™ coatings services:
 - DuPont manages the coating process
 - Quality assurance of application
 - Minimizes process variabilities
 - Maximizes return on investment

FOR MORE INFORMATION

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Note: We believe this information is the best currently available on the subject. It is offered as a possible helpful suggestion in experimentation you may care to undertake along these lines. It is subject to revision as additional knowledge and experience are gained. DuPont makes no guarantee of results and assumes no obligation or liability whatsoever in connection with this information. This publication is not license to operate under, or intended to suggest infringement of, any existing patents.

PERFORMANCE DATA

1. All DuPont™ **StreaMax**™ coatings have the following characteristics:
 - Multi layered system, each layer has a specific engineered function.
 - Guaranteed holiday free surface throughout the pipe.
 - Guaranteed adhesion to bare metal.
 - Excellent non-stick and product release properties.
 - Extremely wide operating temperature range (Minus 100°C to 260°C, Minus 150°F to 500°F continuous operating temperature)
 - Unaffected by high-pressures (up to 10,000 psi)
 - Excellent chemical resistance from H₂S and CO₂ gases and all acids and bases, even at high temperature.
 - Very low friction coefficient.
2. Autoclave lab tests: DuPont™ **StreaMax**™ coatings are unaffected after 29 days exposure at 1026 psi and 122°C (251°F)
 - Gas phase (5% H₂S, 5% CO₂, 90% methane), organic phase (kerosene, toluene) and brine phase.
3. Paraffin Cold finger tests: DuPont™ **StreaMax**™ coatings have 60% less buildup vs. bare steel and other coatings.
4. Paraffin flow loop tests: 60% less deposition with DuPont™ **StreaMax**™ coatings vs. bare steel at turbulent flow.
5. Asphaltene flow loop tests: 66% reduction in asphaltene deposits with DuPont™ **StreaMax**™ coatings vs. bare steel.
6. Scale Tests: deposit reduction of over 50% with DuPont™ **StreaMax**™ coatings vs. bare steel.
7. Live well tests in Western Canada using coupons suspended at the reservoir bottom for 21 days showed DuPont™ **StreaMax**™ coatings had no deposits. Well has long history of asphaltene problems.
8. High-pressure flow loop tests using entrained sand have confirmed the abrasion resistance.

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