

THE SECRETS BEHIND NITROGEN-BASED SPRAY SYSTEM

Have you been dreaming about a high-end coating application solution that provides superior finish with significant cost saving of both time and dollars for your shop?

Advanced Coating & Application Technologies® from Haydell Industries, using 3rd generation membrane, is a radically innovative and proprietary technology that eliminates every shortcoming of compressed atmospheric air. It offers full control over the three principal problem-causing variables: heat, moisture/humidity, and electrostatic charge.

Compressed air has been the standard fluid carrier, but it is fundamentally flawed in heat control, moisture content (humidity), and static electricity.

Heat

- *Compressed Air* - High temperatures change the volume of air molecules altering paint density in the fluid carrier. This distorts color, necessitates changes in air pressure, and alters chemical reaction rates, especially solvent evaporation and drying times.
- *Nitrogen Technology* - Heat is controlled and constant, allowing for predictable and reproducible results. Controlling heat obviates the necessity of solvents to manipulate viscosity.

Moisture

- *Compressed Air* - Allows moisture to initiate and accelerate several coating problems. Moisture alters paint's electrostatic charging efficiency, leaves imperfections on the substrate, causes film defects—such as blistering—and is a primary factor of corrosion.
- *Nitrogen Technology* - Brings the fluid carrier temperature down to anhydrous levels (-58°F/-50°C), eliminating all traces of moisture/water and the cascade of defects moisture causes.

Static Electricity

- *Compressed Air* - Generates undesirable static electricity in spray applications, due to the friction-intensive route to the nozzle before application. A net negative charge in the compressed air and fluid cause them to repel one another. In addition, sanding, polishing and tacking add a negative charge to the target substrate. This is clearly undesirable for a process reliant upon the adhesion of one substance to another. This also encourages contaminant attraction of dirt, dust and fibers to the freshly-painted substrate. It also contributes to film defects causing metallic particles and color pigments to change position, creating issues such as inconsistent color and coverage.

- *Nitrogen Technology* - Uses static electricity by positively charging the fluid carrier. This attracts the negatively-charged target substrate.

Additional Benefits of Nitrogen Technology

- *Corrosion Protection* - Without protective coatings, bare surfaces weaken and corrode long before their usual life expectancy. How well coatings fully cover and adhere to the target substrate is the determinate factor. Third generation nitrogen technology greatly reduces failure to adhere and also reduces voids where water, oxygen, and other contaminants contact bare metal and initiate the corrosion process.
- *Particle Size* - A critical factor in film appearance and flocculation. Reduced particle size in nitrogen technology eliminates many coating film defects and increases dispersion stability.
- *Fluid Carrier Composition* - Completely controls fluid carrier gases through discreet gas separation. Each coating is applied with an identical fluid carrier with constant proportional gas content. Proprietary fluid carrier control increases adhesion and coverage of the target substrate. Third generation nitrogen technology ensures better coverage, higher transfer efficiency, enhanced adhesion, and reduced overspray.

Testing

A comparative study of compressed air vs. Advanced Coating & Applications Technologies® 3rd generation nitrogen technology validates nitrogen technology's corrosion-diminishing potential over compressed air. Even in the earliest stages of corrosion, a significant difference was evident between the two, favoring nitrogen.

Green

Environmental impact is substantially reduced simply by virtue of reduced material consumption. Users enjoy a 20–30% reduction in VOC emissions. And harmful solvents needed to change viscosity are cut to between 50 and 100%, a benefit to both users and the environment. Energy costs drop by 30-50% with nitrogen technology.

Plus, your material costs for filter change-outs, booth maintenance, shoot suits and tear-away masks are much reduced, since there is less overspray. With increasingly stringent laws and guidelines regarding the environment, every opportunity should be engaged to remain ahead of the ever-progressing “green” curve.

Costs/Labor Savings

Aside from eliminating film defects, it has been proven that Haydell's Nitro Tech Spray Paint System provides significant savings to the user in both labor and materials. Repeated testing reveals the technology saves 20–30% materials and 30–50% in labor. Labor and material savings are due to greater coverage in a single pass with this technology. Greater transfer

efficiency and faster drying times significantly reduce the need for do overs. Savings realized in coverage, time, efficiency and drying actually produce finishes of greater quality and higher definition.

Customers Say

Leaders in the aviation, automotive, marine, woodcraft general manufacturing and defense industries adopt Advanced Coating & Application Technologies ® because they comprehend both the near-and long-term value of the technology and its benefits. And, that it is applicable to nearly every product requiring a coating. Current customers use the technology to coat a variety of products from golf balls to jumbo jets.

Our customers say it's changed their businesses. "Our gross profit on materials has increased 15-20%, and we easily saved up to 25% on liquid materials..." (Scott Petersen, Classic Collision), "One week out of the month to pay for the system, and the rest is pure profit" (J.M., Lexus) and "This is a game changer; it changes everything" (Mike, Fathers & Sons Porsche).

See It for Yourself

Every spray method except airless application can be equipped with this technology. The increasing sophistication of paint and spray gun technology, combined with Advanced Coating & Application Technologies,® creates a progressive collaboration capable of revolutionizing the entire coatings industry. To start seeing the quantitative and qualitative proof that the Nitro Tech Spray Paint System will save your company money, provide a superior product to your customers and give you a sure advantage over your competition, call today at 800-877-4362 for information about viewing a product demo.