

## 3M Celebrates National Preservation Month: Honors the State Library of Pennsylvania

Preservation Model Using 3M™ Novec™ 1230 Fire Protection Fluid Sets the Standard for Libraries

In an effort to draw awareness to the importance of preservation, 3M is celebrating National Preservation Month by recognizing efforts by [the State Library of Pennsylvania](#) within the Department of Education in Harrisburg. The library uses 3M innovation as part of its holistic preservation system. This system protects our nation's heritage and treasures such as the library Benjamin Franklin purchased, which influenced the writing of the Declaration of Independence and the Constitution. The preservation environment designed to protect this invaluable collection sets the standard for libraries with one of the countries lowest maintenance and energy costs.

As part of the preservation system, the design team selected Ansul® SAPPHIRE® Fire Suppression System charged with [3M™ Novec™ 1230 fluid](#). Novec 1230 fluid is a clean extinguishing agent ideally suited for the [protection of libraries](#), archives and document repositories. It can be discharged in rooms or spaces containing books, precious artwork, artifacts, sensitive electronics and other delicate items without causing harm. The fluid is a chemical agent that is stored as a liquid but is discharged as a gas that leaves no residue. Novec 1230 fluid has also found its way into the archives of the Library of Congress and The Daughters of the Republic of Texas Library in the Alamo compound.

"After 16 months of research, 3M Novec 1230 fluid was selected as the fire suppressant for the closed stacks of the Rare Collections Library," said Cornelius Rusnov, architectural designer for Pennsylvania's Department of General Services, Bureau of Engineering and Architecture, who led the preservation effort. "It meets long-term standards for the environment, while providing the primary protection for the collection in case of a fire incident and does not impose secondary damage to the collection when discharged."

Early in the design of the Rare Collections Library M. Clare Zales, deputy secretary for Commonwealth Libraries within the Pennsylvania Department of Education set as a priority that this project be a model from which other institutions may learn that preservation can, indeed, be affordable.

"Because of the precision of the design for the preservation components, the State Library of Pennsylvania has one of the nation's lowest maintenance and energy costs," said Zales. "From our experience, libraries can learn that it is within their means to preserve collections of immeasurable value."

At a maintenance cost of 15 cents per volume per year, this high-preservation environment is more affordable than many newly built public libraries and is comparable to a typical Pennsylvania public library. Initial energy costs for the Rare Collections Library have proven to be affordable at less than eight cents per volume per year.

"Preservation by its very nature is energy intensive. Being aware of this reality we've engineered a specialized system using the best technologies available to meet environmental standards and anticipated the ongoing costs of operation and maintenance," said Rusnov. "By working within the parameters of preservation research in the last 20 years, we have been able to push the limits of the recommended standards to ensure the longevity of Pennsylvania's priceless collections for decades to come."

The 3M Novec 1230 fluid technology was first developed in the 1990s as replacement fluid for ozone depleting substances. Researchers at 3M developed Novec fluids based on a sustainable technology that balances performance requirements with excellent environmental and worker safety properties. The fluid also offers an

opportunity for a building project to earn innovation credits toward LEED certification. The fluid has a minimal impact on the environment, with a zero ozone depletion potential, an atmospheric lifetime of five days and a global warming potential less than one. As a result, the fluid is safe for people and the environment now and into the foreseeable future.

The State Library of Pennsylvania's holistic preservation system took into consideration routine maintenance, energy efficiency, long-term costs, environmental impact, lighting, air quality, airflow, security, fire protection, fire detection and fire suppression. To honor the preservation efforts by the State Library of Pennsylvania and other preservation efforts around the country, 3M is making a contribution to the National Trust for Historic Preservation.

For more information regarding 3M Novec 1230 fluid log onto [www.3M.com/Novec1230](http://www.3M.com/Novec1230) and visit us on Facebook at [www.facebook.com/#!/3MNovec1230fluid](http://www.facebook.com/#!/3MNovec1230fluid). For more information about 3M Novec products visit [www.3M.com/Novec](http://www.3M.com/Novec).

#### About the State Library of Pennsylvania

The State Library of Pennsylvania touts its founding as 1745, the year Ben Franklin began to purchase a law library for use by the Pennsylvania Assembly. Around that collection, the State Library developed extensive print and electronic holding in public policy, administration, law, local and state history, education, business, genealogy, natural sciences and nearly every area of human endeavor. The State Library of Pennsylvania serves all branches of state government as well as a resource for all libraries of the Commonwealth.

#### About 3M

3M captures the spark of new ideas and transforms them into thousands of ingenious products. Our culture of creative collaboration inspires a never-ending stream of powerful technologies that make life better. 3M is the innovation company that never stops inventing. With \$27 billion in sales, 3M employs about 80,000 people worldwide and has operations in more than 65 countries. For more information, visit [www.3M.com](http://www.3M.com) or follow @3MNews on Twitter.

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