

# Tips on Selecting the Right Flooring System for Pharmaceutical Facilities



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# ***“How Can I Ensure I Pick the Right Solution for My Pharmaceutical Facility’s Floor?”***

**There are many firms that claim to offer a wide variety of commercial and industrial flooring solutions for pharmaceutical manufacturing operations. Some will perform better than others.**

When it comes to the production of medical drugs and supplies, maintaining superior safety and cleanliness is critical. You need durable, high-performance flooring, wall, and lining systems that meets or exceeds strict FDA safety standards for industrial-scale production of safe and effective medications. The company must be well regarded in the pharmaceutical industry for customized, commercial flooring solutions, designed specifically for the production of medical drugs and supplies.

## **Finding the Right Pharmaceutical Flooring System Provider**

It’s a good idea to consider more than one flooring company when planning your pharmaceutical operation’s flooring system. Michael Greenblatt, Founder and President of [Surface Technology, Inc.](#), a nationally recognized industrial flooring and coatings firm, recommends contacting multiple companies. By talking with different flooring specialists, you will be better able to understand the differences between their industry experience, installation approach, reputation for client satisfaction, and their ability to design and install custom industrial flooring and coating solutions for your operation.

## **Finished Floor Performance Is More Important Than the Brand**

One industry leader manufactures an excellent line of materials, but they only install their own proprietary product. They have done a good job marketing their name, but it is important to know that there are many other premium floor

coating manufacturers that have created top quality products; each product has different qualities and benefits. Talk to an industry expert about what custom solutions are right for your specific pharmaceutical manufacturing application.

“I always recommend that operators of pharmaceutical processing facilities consider more than one product or manufacturer for their epoxy, polyurethane or acrylic flooring installation,” Greenblatt said. “There are many different types of flooring solutions out there, and each one has its benefits and drawbacks. A good flooring contractor will be able to evaluate your situation and provide a recommendation for the best product that will create a customized flooring solution.”

Independent flooring contractors may provide an advantage since they are not locked into selling just one manufacturer’s solution. Surface Technology, for example, was originally founded as an installation contractor for this industry leader; however, as their reputation grew and demand for their services increased, Greenblatt decided to offer his clients a wider variety of premium products from industry-leading manufacturers.

“Every application is different,” Greenblatt said, “especially in the pharmaceutical industry. Be certain that

the company you select employs the top flooring experts and craftspeople in the business. Like our craftsmen, they should have current pharmaceutical industry experience, be multi-manufacturer certified, from a wide range of premium manufacturers to create a customized floor for each project. In our case, this customization allows our clients to enjoy exceptional long-term performance and value from each of our flooring solutions.”

The firm must carefully evaluate your existing facility and take the time to discuss your requirements in detail. Their personnel must assess the full range of products available and provide the best recommendations for your flooring needs. After their experts have a complete understanding of your facility and requirements, they should design a custom solution for your firm that takes advantage of the best that the flooring system industry has to offer.

## **Unique Requirements for Pharmaceutical Facilities**

You must be certain that the flooring professionals you select are experts at planning and installing high-performance flooring and wall systems specifically designed to improve the performance of pharmaceutical processing operations. The flooring professionals you choose must be able to install a variety of coatings, including FDA approved epoxy

flooring, urethane, acrylic (MMA), polyurea, and others. The coating that's right for your facility will depend on your unique needs, your budget, and other environmental factors. Your contractor must actively collaborate with you to design a flooring solution that's perfect for your needs.

The flooring contractor needs to ensure they can install a seamless, polymer floor and wall system that includes the following features:

- Highly reflective surfaces to enhance the available light
- Antimicrobial surfaces to protect product safety and human health
- Smooth, seamless surfaces that are easy to clean and maintain
- Chemical and thermal shock resistance to increase the lifespan of your floor
- USDA and FDA compliance
- Moisture resistance
- Slip-resistance to increase safety
- Non-porous and waterproof

To protect your pharmaceutical operation, be certain their system will seal off the gaps and crevices where microbes, fungi, and insects can hide.

## Painters vs. Industrial Epoxy Flooring Professionals

One of the biggest challenges you may face is to determine if your prospective flooring vendor is a dedicated polymer flooring professional with pharmaceutical industry experience, rather than a conventional commercial painter. There is a difference – even if the commercial painting contractor you are speaking with is a well-respected and experienced firm.

“Ask them specifically for details on their experience with installing epoxy floor coating,” Greenblatt stated. “This is a much more technical process that requires the unique expertise of an industrial epoxy flooring professional to properly install.”

Epoxy was first used in the early 1950s for concrete restoration. Over the last couple of decades, epoxy painted floors have hit the mainstream consciousness and have become a preferred coating for residential garages. Home DIYers and commercial painters have begun applying what is colloquially known as epoxy paint.

**There is a vast difference between epoxy paint and a true industrial-strength epoxy coating, however.**

The main difference is in the quality and durability of the materials as well as the skill required to install the product

successfully. **Common household epoxy paint is good only for light-duty applications and was never intended for industrial use.** It is manufactured with a long pot life for easier application. Products like this may perform beautifully for light-traffic, residential use but are not strong or durable enough for industrial use.

## Epoxy Floor Coatings

The true industrial solution is a floor coating that is specifically designed for your use. Pharmaceutical processing facilities can select from a wide range of specialty epoxy coatings. Your professional floor coating installer can design your epoxy floor to be skid resistant, hygienic, electrostatic dissipative and conductive, and much more, depending upon your requirements.

However, epoxy floor coatings are much more difficult to install than home DIY kits and require a professional coatings installer with experience in the industry. Most industrial coatings products are 100% solids and are a multi-component resin system with a short pot life. This means that they require a skilled hand during the floor preparation, mixing, and application process. The result is a seamless floor that performs beautifully and is hygienic, durable, and easy to clean.

## What is the Difference Between Floor Paint and Floor Coating?

Epoxy paint is essentially latex paint with a small amount of added epoxy for increased durability. This type of product is best left for DIY home garage projects and is never an appropriate choice in pharmaceutical facility settings.

Epoxy floor coating is a much more technical process that requires the expertise of a flooring professional to install properly. The exact materials used vary depending on the type of flooring system required, but every floor system installation requires careful planning to ensure the essential performance characteristics are achieved with the finished floor. Floor coating systems require the proper preparation of the underlying concrete and subsequent layers to ensure the products bond correctly, and the coating is successful.

## Measurable Benefits, Impenetrable Protection

Floor coating systems are used in pharmaceutical operations and an array of industrial facilities, including chemical processing, cannabis processing, electronics, aviation, food & beverage, and warehousing. These systems protect concrete floors as well as products in the facility and provide a safe working environment for staff. They are

seamless, easy to clean, and non-toxic. High-gloss flooring options can even save you money on your electric bill by reflecting light so that fewer indoor lights are needed.

### **Performance Characteristics of Industrial Floor Coatings:**

- Abrasion-resistant
- Impact-resistant
- Chip/flake resistant
- Corrosion-resistant
- Anti-slip (safety)
- Antibacterial
- Antimicrobial
- Antistatic
- Hygienic
- Long-lasting

### **Types of Floor Coating Systems**

The materials used for pharmaceutical and other industrial facility flooring vary depending on specific needs but can largely be divided into the following categories:

**Epoxy** – Epoxy is a resin comprised of 1-part epoxide resin and 1-part polyamine hardener. In the application process, the epoxy is left to cure for a minimum of 24 hours. When cured, it produces polymer structures that give the substance great strength and durability. This type of floor coating is non-porous and is used in high impact facilities where optimum

durability is the top priority. Highly resistant to chemical spills and abrasion, these systems are often used with decorative chips or colored sands. We can achieve an infinite array of color schemes or patterns with this material.

**Epoxy & Urethane** – Epoxy and urethane floors have an added top layer of urethane that acts as a seal and provides a seamless surface that is moisture and heat resistant.

**Urethane Cement** – Urethane cement is a combination of a polymer binder (urethane) and fillers (cement and aggregate). Urethane Cement is also referred to as polymer concrete. Urethane cement can be used in floor coating systems. They can be self-leveling, roller applied, or trowel applied. Urethane cement coating systems can tolerate high moisture, which makes them suitable to be installed directly onto concrete. Urethane cement coatings are well known for their chemical and temperature resistance. They also provide wear-resistant, durable, and seamless floor finishes that are easy to clean. Urethane cement flooring systems are tailored to the demanding service conditions found in the pharmaceutical industries, industrial, food & beverage, and healthcare environments.

**Acrylic (MMA)** – MMA is a dual system polymer that is not as hard or durable as

epoxy but is a formidable option for commercial flooring. MMA has a low glare satin finish and is resistant to weak acids, alkalis, solvents, and scratches. It is also highly flammable and odorous, so special ventilation and installation procedures must be implemented.

**Polyurea** – Polyurea is an organic polymer that is the result of a reaction from mixing an isocyanate and resin blend component. Polyurea has a rubber-like feel, making it not as hard as epoxy but still extremely durable. Polyurea flooring has a high-gloss finish, is highly stain and chemical resistant, and has a high heat tolerance.

**Polyaspartic** - Polyaspartic coatings are a relatively new technology for concrete floor coatings. Initially developed in the 1990s to protect steel from corrosion, they are now being used to protect industrial facilities' concrete floors. Originally developed with low VOC in mind, all polyaspartic coating systems are low or zero VOC.

Polyaspartic coatings possess nearly identical properties as the best two-component aliphatic polyurethane coatings. They are long-wearing and abrasion, scratch, chemical, UV, and impact resistant. In contrast to epoxies and polyurethanes, polyaspartic coatings provide faster drying time, and high film builds allowing for a much faster return to service. They also resist stains and

slightly higher temperatures than other types of coatings.

## Installation

Installation is the most critical aspect of your epoxy or polyurethane flooring solution. If something goes wrong during the install—if the floor isn't properly prepped, if mixes aren't correct or if the coatings are not properly allowed to cure between coats—your floor and its longevity will be compromised.

Michael Greenblatt founded Surface Technology specifically to take control of this process and provide a consistently superior installation for every job.

Initially formed as an installation contractor for an industry-leading firm, Surface Technology's stellar reputation for fast, quality installations quickly increased demand for its services.

Greenblatt saw an opportunity to improve his company's ability to provide custom industrial flooring solutions by increasing the range of premium branded flooring materials his firm installs. When Surface Technology made the move to offer a wider range of products, the firm's ability to match the performance needs of its customers increased exponentially.

Today, Surface Technology is one of the leading independent industrial floor contractors in the United States. Their flooring professionals average more than

20 years of field experience—one of the highest in the industry. They have a LEAN/SIX SIGMA continuous improvement process, using state-of-the-art preparation/installation equipment and techniques.

## Experience and Reputation

When it comes to flooring, it's important to ensure that the people you are working with are highly experienced and respected in the flooring industry.

The contractor and their team must be able to work 24 hours a day, 7 days a week, 365 days a year. They must be ready to work around the clock during planned shutdowns and respond within 24 hours to requests for flooring projects that get the green light during

unforeseen emergencies that result in unplanned shutdowns. They must have the labor and materials available at a moment's notice, so you never have to wait for them.

“Innovation and execution are the keys to delivering value for our clients,” Greenblatt said. As President of Surface Technology, Greenblatt uses his more than 35 years of floor coatings experience to help set the stage for future innovations within the floor coatings industry. He is actively involved in several organizations, including the [National Association of Corrosion Engineers](#) (NACE) and the [International Concrete Repair Institute](#) (ICRI), and was a key contributor in developing the first [Steel Structures Painting Council](#) (SSPC) specifications for coating concrete.

Here are just a few of the nation's leading companies that we have served, including those in the pharmaceutical industry:



Tyson Foods, Inc.



## Final Thoughts

Since you are looking for the best flooring solution for processing pharmaceutical products, your needs and requirements are unique. Don't settle for a cookie-cutter flooring system.

The right floors can increase safety, reduce maintenance, protect sensitive equipment, and provide the long-term durability you require to make the most out of your facility.

When asked what recommendations he had for pharmaceutical clients looking for a good flooring system installer, Greenblatt smiled. "Find a flooring contractor you can trust," Greenblatt said, "and make sure they're using high quality, industry-leading products and warranty their work. At the end of the day, the most important thing is the quality and performance of the finished floor – not the brand name of the product."

## About Surface Technology, Inc.

Surface Technology is a licensed, deadline-focused, national epoxy flooring contractor, providing industrial flooring, coating, and lining systems. We have successfully installed over 50 million square feet of high-performance flooring since 1988. Our highly skilled tradesmen average more than 20 years of experience installing resinous floor systems – the highest in the industry!

We can complete projects anywhere in the United States. We work with facility owners, design-build firms, construction management firms, and general contractors to provide industrial flooring solutions for projects ranging in size from 3,000 to more than 500,000 square feet. We are fully qualified to handle industrial floor coatings in Divisions 7 and 9 of the CSI MasterFormat® list. Surface Technology is bonded up to \$2 million.

Surface Technology has been recognized by national publications, trade associations, and construction professionals as a performance and quality leader among commercial flooring contractors. Our expertise in delivering high-performance floor systems for industrial projects across the country is unsurpassed.

That's why high-profile companies rely on Surface Technology to protect, restore, and enhance their facilities' most critical workspaces.



Founder and President, Michael E. Greenblatt is an independent, nationally recognized industrial flooring and coatings expert with more than 35 years of industry experience.

As a former executive for leading polymer flooring manufacturers, Michael has been a pioneer of highly effective new applications and installation techniques in building custom industrial flooring, coating, and lining solutions. The Surface Technology, Inc. project engineering team, under Michael's leadership, collaborates closely with clients to design the ideal solution for each custom set of application requirements.

For more information, visit [www.SurfaceTechnologyInc.com](http://www.SurfaceTechnologyInc.com).