

DRYFALL COATINGS

Dryfall coatings, sometimes referred to as “dry fog” coatings, are specialized coatings designed for spray application on ceilings, structural steel, and other overhead surfaces in large interior spaces. They are commonly used in commercial and industrial environments such as warehouses, distribution centers, manufacturing facilities, retail stores, gymnasiums, aircraft hangars, and similar large structures.

The defining characteristic of dryfall coatings is their ability to dry rapidly while airborne during spray application. As atomized paint particles fall toward the floor, they dry into a powder-like residue before reaching the ground. Once on the floor, the residue can typically be swept or vacuumed, greatly reducing cleanup time compared with conventional spray-applied coatings.

Because of this behavior, dryfall coatings allow contractors to spray large overhead areas with significantly less masking and floor protection than would normally be required with traditional coatings.

How Dryfall Coatings Work

Dryfall coatings are formulated to dry very quickly once they are atomized by spray equipment. As the coating droplets travel through the air, the solvent or water carrier evaporates rapidly, allowing the droplets to dry before reaching surfaces below.

After falling a sufficient distance—typically 10 to 15 feet—the overspray dries into a powder before reaching the floor. Once on the surface, it can usually be removed easily by sweeping or vacuuming (Figure 1).



Figure 1

At the same time, when the coating contacts the intended surface—such as structural steel or a ceiling deck—it remains wet long enough to form a continuous film and properly adhere to the substrate. This balance between rapid airborne drying and proper film formation is what allows dryfall coatings to function effectively.

Typical Applications

Dryfall coatings are most commonly used on overhead surfaces in large, open interior spaces where protecting floors and equipment from overspray would otherwise be difficult or costly. Typical applications include warehouse ceilings and structural steel, distribution centers, manufacturing plants, retail store ceilings, gymnasiums and indoor sports facilities, aircraft hangars, and parking garages (interior areas). These environments often feature high ceilings and large unobstructed areas, allowing sufficient drop distance for the coating to dry before reaching the floor.

Dryfall coatings can also be advantageous in facilities that must remain operational during painting. Because overspray residue can typically be removed easily, less extensive masking of equipment, shelving, and floor areas may be required compared with conventional spray applications.

Differences from Conventional Coatings

Although dryfall coatings may appear similar to conventional architectural paints, they are formulated differently to achieve their rapid drying characteristics.

Conventional coatings typically remain wet after spraying and will adhere to any surface they contact. As a result, overspray from these coatings often requires extensive masking of floors, equipment, and surrounding structures to prevent contamination. Dryfall coatings, by contrast, are designed so that overspray dries before reaching surfaces below, greatly reducing cleanup and containment requirements.

Ceiling height is also an important consideration. If the drop distance is insufficient, the coating may still be wet when it lands and may behave more like a conventional coating.

In addition, dryfall coatings are generally intended for interior applications. Outdoor airflow and wind can interfere with the airborne drying process and lead to overspray problems.

Types of Dryfall Coatings

Several types of dryfall coatings are available depending on project requirements and environmental regulations.

- **Water-Based Dryfall Coatings**

These are widely used due to their low odor and lower VOC content. They are well suited for commercial environments where indoor air quality is a concern.

- **Solvent-Based Dryfall Coatings**

Solvent-based dryfall coatings may dry more quickly under certain conditions and can offer improved application performance at lower temperatures. However, they produce stronger odors and are subject to more restrictive environmental regulations. Due to their high VOC content, these products are not available in California.

- **High-Performance Dryfall Coatings**

Some formulations incorporate acrylic or epoxy-modified resins to improve durability, adhesion, and resistance to industrial environments.

Application Considerations

Dryfall coatings are typically applied using airless spray equipment to maximize productivity on large overhead surfaces. Proper application conditions and spray technique are important to ensure consistent film formation and reliable dryfall performance. Key considerations include:

- **Ceiling Height:** Adequate drop distance is required for proper dryfall performance. Most coatings are designed to dry into powder after falling approximately 10 to 15 feet.
- **Temperature and Humidity:** Environmental conditions affect evaporation rates. Higher temperatures generally accelerate drying, while high humidity can slow evaporation and increase the likelihood that overspray remains wet when it reaches the floor.

- **Ventilation and Air Movement:** Airflow can influence how droplets travel and dry. While some ventilation is necessary, strong cross-drafts can disrupt droplet fall patterns and carry overspray outside the intended spray area.
- **Spray Technique and Equipment Setup:** Extremely high spray pressure can produce very fine droplets that remain airborne longer and may drift beyond the intended area. Droplets that are too large may not dry quickly enough before landing. Proper tip size, spray pressure, and spray distance help ensure optimal droplet formation.
- **Surface Preparation:** Surfaces should be clean and free of oil, grease, dust, and loose material. Most dryfall coatings are designed for direct application to sound substrates—including metal—without a separate primer. However, as with conventional coatings, a primer may still be recommended to address conditions such as rust or tannin staining.

Because dryfall performance depends on maintaining the proper balance between airborne drying and film formation on the substrate, controlling these application conditions is essential.

Limitations of Dryfall Coatings

While dryfall coatings offer significant advantages for large interior spaces, certain limitations should be considered during project planning.

These coatings are generally not intended for surfaces exposed to heavy abrasion, frequent cleaning, or aggressive chemical exposure. In such environments, more durable coating systems may be required.

Adequate drop distance is also essential. In areas with low ceilings or obstructions that prevent sufficient fall distance, overspray may not dry completely before reaching lower surfaces. Although dryfall overspray is easier to clean than wet paint, powder residue can still accumulate on equipment or finished surfaces if appropriate precautions are not taken.

Key Takeaways

Dryfall coatings provide a practical solution for coating ceilings and overhead structures in large interior environments. Their ability to dry while airborne allows contractors to spray large areas efficiently while reducing overspray cleanup and minimizing masking requirements.

However, successful use of dryfall coatings depends on understanding their limitations, including required drop distance, environmental conditions, and substrate preparation requirements. When applied under suitable conditions, dryfall coatings offer an efficient and cost-effective alternative to conventional coatings for many commercial and industrial projects.

Where Color, Creativity & Chemistry Meet!

2020 E. Orangethorpe Avenue • Fullerton, CA 92831
 (714) 680-3800 | www.vistapaint.com
 ©2026 Vista Paint Corporation. All rights reserved.

Follow us

