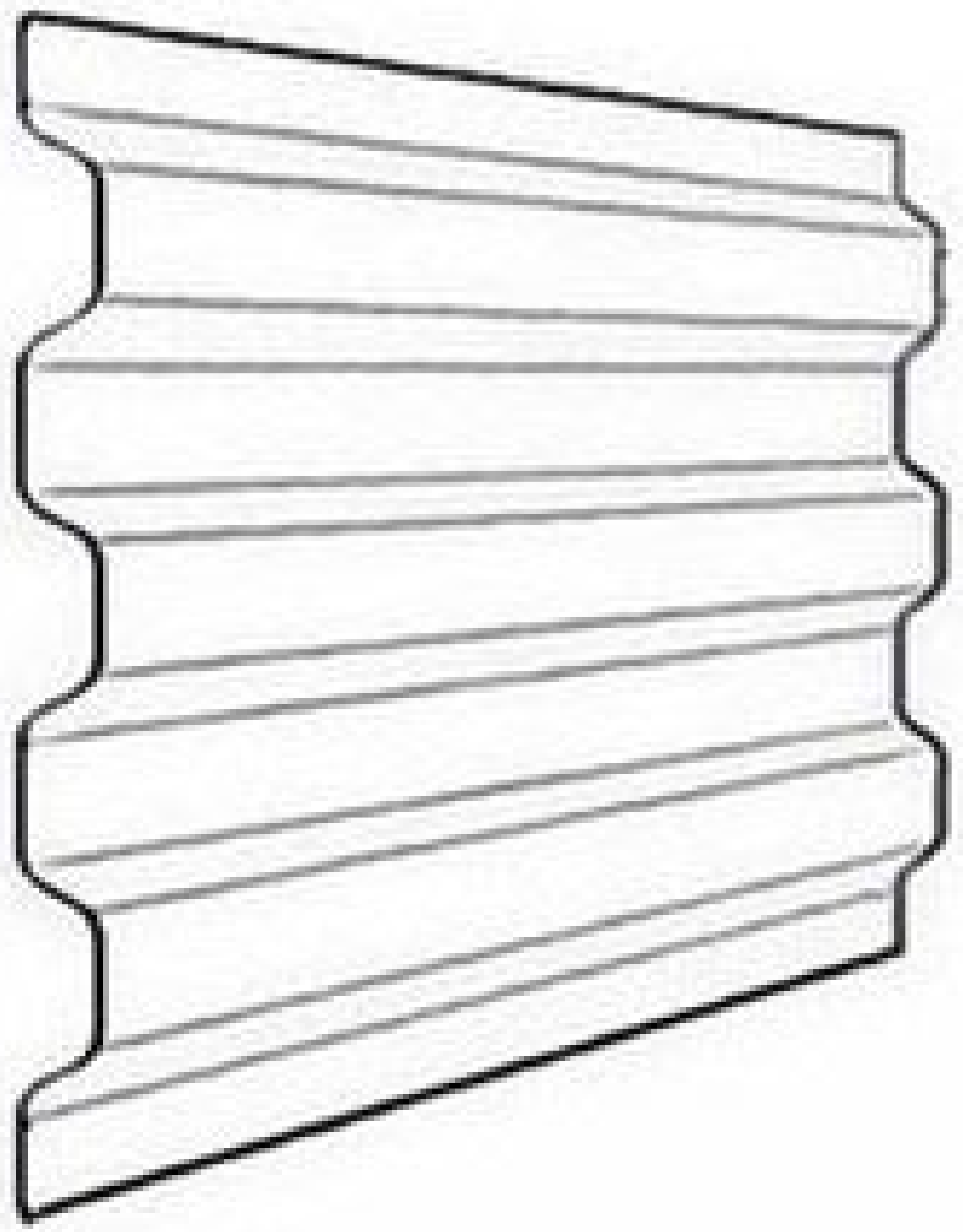
Anatomy of a storage roll door

A roll door consists of alternating vertical and horizontal surfaces. Over 20% of the surface area acts as a horizontal "shelf," where road grime and dirt can accumulate, and water tends to sit. This makes it particularly challenging to maintain and coat, as these areas are prone to increased contamination and moisture retention.

The modern average 8-foot tall roll door has 26 ribs and 104 “corners”

It is factory coated using a Silicone Modified Polyester (SMP) coil coating



A Deep Dive into “SMP” and Kynar coatings

- SMP (Silicone Modified Polyester) and Kynar (Polyvinylidene Fluoride/PVDF) are the two most prevalent factory finishes for coil-coated steel used in metal buildings, metal roofs, roll-up doors, and similar applications.
- **Kynar:** Softer with better UV resistance, typically used in non-contact areas like roofs.
- **SMP:** Harder and more scratch-resistant, commonly used on doors and metal walls, but more susceptible to UV degradation and chalking.
- Both coatings are known to be equally challenging to repaint, with newer surfaces being particularly difficult to paint. Let’s review the documentation provided by several commercially available "glossy surface primers" that specify their ability to be used over Kynar and SMP surfaces.

Key takeaways on multiple “glossy surface primer” specs

- **Surface Preparation:** All sources emphasized the importance of a thorough cleaning system to remove surface contaminants, recommending the use of a degreaser.
- **Chalk Removal:** Removal of chalk was universally stressed as a critical step.
- **Surface Characteristics:** Horizontal surfaces and standing water were identified as particular concerns.
- **Material Specifics:** Both SMP and Kynar were singled out for requiring special attention, distinct from typical glossy surfaces.
- **Surface Profiling:** Strong recommendations were made for creating a surface profile (through sanding, dulling, or abrading) to establish a “mechanical” bond, enhancing the “chemical” bond provided by the primer.
- **Environmental Conditions:** All noted the importance of monitoring atmospheric conditions before, during, and after the application process.
- **Testing:** Test panels were universally recommended to ensure adequate adhesion before proceeding with the full application.
- **Major Takeaway:** This is one surface where taking shortcuts is like playing Russian Roulette.

Selecting the right product for roll doors

- Chem-Bake is always the preferred and most robust system for coating SMP surfaces. As a solvent-based 2K system, it provides the best margin of error, but proper surface preparation remains essential.
- **Recommendations:**
- **When to Use Chem-Bake:**
  - If the surface has never been painted before.
  - If it has been previously painted with a 2K urethane system.
  - If it has been painted with a 1K silicone alkyd or an acrylic system with minimal issues.
  - Especially if the surface has a slick, hard, smooth, or glossy finish.
- **Water-Based Systems:**
- In our professional opinion, water-based systems, including Endura-Crylic, should only be specified if the project has been previously painted with a water-based system, and converting to Chem-Bake or another urethane system is not possible.

Summary

Due to the nature of roll-up doors, where SMP coatings interact with alternating vertical and horizontal surfaces, there is a higher tendency to accumulate oily grime and allow water to stand on the ribs. Additionally, the numerous sharp inside and outside corners exacerbate the challenge. Merely doing a water rinse without detergent and brushing the surface leaves you relying solely on chemical adhesion. This is highly problematic when coating over a glossy, hard, and slick SMP surface with any system. Proper surface preparation, including cleaning and abrading, is crucial to ensure effective adhesion and long-lasting results.