

A **Valspar** White Paper

# valspar

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**Coating solutions for harsh and aggressive environments.  
Formability characteristics of thick-film systems.**

*By Al Dunlop  
Vice-President  
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### **Why do we use thick-film systems?**

Thick-film fluoropolymer systems are used where superior corrosion protection is required while maintaining excellent color and gloss retention is the heart and soul of these products. They require very little maintenance and will keep your building looking good for years to come.

### **What is Flurothane II?**

The Flurothane II formulation combines two of the most effective coating technologies known to our industry, urethane and the fluoropolymer chemistry of Kynar 500® or Hylar 5000® resin. Flurothane II coatings can be applied to properly pretreated HDG steel, aluminum-zinc alloys and aluminum. It is available in a wide variety of standard and custom color hues as well as Energy Star® and LEED® compliant formulations.

### **What is Flurothane IV?**

A recipient of the prestigious R&D Award for one of the most outstanding technical achievements in the world in 1989, Flurothane IV combines two of the most effective coating technologies known to the coil coatings industry, urethane and the fluoropolymer chemistry of Kynar 500® or Hylar 5000® resin.

The Flurothane IV film system is thicker than Flurothane II and can be applied to properly pretreated HDG steel, aluminum-zinc alloys and aluminum. It is available in a wide variety of standard and custom color hues as well as Energy Star® and LEED® compliant formulations. Flurothane IV is a two pass system on a coil line.

### **Why do we recommend Flurothane II?**

Flurothane® II coatings are formulated to protect and enhance your building project in tough environments. They have proven effective against ultraviolet rays, corrosion, humidity, acid rain, and a wide range of chemicals and other pollutants. Flurothane II resists chalking, fading, chipping, cracking, and dirt. It has excellent gloss retention.

### **Why do we recommend Flurothane IV?**

Flurothane® IV coatings are formulated to protect and enhance your building project in extremely harsh environments such as those found in seacoast and industrial locales.

Projects located in these hostile environments need the added protection against salt spray and chemical corrosion that Flurothane IV delivers. This system provides excellent flexibility, maximum abrasion and chemical resistance, and barrier corrosion protection. Flurothane IV coatings have proven effective against ultraviolet rays, corrosion, humidity, acid rain, and a wide range of chemicals and other pollutants. Flurothane IV resists chalking, fading, chipping, cracking, and dirt. It has excellent gloss retention.

Under special circumstances Flurothane IV is applied to both sides when protection is required for both the inside and outside of a building.

### How do we handle it?

The internal cohesive forces that come into play when post forming thick-film systems, including composites, can result in some film cracking. This cracking can be minimized through the control of temperature in the forming operation.

### Flurothane II

- Hot Dipped Galvanized Steel  
Pretreatments: Zinc Phosphate /1402W or P62  
Topside: 803X419 Flurothane (thick-film primer)  
Appropriate color Fluropon topcoat  
Backside: PMY0302  
Appropriate Valcoat backer
- Galvalume  
Pretreatments: 1310 or 1402W  
Topside: 803X449 Flurothane G (thick-film primer)  
Appropriate color Fluropon topcoat  
Backside: PMY0302  
Appropriate Valcoat backer
- Factory roll forming should be conducted at a metal temperature of at least 55°F. Flexibility will be 0-1T NTO.\*

### Flurothane IV

- Hot Dipped Galvanized  
Pretreatments: Zinc Phosphate /1402W or P62  
Topside: PMY0302 single coat  
803X419 Flurothane (thick-film primer) 2 coats  
Appropriate color Fluropon topcoat  
Backside: PMY0302  
Appropriate Valcoat backer
- Galvalume  
Pretreatments: 1310 or 1402W  
Topside: PMY0302 single coat  
803X419 Flurothane (thick-film primer) 2 coats  
Appropriate color Fluropon topcoat  
Backside: PMY0302  
Appropriate Valcoat backer

\*Metal fracture can reduce the flexibility.