AkzoNobel

Understanding PVDF

Paint coatings are made of a blend of resins, solvents, pigments and other additives that give the final product its characteristics. Many resins are used in paint to achieve different performance characteristic.

Resin types can include polyvinylidene fluoride (PVDF), silicone-modified polyester (SMP), polyester, urethane, acrylic, epoxy, etc. **PVDF is a component of the coating, not the coating itself.** There are many suppliers of PVDF, some of which have commonly heard names that have been mistaken for the finished product (coating) itself. It can be confusing for those outside of the coatings industry to differentiate between the resin manufacturers and the coating manufacturers.

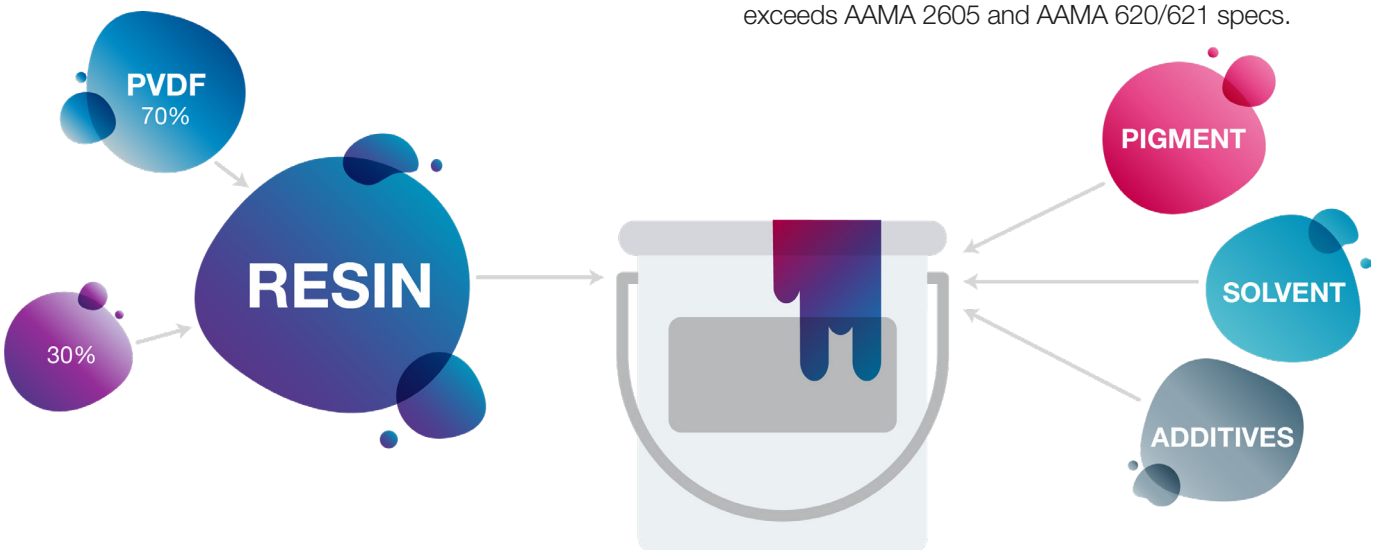
Q: What is PVDF?
PVDF stands for polyvinylidene fluoride and is a type of fluorocarbon polymer. PVDF is a polymer, also called a resin, used in architectural coatings due to the excellent weathering characteristic of fluorinated materials. PVDF itself is a solid pellet and therefore requires other additives, dispersants, solvents and colorants to be transformed into a usable coating. These additional materials are what coatings manufacturers control and what differentiates their products from their competitors' products.

Q: What are Kynar® and Hylar®?
Kynar and Hylar are not coatings—they are trade names for PVDF. Kynar is a brand of PVDF trademarked by Arkema. Arkema licenses the trade name Kynar® 500 to coatings manufacturers purchasing their product. Hylar® 5000 is another trade name (brand) of PVDF that is a registered trademark of Solvay Solexis Inc. These are the two brands of PVDF resins most widely recognized in the U.S., although other suppliers offer equivalent resins. Regardless of brand name recognition, all PVDF resins offer similar quality and performance in terms of industry standards for weathering.

Q: What do I get if I specify Kynar or Hylar?
If you specify one of these resins, you are only specifying a specific brand of raw material that will be used in the final coating. This does not guarantee the quality of the other coating components or the final coating performance.

Q: What is important for me to know when specifying a PDVF coating?
You want to specify a 70% PVDF coating system that meets AAMA 2605 specs (for aluminum substrate) or AAMA 621 (for steel substrate). Years of testing demonstrate that coatings containing PVDF are most durable when it makes up 70% of the coating; there were diminishing improvements when higher amounts were added. There are companies that sell 50% and even 30% PVDF formulations (which still may contain Kynar or Hylar branded PVDF), but the performance drops off considerably and will not meet AAMA 2605 requirements.

Q. What is TRINAR®?
TRINAR is a high-performance fluoropolymer coating manufactured by AkzoNobel containing a minimum of 70% PVDF. When TRINAR is used on your project, you always know you are getting a coating that meets or exceeds AAMA 2605 and AAMA 620/621 specs.



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