Coating System Performance

Coating Type	Least Physical Properties	Good Physical Properties	Superior Physical Properties	Best Physical Properties
NC	NC			
PC		PC		
AC			AC	
UV			UV	
PU			PU	

There is an overlap in the performance properties between different categories of coatings. This reflects the real world in which there are many different types of coatings marketed by various coating suppliers under the same generic category description.

So the phrase "Let the buyer beware!" certainly applies.

An example of this can be seen in the Polyurethane (PU) category where polyurethane coatings from some suppliers are fully cross linked, are based on low yellowing polyols (resins) and isocyanates (Part B), are extremely flexible, and highly impact and chemical resistant. However other PU's from other coating suppliers may be highly modified with various resins and possess very poor cross link density, contain low cost highly yellowing polyols and isocyanates and have in-service performance that is not much better than a nitrocellulose lacquer.

No coating in any particular product category is better or worse than a coating in a different product category. The question of which coating is "the best" is dependent upon a number of factors:

- The application equipment and environment
- Skill and experience of the coating applicators
- The substrate/article being coated
- Health, safety and environmental requirements
- The environment into which the coated article will be placed in service
- Any special buyer/customer coating requirements (specification) that must be met

The physical properties of a coating refers to a coating's in-service performance after application in terms of:

- Chemical and water resistance
- Flexibility/ Impact Resistance
- Light & Colour Fastness
- Yellowing
- Abrasion Resistance

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