

DATA SHEET – PVC COATING



THE ADVANTAGES OF PVC COATING

The purpose of this synopsis is to provide people with practical information on the advantages of PVC coatings using polyethylene, nylon, epoxy, and polyester hybrids. A comparison is made of PVC with other coatings for various important physical parameters.

DUROMETER (HARDNESS)

Vinyl is a material that is available in a range of hardness's from very soft coatings to very hard formulations. The hardness can be adjusted according to the customer's requirement. Polyethylene coatings are available only in a soft formulation. Nylon, epoxy and hybrids are all available in hard coatings.

FLEXIBILITY

Vinyl is far and away the most flexible coating available. It can be bent without breaking or cracking. It can be stretched without snapping. Polyethylene is flexible but cannot be stretched. Nylon is slightly flexible. When nylon is bent, it will maintain the angle to which it was bent. It is also possible to bend it and snap it. Epoxy and hybrid coatings are not flexible at all compared to PVC.

BONDING

PVC, when used with a primer over clean metal, will bond very firmly to the point that it cannot be removed without totally destroying the PVC coating itself. Polyethylene has no bond to the substrate regardless of how clean it is. Nylon, when used with a primer, will bond slightly but not as strongly as PVC. Epoxy anohybrid coatings will bond firmly to a properly cleaned metal substrate.

GENERAL PHYSICAL PROPERTIES

Vinyl has excellent tensile, tear and elongation properties compared with any of the other powder coatings discussed here.

OUTDOOR WEATHERABILITY

Vinyls formulated for outdoor exposure are superior to any other type of coating for outdoor weather ability. Polyethylene has no weather ability. Nylon has good weather ability, as does polyester. Epoxy has very poor outdoor weather ability.

LOW TEMPERATURE FLEXIBILITY

Vinyl when formulated for use in low temperature applications (such as coating freezer basket) has excellent low temperature flexibility. Polyethylene has fair low temperature flexibility but because of its poor physical properties, it will break at -40 degrees Fahrenheit. Nylon, epoxy and hybrids all have poor low temperature capabilities.