Painting KYDEX® Thermoplastic Sheet

For information applicable to KYDEX® FST please refer to 300 series technical briefs.

TB - 152-A

Introduction

KYDEX® thermoplastic sheet is easily painted if recommended paints are used in accordance with manufacturer's recommendations. Due to the high chemical resistance of it, only certain paints adhere well. It is very important to use recommended paints to paint KYDEX® sheet. KYDEX, LLC has performed research into which paints are suitable and what methods should be used to paint it. These methods have proven successful in the field, and will provide excellent results.

Paint Selection

Recent environmental concerns and legislation have caused the creation of paints with differing levels of "Volatile Organic Compounds" (VOC). High VOC level paints have a high solvent content. Low VOC level paints exhibit a lower level of solvent content, and also do less environmental damage. Some municipalities have legislated what VOC levels may be legally used in their jurisdiction. Please check with local officials to learn if any restrictions on VOC levels exist before selecting a paint. Normal VOC level paints have proven successful to paint KYDEX® sheet.

The following paints have been tested and are recommended for painting KYDEX® sheet:

Sherman Williams SuperPaint® or Duration™
Sherwin Williams Polane™ Series (Spray application only)
Phone: (800) 331-7979 (Ronseal U.K.: 44.114.246.7171) web: http://www.sherwin-williams.com/

Cardinal Polyurethane 6400 Series (Spray application only)
Phone: (323) 283-9335 web: http://www.cardinalpaint.com/

Considerations When Using Recommended Paints

Overheating during thermoforming may cause paint adhesion problems due to excess gloss. Be sure the KYDEX® sheet is formed in accordance with the recommendations of KYDEX.

Low VOC level paints have demonstrated lower adhesion properties. If a low VOC paint must be used, surface preparation prior to painting may increase adhesion. See "Surface Preparation" below.

Retarding agents are available from paint manufacturers, which have increased paint adhesion in laboratory testing. These retarding agents cause the paint mixture to evaporate slower, giving the paint more time to attack and adhere to the surface. As an example, adhesion of Polane T Plus paint was increased when Reducer R7K84 was replaced by retardant R7K216 in the paint mixture.

For external applications using Sherwin Williams Polane Series, use exterior catalyst V66V29 instead of the interior catalyst V66V27. The ratio is 6 parts paint, one part catalyst.

KYDEX, LLC
ISO 9001 and 14001 Certified

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Surface Preparation

If paint adhesion problems are encountered, try the following surface preparation techniques. Always check to make sure using any of the methods listed below does not violate existing environmental statutes.

Isopropyl Alcohol (IPA) Wiping – The KYDEX® sheet surface can be wiped using IPA or rubbing alcohol prior to painting. This method of treatment helps paint attack the surface and create a strong bond to the KYDEX® sheet.

Sanding – Sand the surface using fine grit sandpaper. This will roughen the surface and make it more suitable for paint adhesion, similar to prepping a glossy-painted wood surface. Wipe the surface with dry cloth or IPA after sanding to remove debris.

Paints Not Recommended

The following types of paints have provided poor adhesion in laboratory testing. KYDEX, LLC does not recommend the use of the following paint types: Epoxy Paints, Water-Based Latex Paints, and Oil–Based Enamels.

Even though KYDEX, LLC has experienced difficulties with the paints listed above, customers may experience success with these paint types in the field.

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