

WATER-BASED PVDF FIELD APPLICATION CASE STUDY



Project Profile – Roof restoration – Saint-Fons, France

The Interfora technical school is an 840 square meters building located in Saint-Fons next to Lyon in France. Since 1948, Interfora has been a leading training center focused on job placement within the chemical industry. The restoration of the building in 2010 and 2011 with performance enhancing materials, designed to reduce the carbon footprint and energy consumption, illustrate the variety of innovations derived from the chemical sector. The buildings have been refurbished with sustainable materials that reduce gas and electrical consumption.

Kynar Aquatec® is a new innovative platform of emulsions, which are used by paint formulators to make premium weatherable water-based coatings. Coatings formulated with these emulsions can provide the durability and performance of traditional Kynar 500® based coatings. They can easily be applied to a variety of substrates, including metals, plastics, wood,

concrete, textiles, and previously painted surfaces. Now the extreme weatherability of a Kynar 500® based coating is available in a VOC –compliant, field- or factory-applied, ambient air-dry system. Additional benefits include tremendous resistance to dirt pick-up, outstanding water repellency, and high initial and long-term Total Solar Reflectance and Emissivity.

Kynar Aquatec® meets these requirements and then some. Its simplicity of application, long term durability, and its ability to shed dirt allowing it to remain white (a key factor in the coating's ability to retain its solar reflectance over time) quickly won over the manager of Interfora. The roof will now reflect solar radiation for more than 20 years. Because of the decreased internal temperature of the building, there will be less reliance on air conditioning which will significantly reduce the over all energy consumption of the building.

Project:
Roof refurbishment,
Interfora, Saint-Fons, France

Coatings:
Basecoat: Cool Barrier Roof®
Top Coat: Cool Barrier roof
Optimum®

Coating Supplier:
Abolin, Athens, Greece

Coating construction and application

Abolin Co. of Athens, Greece supplied the Cool Barrier Roof® coating for waterproofing and Cool Barrier Roof Optimum® coating (Kynar Aquatec® emulsion-based coating) for heat reflectivity for this job. The roof restoration took place directly on the bitumen membrane at ambient temperature. The roof was first cleaned with a low pressure water cleaner and allowed to dry for 24 hours before the application of the Cool Barrier Roof® acrylic-based primer. Over the next two consecutive days, a 150 micron layer of the Cool Barrier Roof® acrylic-based primer was applied each day by roller application for a total dry

film thickness of 300 microns. The following day, 100 microns of the Cool Barrier Roof Optimum® topcoat, based on our Kynar Aquatec® technology, was applied by a roller application.

Cool Roof Properties & Energy Savings

Cool Barrier Roof Optimum® was selected as the topcoat technology by Interfora. Cool Barrier Roof Optimum® is a white elastomeric coating from Abolin that provides high initial and aged solar reflectance, color stability, and weather resistance over new or existing roof surfaces. The coating is based on Kynar Aquatec®, a new-emulsion-based, low VOC PVDF fluoropolymer technology



developed by Arkema to deliver the same durability and performances as Kynar 500® PVDF resin-based coatings. A 15% annual reduction in the over all energy consumption of the building can be expected with the use of Arkema's Kynar Aquatec® emulsion technology.

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The world is our inspiration

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