

Project Description

As part of its HCFC Phase-out Management Plan (HPMP), Jamaica is converting one of its foam enterprises to a non-HCFC technology. This conversion project is being implemented by The United Nations Development Program (UNDP), which was provided information on the various alternatives to HCFC-141b for foam applications. It opted for the use of ecomate®, based on satisfactory trials conducted with this technology.

Company Description

Seal Sprayed Solutions, Ltd. (Seal Spray) is a spray foam contractor based in Kingston, Jamaica. It is engaged in the business of roof spray, cold store, and interior spray applications, both in Jamaica and on surrounding islands. Currently, this enterprise uses HCFC-141b and some HFC-245fa in their operations, with polyurethane systems imported from Mexico, Trinidad and the United States of America (USA).

In converting to non-HCFC technology for these applications, Seal Spray will be using fully formulated polyols using ecomate® supplied by Foam Supplies, Inc (FSI), located in the USA.

Trial Methodology

A trial was conducted recently in Kingston, Jamaica. Two spray foam systems (a two-pound density foam and four-pound density foam) were provided by FSI for a trial application to evaluate their performance. The spray foam was applied to an existing non-insulated corrugated steel roof of one of Seal Spray's clients. The roof was prepped with a primer normally used by Seal Spray for their spray foam projects, and spraying was done using a Gusmer H 20/35 with a GAP Pro gun.

The temperature and pressure settings on the equipment used was kept at the same level for regular spray foam jobs done by Seal Spray using HCFC-141b or HFC-245fa. The 4pcf system was used on the roofing application as requested by the company.

Additional application of the ecomate® systems were conducted at the Seal Spray warehouse, where both the 2 pcf and 4 pcf systems were sprayed on metals, magnesium boards, plywood and concrete board.

Results

Based on physical observation, Seal Spray did not spot any difference between the results of the application using the ecomate® system supplied by FSI as compared to HCFC-141b systems. According to the applicators/operators, the ecomate® system "...was not different than a 141b system...and processed the same..." Physical and mechanical tests are currently being conducted on the foam samples taken from the trials.



Roof spray trial performed by Seal Sprayed Solutions



Roof was prepped on site

Primer applied



Equipment used – Gusmer H 20/35 Gun Used – Gusmer GAP Pro



Temperature Settings – Both Trials



Pressure Settings – Both Trials



Spray in Progress



Spray in Progress



Spray trials conducted at Seal Spray's Warehouse after the site trial