

CASE STUDY: TAR AND GRAVEL

Tar and gravel roofs (Built-up Roofing) have been a popular choice for many decades and generally have a 10 to 15-year lifespan in cities like San Diego. But, with the crack down on noxious fumes (VOCs), they are giving way to modern membranes and coatings, especially with the rising demand for cool roofs.

PROBLEM

This 15-year-old flat roof on an industrial building in San Diego was in a very poor state with numerous leakages and interior damage reported. It had been flood-coated with potentially flammable asphalt and overcoated with loose gravel to provide a fire suppressing layer. It should have had a much longer service life.

On a life cycle cost basis, there are few, even today, commercial roofing systems that have outperformed coal tar when multi-layered and properly maintained.

The building owner wanted a long-term solution that would still be price competitive with BUR and they most especially wanted the confidence a well established contractor would give them should problems arise in the future. In this case, San Diego Roofing is now in its 81st year of operations.

Above all, the client did not want to have to re-roof as continued leakages would likely have necessitated such action had they not embarked upon immediate remedial work.

The hot weather, and cool nights, created dew that had to burn off before coating could take place and that was at about 10:30 am. The high temperatures also meant reduced pot life of about 20 minutes during the hottest part of the day.



SOLUTION

VOC-free Ecodur can, and often is, an opportunity for the lifespan of a flat roof to be radically extended despite previous water damage and poor state of the substrate. Of great importance is its exceptional adhesion and ability to seep into tiny cracks and crevices to provide a very long lasting and highly robust plasticized gypsum seal. In the case of any wood (cellulosic material) it encounters, it will actually molecularly bond to it.

Ecodur is made from renewable castor oil and naturally occurring soft rock gypsum resulting in a highly natural product which is completely non-toxic, Class A flame retardant and also certified for use in contact with drinking water.

Ecodur is also highly resistant to UV and makes an ideal primer for acrylic and silicone cool topcoats should the client wish to have them later.

APPLICATION RESULTS

This was a 10,000 square foot roof and, it is estimated, about 10,000 lbs of loose gravel were removed. What made this job much easier, was a power sweeper. It was affectionately referred to as a 'job saver', especially with the heat. A blower was used to clear away the remaining fine dust.

The cleaned off surface readily took a manually applied 30 mils average layer of foamed Ecodur and San Diego Roofing provided the client with a 25-year warranty.