

Sustainability Solutions / Cost Savings / Energy Management

Roof Restoration with Seamless Reflective Cool Roof Technology

Department of Homeland Security (DHS)

Building Maintenance and Operations (BMO)

Contracting Officer Representative (COR)

Facility Operations Specialist (FOS)

Facility Manager (FM)

Meeting sustainability goals requires innovative products as the solution. Instacoat Premium Products provides those solutions, helping agencies plan and budget for facility maintenance, construction and renovation projects. Executive Order (EO) 14008 and 14057 set sustainability goals for all federal agencies. The DHS Climate Action Plan outlines sustainability requirements for all components. This brochure highlights those requirements and provides solutions specific to climate resiliency using "Cool Roof" technologies.



Executive Order (EO)

14005 Procure Goods

Produced in the USA



Cost Effective - Innovative Strategies - Waste Reduction - Sustainability Planning

<u>DHS Climate Action Plan</u> https://www.dhs.gov/publication/dhs-climate-action-plan-address-impacts-ensure-resilience <u>Priority Action 2:</u> Ensure Climate Resilient Facilities and Infrastructure

"Adapting to climate change includes integration of climate resilient infrastructure"

"Anticipated climate impacts on DHS facilities and infrastructure include higher average temperatures" "promote integration of climate resilience and enhanced procurement of sustainable products and services"

Climate Change has increased heat index averages and heat waves continually increase energy use. IPP cool roof systems dramatically drop roof deck temperatures; this reduces energy consumption, Co2 emissions, and significantly reduces heat island effect. This membrane system provides a thermal air barrier, and with lower deck temperatures, facilities can extend life-cycles of roof top equipment, HVAC, solar arrays, and communication equipment. Cold applied monolithic seamless roof decks will seal the entire roof envelope and provide an energy savings thermal barrier regardless of facility location.

Energy/Cost savings can be captured with: lower construction costs and labor, less energy consumption, less roof top equipment cycle usage, less Co2 emissions, and less preventative maintenance.

Federal Acquisition Regulation (FAR) is a parent document for all federal acquisitions

FAR 23.103 Sustainable Acquisitions FAR 36.602-1 Waste Reductions



FAR 36.104 Sustainable Buildings

FAR 36.601-3- Conservation, Preventions and Reductions





Sustainability Design

- "Air Barrier" and thermal roof envelope design-ASHRAE 90.1
- Air tightness and whole building design-- IECC, ASHRAE, ASTM and ABAA standards
- Climate Resilient Facilities and Infrastructure--DHS Climate Action Plan

Environmental Protection Agency (EPA)

- Heat Island Mitigation Strategies (Cool Roof Technology) https://www.epa.gov/heat islands
- Energy Star Roofing program phase out June 2022: www.ipp/energystar/sunsetting.com
- EPA Waste Reduction Model (WARM): https://www.epa.gov/warm Determine Co2 and waste reductions for your project with positive climate impacts

Department of Energy (DOE)

Energy Costs Savings, Increased Roof Longevity, Longer HVAC unit life cycles, Increased Solar Reflectance Index (SRI), Reduces Co2 emissions. https://www.energy.gov/energysaver/design/energy-efficient-home-design/cool-roofs

Federal Government Marketing & Sales: Jose Ibarra Telephone: (951) 840-0800

Email: jibarra@instacoat.com www.instacoat.com Executive Order (EO) 14005 Procure Goods Produced in the USA











Cool Roof Rating Council (CRRC)

- Solar Reflectance Index: IPP Silicone 113
- ANSI/CRRC Standard-100

Best Practices

- LEED Silver Certification
- Federal Energy Policy Act--Now Permenant
- Energy Efficient Buildings Tax Deduction-Roofs

Sustainable Design

Heat Island Effect Mitigation Renovations 30% Energy Reduction ANSI/CRRC S-100 products and materials No/Low VOC emissions products Solid Waste Reduction 50% and 75% by 2030

Company Website

Instacoat Premium Products - Coatings Manufacturing Please see the webpage designed for DHS and past projects https://instacoat.com/department-of-homeland-security/

Federal Government Projects

US Air Force- Silicone Roof Restoration EAFB, CA
US Army- Silicone Roof Restoration San Pedro, CA
Dept. of Veterans Affairs-Roof Restoration, Augusta, GA
DHS/CBP- Silicone Roof Restoration San Diego, CA

Federal Acquisition Regulation: FAR 36.104 Policy

- Cost Effective, Highly Reflective Cool Roof Technology, Minimizes Energy Consumption
- Identify alternatives to renovation and reduce maintenance cost
- Ensure pollution prevention, Low/No VOC's
- Eliminate waste by diverting at least 50% of construction materials and debris from landfills

IPP Solutions & Cost Savings/Cool Roof Rating Council

- Cost savings- 1/3 of construction is typically roof demo, with IPP roof restoration there is no demolition; roofs are left in place and restored with a new membrane and 10-25 year warranty
- Cold applications, no heat/fire hazards, low/no VOC
- Roofs are encapsulated and left in place, no abatement is necessary because materials are not disturbed
- Highly Reflective roofs, energy conservation, cost savings
- Reduced Heat Island Effect, temperatures can be reduced up to 60 degrees based on locations and roof type
- HVAC equipment extended life cycle, equipment cycles on/off less-equals cost savings from less maintenance and repair
- Site Air Quality-continuous site operations, no dust/debris
- Walkways integrated into the deck, ergonomic effects for maintenance workers, no high wind debris hazards
- No permits for landfills, can reduce waste to landfill up to 100%, no construction dumpsters, keep EMR ratings low
- Seamless roof systems eliminate almost all maintenance repair costs; there are no seams to fail like other flat roof systems
- The rubber emulsion elongation factor is over 800%, there are no seams to buckle/fail causing expensive leaks/repairs
- Co2 reduction--roof top HVAC units cycle on and off less

Products

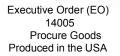
Instacoat Premium Products
Silicone Roof Restoration System-TDS/SDS
https://instacoat.com/federal-government/



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1. Cap Sheet roof cleaned for SRR System

Department of Homeland Security 44k sqft Cap Sheet Roof Restored with SRR System



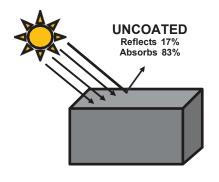
2. Cap Sheet coated with IPP Rubber



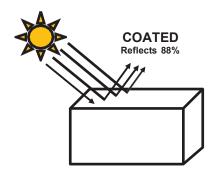
3. HS 250 Silicone UV stable highly reflective



4. EPDM integrated walk-ways







SILICONE ROOF RESTORATION SYSTEMS WORK, THE PROOF IS IN THE NUMBERS

88% 60 \$0.50 33% 1/3

The amount of UV rays reflected by the IPP SRR System.

The number of degrees cooler the IPP SRR System can obtain over conventional systems

Energy savings per square foot by installing an IPP SRR System. (EPA Study) Energy savings per year by installing an IPP SRR System. (California Energy Commission). The cost savings of an IPP SRR System over a total roof replacement, depending upon the size and scope of the project.









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