

The MGM City Center Uses GCP Waterproofing and Fireproofing

Protecting the largest sustainable development in the world with GCP solutions



Clients	MGM CityCenter, The Cosmopolitan of Las Vegas
Architects	A collaboration of eight of the world's foremost architectural firms
Fireproofing	Clayton Coatings Inc. d/b/a Clayton National
GCP Solutions	MONOKOTE® fireproofing, PERM-A-BARRIER® air barriers , Grace ULTRA™ roofing underlayment

Project Profile

Building on a massive scale

Covering 68 acres, the MGM City Center is the largest privately funded building in the history of the United States. This unique commercial endeavor features a vibrant mixed use complex of hotels, luxury condominium residences, shops, and gourmet restaurants located in the center of all the action on Las Vegas Boulevard.

"Our decision on fireproofing products was based on which company has the best quality control, performance, and field support so we could meet

our very fast critical path schedule. Only one company offered us everything we needed to meet his huge challenge—and that was GCP. That's one reason we've used their products for 30 years."

Richard Clayton, Founder, President and CEO,

Clayton Coatings Inc. dba Clayton National

Leaving nothing to chance

No fewer than eight world-class architectural firms were involved with the City Center's construction, which made it important to select high performance materials. In addition, they needed an experienced support team that could coordinate the delivery and installation of this material over a vast job site with thousands of workers.

Lastly, the fireproofing material needed to resist intense job-site temperatures, which often necessitated nighttime work. All told, GCP needed to deliver enough product to cover 20 million square feet of structural support beams and columns, as well as enough waterproofing to cover 200,000 square feet of stainless steel roofing and 100,000 feet of wall surface. These products had to provide excellent performance while withstanding extreme desert temperatures.

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Withstanding the heat

GCP fireproofing and waterproofing materials were used to protect its approximately 500,000 square feet of commercial buildings. In addition, GCP fireproofing was used to protect an adjacent commercial building, the LEED Gold-certified Cosmopolitan of Las Vegas, featuring nearly 3,000 rooms, two 50-story towers, three distinct pool environments, and an 110,000 square foot casino.

Clayton National, the largest fireproofing contractor in North America and a UL Qualified Spray-Applied Fire-Resistive Materials (SFRM) Contractor, was selected to deliver GCP fireproofing products. They shipped and spray-applied over 500,000 bags of material, comprising three different products:

- MONOKOTE® MK-6® was used wherever structural steel would be concealed.
- MONOKOTE® Z-146® high-density cementitious fireproofing material was used in high-traffic areas.
- MONOKOTE® Z-106® medium-density fireproofing was used in the parking garages, mechanical

rooms, and electrical rooms.

Six full-time quality control personnel monitored the thickness, density, and coverage of these products. The combination of high-quality materials and high-intensity organization allowed all parties to meet stringent quality control requirements and challenging project deadlines.

CityCenter architects also specified Grace ULTRA™ roofing underlayment for areas to be covered by stainless-steel roofs. In the heat of a Nevada summer, the exceptional heat resistance of Grace ULTRA™'s butyl-based adhesive chemistry and its proven superior performance made it an ideal choice for this "hot roof" assembly. In the same vein, PERM-A-BARRIER® HT (high temperature) wall membrane was used for on wall surfaces. Designed for the kind of elevated temperatures found in the desert heat, PERM-A-BARRIER® HT was a perfect choice as a self-sealing, self-adhering vapor barrier.

MONOKOTE® fireproofing, Grace ULTRA™ roofing underlayment, and PERM-A-BARRIER® air barrier membrane offered add design and performance advantages, while making life easier for contractors in the field. The use of Monokote allowed contractors to complete a massive project on time while working under some of the harshest jobsite conditions imaginable. In turn, the designers who specified MONOKOTE® in their plans ended up choosing a material that performed admirably and passed inspection.

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[Project briefcase](#)



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