BASIC CONCEPTS INC
Justrite Safety Group

their safety is essential.
Protecting people, property, and the planet.

SC-3900 Secondary Containment Wall Achieves ASTM E119 4-Hour Fire Resistance Rating

ASTM E119 furnace unit prior to wall install for test.

Exposed side of SC-3900-coated block wall post stream test with no water pass-through.

Objective:

Traditional fiberglass containment wall systems do not meet fire ratings. BCI customers have inquired about the fire resistance of our SC-3900 coating applied to block walls - could it hold up in the case of a fire in their containment? BCI had a 3rd party agency test a non-load bearing block wall assembly coated with SC3900 on both sides to determine its fire resistance in accordance with ASTM E119-19, standard test methods for fire tests of building construction and materials.

The SC-3900 Spray Coating System:

BCI's SC-3900 spray coating system is temperature stable, chemical resistant, and highly flexible. It provides a seamless, long-lasting solution that bridges cracks, seals voids, and can be installed on a variety of materials including block walls. SC-3900's extremely fast dry time allows for a quick application, limiting downtime, eliminating cost, and often extending life by up to 10+ years.

- 3000-4000 psi tensile strength
- Elongation 100-300%
- High build to 60-1,000 mil pending application requirements
- Temperature stable: -40 to above 200°F
- Highly abrasion resistant
- Chemical resistant
- Zero VOCs
- Non-slip grit upon request

ASTM Test Method for SC-3900:

ASTM E119 test method is intended to evaluate the duration for which a building element will contain a fire, retain its structural integrity, or display both properties dependent upon the type of building element involved, during a predetermined fire exposure time. The test exposes a specimen to a standard fire, controlled to achieve specified temperatures throughout a specified period. When required, the fire exposure is followed by the application of a specified standard fire hose stream applied in accordance with ASTM E2226, Standard Practice for Application of Hose Stream.

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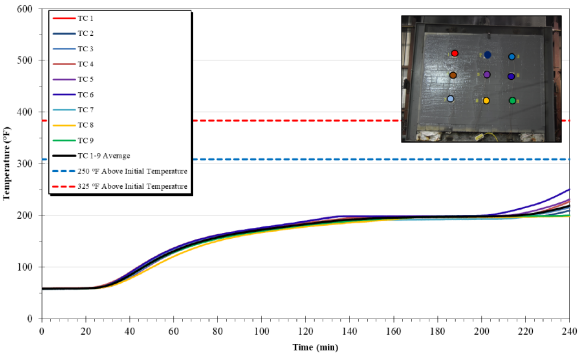

Unexposed wall surface temperature of block wall while test was in progress.


Full secondary containment with GC-2100 liner material and SC-3900 coating spray applied to a transformer pad.

ASTM Test Assembly:

The test assembly consisted of a concrete masonry unit (CMU) block wall measuring 12 x 9ft coated on both sides with Basic Concept's SC-3900 Elastomeric Coating.

Key Observations During SC-3900 Test:

- 0:00:00 · Furnace ignited, test started (ambient temp 62.3°F, relative humidity 32.1%)
- 0:15:00 · No visible flames on the exposed side of the wall
- 1:00:00 · No change, no visible flames on the exposed side of the wall
- 2:00:00 · No change
- 4:00:00 · End of test (230°F average temp of unexposed surface of block wall; 2000°F max internal furnace temp)
- 4:02:50 · Hose stream test begins (5min 24s duration at 45 psi)
- 4:08:14 · Hose stream test ends with no pass-through of water. Test successful

ASTM Test Results:

Based on the 3rd party test results, the block wall assembly coated with SC-3900, tested as described, achieving a fire resistance rating of 4 hours when tested in accordance with ASTM E119.

Conclusion:

Basic Concepts' SC-3900 spray coating is chemical resistant, highly flexible, and provides a seamless, long-lasting solution to cracks and voids. Traditional fiberglass containment wall systems don't meet fire ratings, but SC-3900 applied to a block wall, with its ASTM E199 4-hour Fire Resistance Rating, provides a strong, safe, and fire-rated solution for containment jobs.

- Transformer storage areas
- Substation oil filled equipment containment
- Any containment with block wall construction

For further information call 1-800-285-4203 or visit us online at BasicConcepts.com