

PRESENTED BY FRIDESWIDE

GigaCrete Housing Revolution – Resilient to Damage

FIFTY (50) YEAR WARRANTY

TAS 202-94 (ASTM E330-14) Wind Loads (Specimen 1 passed performance test for 150psf load) - according to NCTL WV-Chart will **withstand Hurricane winds of 245.14 mph**

FIREPROOF Construction

Water Resistant Exterior – Waterproof Finishes Indoor

Insect - Mold - Mildew - Moisture Proof

Recognized by LEED - U.S. GREEN Council

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visit www.gigacretehousing.com

VALUE PROPOSITION DESCRIPTION

- The GigaCrete Steel Frame Building System (www.gigacreate.com) significantly reduces costs of construction and potential damage repair; and is very high energy efficient, incorporates hazard-resistant building design, sustainability, and exceptional weather resiliency features. GigaCrete exceeds HVHZ high-wind standards of Miami-Dade County Risk Category II, III, and IV. The entire building is designed to be impact resistant, and passed and exceeded testing criteria.
- ASTM E72-05 Compression, ASTM E72-05 Tension, ASTM E72-05 Racking, ASTM E283-04 Air Filtration, ASTM E331-00 Water Filtration, TAS 201-94 (ASTM E1996-14) Large Missile Impacts, and TAS 203-94 (ASTM E1886-13) Cyclic Load.
- The Building System and Products (commercial & residential) incorporated provide exceptional structural and building integrity: StuccoMax, PlasterMax, and BallistiCrete will mitigate in Critical Facilities for wind pressure, wind-borne debris, water, fire (noncombustible materials), high caliber bullets, mildew, mold, and significantly reduce and/or eliminate mitigation of wind pressure damage, flood-proofing, and roof failure. Flood walls constructed of the Products are absolutely waterproof. The GigaCrete Steel Frame Building System is the only Hurricane proof housing system to completely withstand Hurricane Category 1, 2, 3, and 4 winds.
- Innovation and unique properties of the GigaCrete system: **each truss anchors to the foundation to pull the roof and house into the slab (steel form roof brackets and trusses keep roof secured to the foundation)**, speed of build, built without wood/Portland cement/gypsum board, can be hosed down after flood, StuccoMax (a waterproof exterior coating that is non-combustible – weather resistant – fire rated/resistant), PlasterMax (fire rated/resistant – extreme wear – impact & abuse resistant over foam replacing gypsum board), GigaCrete coatings bond permanently to EPS and PU installation foam – concrete products – bricks – plasters, energy savings of 60%+, no VOC emissions, completely non-toxic, 97% non-combustible, GREEN, no design limitations, and extreme water resistant capabilities/applications. The GigaCrete family of products could be utilized to mitigate corrosion to facilities built within salt water environment.
- BallistiCrete is today's **solution for protective requirements with innovative and unique properties stopping ballistic calibers from penetrating of structures**, and other applications: application over new and any existing walls, 9,000+ psi (62 Mpa) mixed and applied onsite, utilization over cement block walls and other substrates like gypsum board has been tested to NIJ Level IV, reduces sound, can be made into precast panels, non-toxic with no harmful ingredients, GREEN sustainable material, will not support mold or mildew, and is non-combustible/no smoke/no flames/no off gassing. Nambé' Pueblo Construction LLC 8(a) (www.nambetribe.com) **delivers a fast-track contract acquisition methodology** under 13CFR124.506(b) (Cage Code 4QH48)(Duns 794038708) (SBA- BOS Joshua Baca (505) 248-8236)

THROUGHOUT THE WORLD

DURING THESE EVENTS:

- HOMES AND BUSINESSES ARE LOST
- JOBS ARE LOST WHEN BUSINESSES CLOSE
- BILLIONS OF DOLLARS ARE SPENT REBUILDING
- INSURANCE COMPANIES SPEND BILLIONS WHICH RAISES PREMIUMS

YET WE STILL REBUILD WITH THE SAME MATERIALS THAT WERE JUST DESTROYED REPEATING THE SAME MISTAKES BUT EXPECT BETTER RESULTS





What is GigaCrete

- GigaCrete is a family of products based on low carbon footprint “Green” ceramic binders significantly outperforming Portland cement: We do not use PORTLAND CEMENT which is a high CO2 producer
- **StuccoMax**, a waterproof exterior coating that is non-combustible
- **PlasterMax**, a fire rated abuse resistant coating over foam replacing gypsum board
- All GigaCrete coatings **bond permanently** to EPS and PU insulation foam, concrete products, bricks and plasters.
- All are one coat applications and **fast to apply**
- All are **abuse resistant**, non combustible, no VOC's, no off-gassing utilizing only safe and **healthy materials** that will not support the growth of mold or mildew.

THERE IS A GIGACRETE SOLUTION

- **BUILT WITHOUT WOOD**
- **WITHOUT PORTLAND CEMENT**
- **WITHOUT GYPSUM BOARD**
- **WILL NOT SUPPORT MOLD OR MILDEW**
- **CAN BE HOSED DOWN AFTER A FLOOD**
- **200MPH CATEGORY 5 HURRICANE RESISTANT (proven by IRMA)**
- **SUPER INSULATED OVER 50% ENERGY SAVINGS**
- **SEISMIC ZONE 4 EARTHQUAKE RESISTANT**
- **SHIPPED GLOBALLY IN CONTAINERS**
- **UTILIZES LOCAL UNSKILLED LABOR**
- **A FACTORY CAN PRODUCE THOUSANDS OF HOMES A YEAR**
- **CREATES THOUSANDS OF NEW UNSKILLED LABOR JOBS**
- **ENVIRONMENTALLY FRIENDLY**
- **100% RECYCLABLE**

Structural Steel Studs slide into pre-cut foam shapes

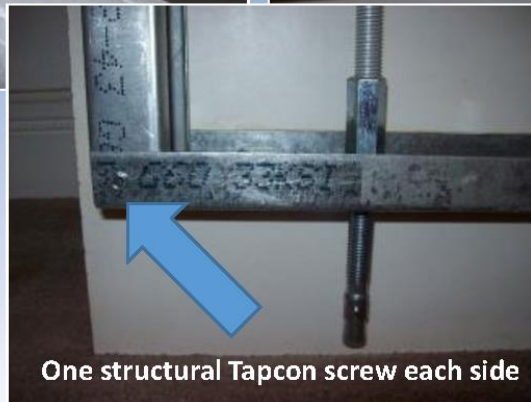
Pre-engineered, ICC approved galvanized double steel studs make patented connectors precut for accuracy and no jobsite waste. Hurricane and seismic tie down anchors connect the roof into the foundation.



Note: Double 2x4 stud panel to panel connectors equals 4x4 construction



EACH TRUSS
CONNECTS TO
THE FOUNDATION
TO PULL THE
ROOF AND HOUSE
INTO THE SLAB



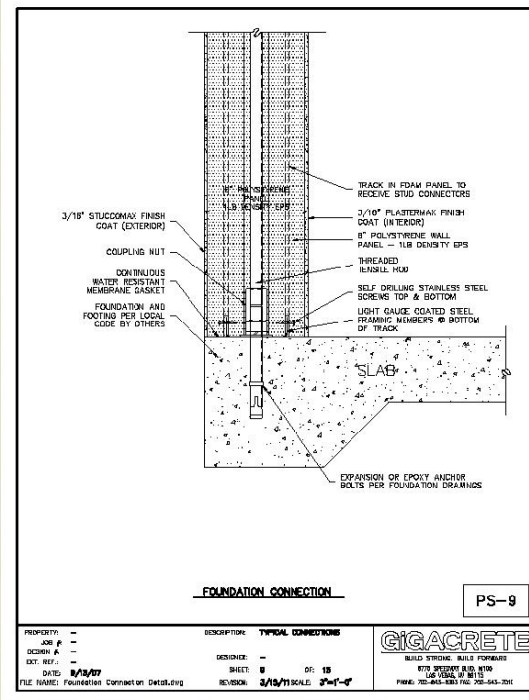
One structural Tapcon screw each side

Note: Continuous steel all-thread connects the roof trusses through the panels and into the foundation

Heavy gauge welded steel form roof brackets and trusses keep the roof secured to the foundation.



Extreme engineering in brackets, designed for over 200 mph hurricane forces



Foundation to wall connection

Hurricane anchors... solid steel connection from the roof to the foundation

Easily mixed and applied with conventional plaster and stucco tools



**Mixed and applied on site.
Crystalline cement technologies,
NO Portland cement.
NO silica sand.**



Haiti House 576 sf fits easily inside a 40 ft container



FITS IN A 40FT CONTAINER



**"Haiti House" 2009
Has already survived
Hurricanes and
earthquakes and is
the local shelter.**

**It was constructed by
local unskilled labor
in 10 days**



Exuma Bahamas house and garage. 1,800 sf.



“Exuma House”
Has already survived
3 hurricanes:
2015 Juquin (Cat 4)
2016 Mathew (Cat 5)
2017 Maria (Cat 5)
Zero damage or leaks
60% documented
energy savings.



GigaHouse, StuccoMax, PlasterMax

St Thomas USVI Sales office 576 sf fits inside a 40 ft container



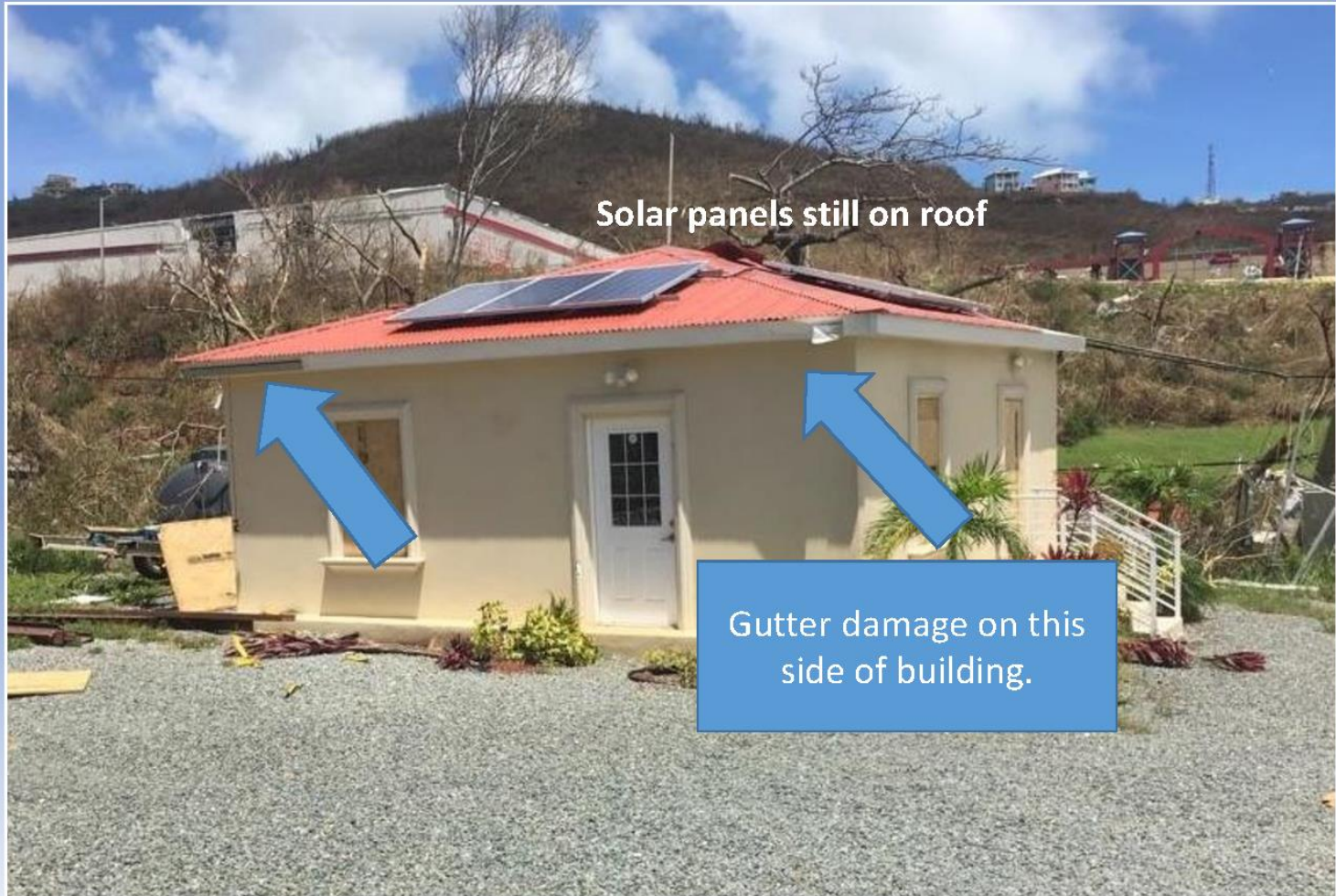
“GigaCrete Caribbean Sales office and demo unit”

Built rapidly and has already survived Hurricane Irma 185 mph sustained winds 235 gusts followed by Hurricane Maria. No structural damage at all.



Almost completed, minus standing seam metal roof by local roofer

St Thomas GigaCrete Caribbean Sales office after Hurricane Irma 185 mph sustained and 235mph gusts and followed by Hurricane Maria.



Post Hurricane Irma Evaluation 09/10/2017
Wind 185m/h [298k/h] Max Gusts 235m/h [378k/h]

AFTER
IRMA





Holmby Hills (Beverly Hills area) Los Angeles California, 2014.



PlasterMax over GigaPanels in Residence, Holmby Hills interiors



Unique Selling Propositions

Both technologies are ecologically recognized as green, environmentally friendly ceramic cements, utilizing NO Portland cement whatsoever

PlasterMax, was developed as a gypsum board replacement over any foam and is the worlds first and only fire rated, abuse resistant, non-toxic, extreme performance coating to replace gypsum board.

StuccoMax is a weather resistant exterior coating but also exhibits long term fire resistance but is yet to be fully tested by accredited testing agencies.

PlasterMax is Fire Code compliant with:

- UBC 26-3. (15 minute test)
- NFPA 286. (15 minute test)
- ASTM E136. (non-combustible material)
- ASTM E84 (Steiner tunnel test)
- ASTM-E119 being scheduled soon for both coatings as an assembly

PlasterMax Fire Resistance Applications:

Unique Selling Propositions are:

- Interior fire rated finish replacing gypsum board
- Extreme wear and impact resistant plaster over gypsum board significantly increasing fire resistance
- Fire resistant coating over carved foam (art, movie sets, exhibits)
- Over PU insulation foams used on storage tanks (oil, gas, fuels)
- Potential Fire resistance applied to plywood and OSB
- Will not support Mold or Mildew



PlasterMax was tested to NFPA 286 a 15 minute Corner Burn Test at 1,400 degrees F as a Gypsum Board replacement over EPS foam.

INTERTEK
Testing labs 2008



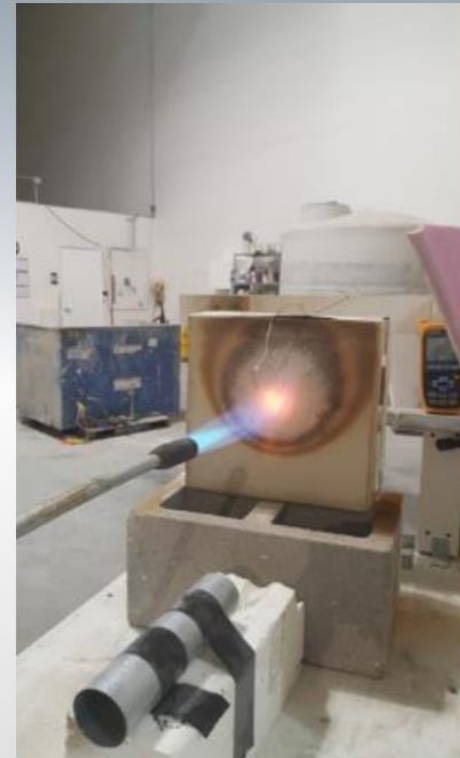
GigaLab internal fire test simulating ASTM-E119, 1 hour, 2 hours & 4.25 hours
Exterior assembly fire test



1,700 F flame directly on
StuccoMax (E119 does
not have direct contact)



1,797 F registered
on thermocouple



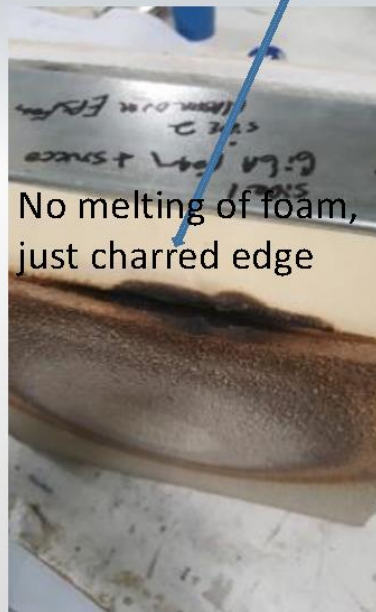
StuccoMax glowing white hot

One hour test using StuccoMax, GigaFoam, EPS core, PlasterMax interior finish

StuccoMax face



Top view



Interior
PlasterMax finish
Zero damage



Cavity inside wall
showing where EPS
foam melted but
GigaFoam stayed intact



No damage to StuccoMax

No damage to PlasterMax (only warm to the touch)

Two hour test using StuccoMax, GigaFoam, GigaBoard, EPS core, PlasterMax interior finish

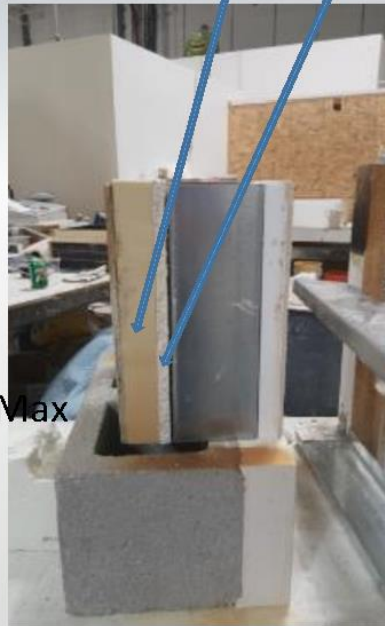
StuccoMax face



StuccoMax Face

No damage to StuccoMax

Side view



Interior PlasterMax finish Zero damage, only warm to the touch.



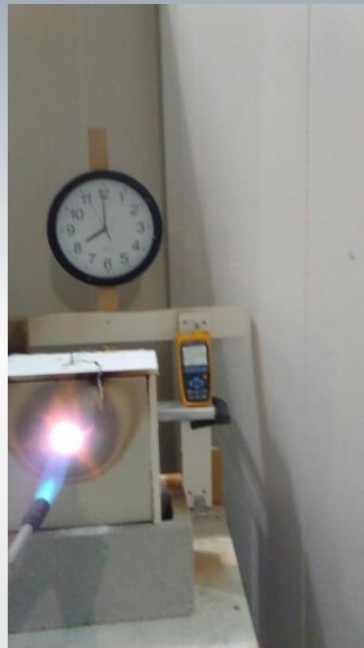
Cavity inside wall showing where foam remained intact, melting slightly



Four hour test using StuccoMax, GigaFoam, GigaBoard, EPS core, PlasterMax interior finish



7am start time



1 hour



2 hours



3 hours

Propane torch ramps up to 1,700 F surface temperature within a few minutes
Note Thermocouple wire connected to meter .

Four hour test using StuccoMax, GigaFoam, GigaBoard, EPS core, PlasterMax interior finish

Started at 7am, time below is 11am, test actually ran additional 20 minutes



4 hours

3/16" PlasterMax NFPA 286 approved



4-5/8" eps foam

View port shows slight melting of EPS foam

1/2" M4 board sheer panel

1-1/2" GigaFoam + 3/16" StuccoMax

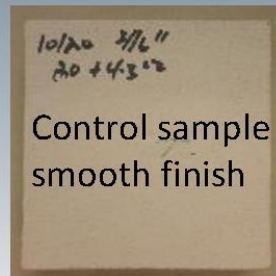


Surface damage only
No penetrations
Small cracks even
after 4 hours and 20
mins @ 1,700 F

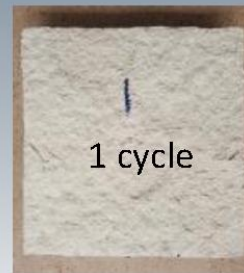
StuccoMax Water resistance applications:

- Exterior water resistant stucco coating replacing synthetics
- Higher impact and abrasion than all known Stucco's
- Ideally suited to Hurricane zones where waterproof and impact resistance is king
- Swimming pool plaster including over ICF foam pools.
- Waterproof roofing, roof tiles (GigaRoof) roof gardens
- Exterior cladding and renovation
- Waterproof wall finishes indoor and outdoor
- Flooring, driveways, factory floors
- Tile setting, bonds to porcelain, concrete, wood, gypsum board, glass board, foam
- Total submersion including seawater

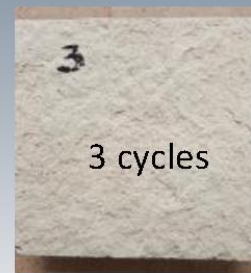
Weathering tests done with modified ASTM C1202 test in Maytag Dishwasher
Simulating wind driven rain, extreme humidity and extreme heat.



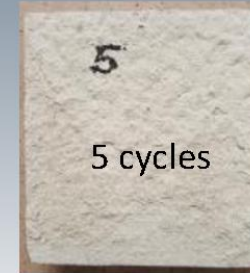
Control sample
smooth finish



1 cycle



3 cycles

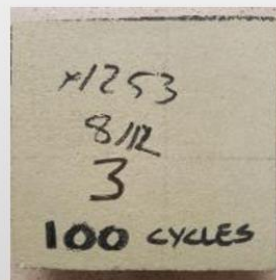


5 cycles

STO, DRYVIT, SENERGY, PAREX samples subjected to Dishwasher test: ASTM C1202
Each sample exhibited severe damage at 1 cycle, 30% loss at 3 cycles and 50% loss at 5 cycles

COMPARED TO

StuccoMax cycled **100 times** plus **40 Freeze Thaw cycles** at -20C with no deleterious effect including bond to EPS foam.



Front side



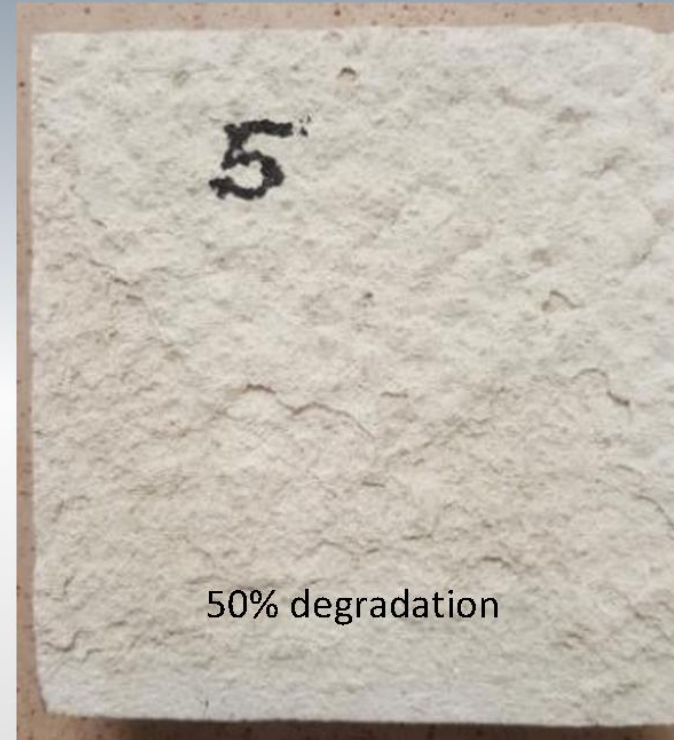
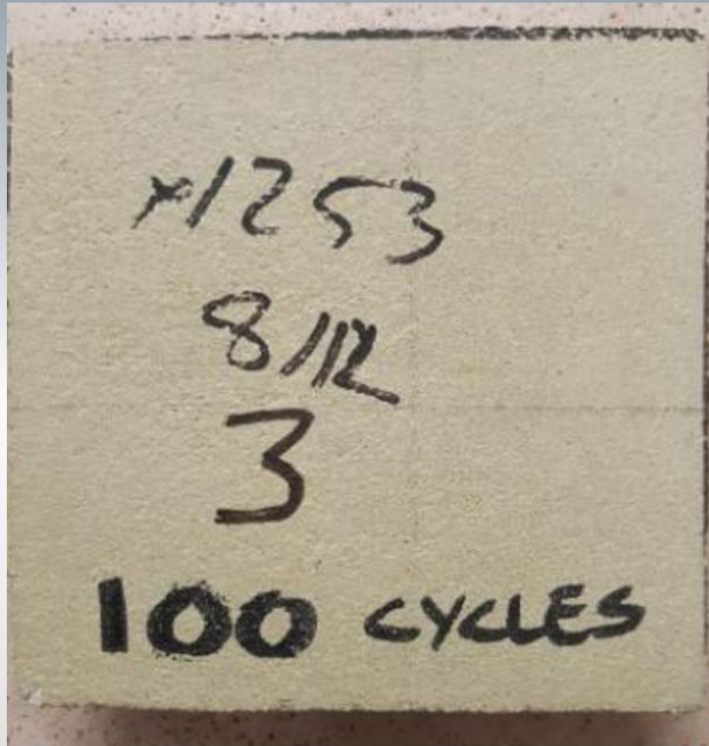
Edge



Back side

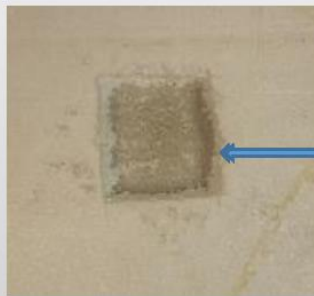
Note:
foam is shrinking
from heat, but
bond to foam is
unaffected.

**Blown-up comparisons between StuccoMax and STO, Dryvit, Senergy and Parex.
All have been tested and all react the same.**



StuccoMax remains firmly bonded to the EPS foam
Even after 100 cycles followed by 40 freeze thaw cycles.
Nothing else exists in the stucco industry to compete.

ASTM 60" water column test



Column is epoxied to the StuccoMax over 1" low density 0.90lb EPS foam and filled with 60" of head pressure. Substrate foam is removed beneath water column to see if water droplets or penetration occurs.

Test as seen in photo is 5 years old with NO water penetration!

COMPARED TO:

STO, DRYVIT, SENERGY, PAREX, all of which totally collapse and fail within minutes.

NOTE: EPS foam is removed on underside exposing back side of StuccoMax



VALUE PERSPECTIVE

Architects, Engineers and Specifiers

GigaCrete products have passed the following US codes:

- ASTM E C587-04 Bond Strength, Impact Strength, Joint Strength
- ASTM E-84 Steiner Tunnel Fire test
- ASTM E-136 Non Combustible material
- ASTM C1629-06 Abuse Resistance
- ASTM D4977-03 Adhesion
- ASTM D5420-04 Impact Resistance
- ASTM G21-96 Will not support mold or Mildew
- NFPA 286-3 Fire Test (National Fire Protection Agency)
- UBC 26-3 Fire Test (International Building Code)
- Exceeds USEPA (environmental protection agency) no VOC's
- Exceeds stringent California Air Quality Standards
- No Silica sand used, no added sand on the jobsite
- Utilizes only safe non-toxic food grade materials
- Recognized by LEED and US Green Building Council



CODE COMPLIANCE - TESTING INFORMATION

CEMCO STEEL FRAMING ICC-ES - ESR - 3016

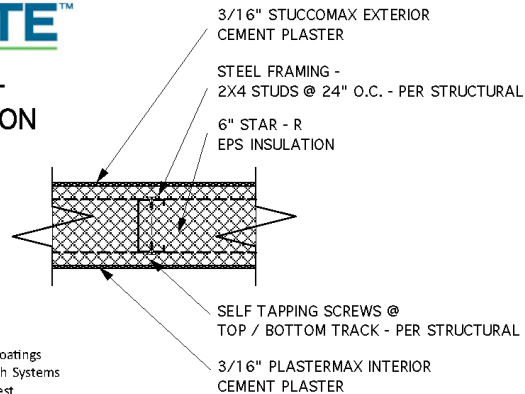
STAR - R FOAM EPS INSULATION ICC-ES - ESR - 1566

STUCCOMAX - EXTERIOR PLASTER

ICC-ES AC11 - Cementitious Exterior Wall Coatings
ICC-ES AC219 - Exterior Insulation and Finish Systems
ASTM C1629/C 1629M Abuse Resistance Test
ASTM E C1629-06 Abuse Resistance Test
ASTM D 4977-03 Abrasion Test
ASTM C 587-04 Bond Strength, Impact Strength, Joint Strength & Flexure Test
ASTM G21-96 Fungal Resistance Test will not support mold or mildew
ASTM C 109 Compressive Strength Minimum 3,000 PSI compressive strength @ 7 Days
ASTM C 293 Flexural Strength 900 psi in 7 days
ASTM C 642 Cold Water Absorption 2-3% in 7 days
ASTM C 157 Shrinkage Air-Cure 0.002% in 7 days
ASTM E 136 Non-combustible building material
ASTM E 84 Flame spread 0 Smoke 0
ASTM D 4977 Exceeds surface abrasion resistance
GREENGUARD Report No. 15995-06 - Meets all the emission level requirements
Exceeds stringent California Air Quality Standards
Recognized by LEED and US Green Building Council - qualifies for points

PLASTERMAX - INTERIOR PLASTER

IBC 803.2.1 - Room Corner Fire Tests (code required fire protection for EPS foam walls)
IBC 803.3 - 30 Minute Elevated Temperature Exposure Test
NFPA 286 Standard fire test method for evaluating contribution of room fire growth
ASTM E-84 Flame spread 0 Smoke 0
UBC 26-3 Room fire test standard for interior foam plastic systems.
ASTM C587 Joint Strength Standard Specification for Gypsum Veneer Plaster
ASTM C1629/C 1629M Abuse Resistance Test
ASTM E C1629-06 Abuse Resistance Test
ASTM D 4977-03 Abrasion Test
ASTM C 587-04 Bond Strength, Impact Strength, Joint Strength & Flexure Test
ASTM G21-96 Fungal Resistance Test will not support mold or mildew
ASTM C109 - Minimum 6,000 PSI compressive strength
ASTM E136 - Non-combustible building material
ASTM D 4977 - Exceeds surface abrasion resistance
GREENGUARD Report No. 15995-06 - Meets all the emission level requirements.
Exceeds stringent California Air Quality Standards
Recognized by LEED and US Green Building Council - qualifies for points



The Worlds only ballistic plaster

Today's solution for our protective needs.

GigaCrete offers a very simple solution that can be applied over any existing walls for less cost than current shielding methods.

It's called **BallistiCrete** stopping a variety of ballistic calibers from penetrating a building. The coatings are applied over new or existing construction.

- it is a 9,000+ psi (62 Mpa) plaster mixed and applied onsite
- it can be used over cement block walls and also blocks sound
- it can be applied over ordinary gypsum board
- it can be made into pre-cut laminated panels
- it is non toxic – no harmful ingredients
- it is a “Green” and sustainable material
- it will not support mold or mildew when wet
- it is non combustible, no smoke, no flames, no off gassing

SPECIAL FORCES SHOOTER FIRES .50 CALIBER ROUND AT SAFE DOOR FILLED WITH BALLISTICRETE: DISTANCE TO TARGET 50 YARDS



Security Doors filled with BallistiCrete provide high security rooms such as nuclear power stations, military weapons storage, vaults. 1-1/2 hour terrorist resistance (response time)

Minor dent looks like a center punch mark from a .50 caliber BMG round