

# BioCrete SPW-900

(Product Data Sheet)

- Fast Set High Strength Cold Weather Repair
- Applicable in temperatures from -30°C to 40°C
- Highways and Bridge decks
- Airport runways/taxiway repair
- Anchoring iron or steel
- Industrial floors
- Structural concrete repair

**BioCrete.Co.,Ltd.**

# BioCrete – SPW-900

## Fast Set High Strength Cold/Hot Weather Repair

### 1. DESCRIPTION

BioCrete SPW-900 is a single component ceramic material for use when the temperature is below -30°C that sets up in approximately 30 minutes and is ready for vehicular traffic in 60 minutes. It bonds strongly to most concrete, tile, masonry and asphalt surfaces. It can be used equally well indoors or outdoors in a variety of applications requiring cold temperature usability and develops high early strength enabling quick turnaround in demanding environments.

### 2. RECOMMENDED USES

- Cold temperature environments
- Highways and bridge decks
- Airport runways/taxiway
- Anchoring iron or steel
- Structural concrete repair

### 3. BENEFITS and FEATURES

- Fast setting with rapid strength gain
- 60 minute return to service
- Superior bonding without agents
- No special curing needed
- Interior or exterior use
- Mix with water only**
- Bonds to asphalt, concrete or masonry
- Freeze / Thaw cycle resistant
- Resistant to deicing chemicals
- Applicable in temperatures from -30°C to 40°C**
- Can be extended with stone**

### 4. PHYSICAL PROPERTIES

#### UNIT WEIGHT(NEAT)

- 115 lb/ft<sup>3</sup> (1842 kg/m<sup>3</sup>)

#### SETTING TIME

- Set Times at 22°C at 1”(2.54cm) material depth
- Initial set : 20-40 minutes
- Final set : 40-90 minutes
- Working time : 10-20 minutes
- Critical Mix Temperature : 25°C

## 5. MIXING INSTRUCTIONS

- To ensure product performance, Do not divide or separate individual units into smaller portions. Mix entire contents at one time.
- Do not hand mix
- To begin the mixing process, add the proper amount of water.  
**20kg bag bucket ----- 2.4L(12%±1) of water**
- In extremely warm conditions, add up to 1 cup of additional water to 20kg bags
- Ideal water temperature is between 18°C and 24°C
- If ambient temperatures are above 25°C, mix material for 2 minutes and use cold water at approximately 10°C
- If temperatures are below -20°C mix until **Critical Mix Temperature of 25°C** is reached, but **not less than 3 minutes**. (For cold weather applications the mix water should be **pre-heated(30~40°C)** along with the substrate surface.)
- It is recommended that a thermal gun or temperature probe be used to ensure that the **Critical MIX Temperature** has been achieved.

### For Aggregate Extension: (Bucket Mixing with Drill & Paddle)

- Use only 5mm ~ 50mm clean washed fractured stone up to **70% maximum** by weight. (For best finishing characteristics, extend by no more **50%**)
- **Add aggregate to material and water slurry after mixing for 60 seconds.**
- See mixing times for NEAT application above.

### ※ MIXING NOTES:

- BioCrete SPW undergoes an exothermic chemical reaction during blending. Heat, the by-product of the
- Reaction, is the best indication that the reaction is complete and that the product is ready to be poured.
- **BioCrete SPW-900 has a Critical Mix Temperature of 25°C which Must Be Reached before placing to Obtain Optimum performance.**

## 6 PACKAGING & SHILF LIFE

- **Packaging**  
packaged in 20kg bag
- **Shelf life**  
Bags – 1years (when stored in original unopened bags)
- **Storage**  
Unused material should be kept in a closed container and protected from moisture and other contaminants.

## 7 LIMITATIONS

- Will not bond to polymers or epoxy
- Must be mixed with drill and paddle – BioCrete SPW cannot be mixed in grout mixer or rotating drum Concrete mixers due to rapid set times.

## 8 APPLICATION & FINISH

- For best results, ECOWORLD recommends monolithic placement of repair materials. Maintain a minimum Thickness of 2.54cm if repair material must be layered.
- Upon initial set, a broom finish can be applied. Upon final set, the material can be saw-cut, drilled, Sanded and/or polished.
- Do not re-temper. The addition of water to the surface of the repair will negatively affect the materials Final properties.
- **General loading in 1.0 hour for wheeled traffic and 20 minutes for foot traffic.**
- All previously existing joints must be re-established within 1-3 hours of final set.
- Self-curing
- Clean all tools and equipment with water prior to the material reaching final set.

## 9 SAFETY

- See Material Safety Data Sheet(MSDS)
- This document does not purport to address all of the safety concerns, if any, associated with its use.
- Dispose of water and materials in accordance with Cities, Provinces and Local regulations.
- The use of a dust mask, safety goggles and gloves is recommended.
- Keep out of the reach of children.