

# BioCrete QSP

(Product Data Sheet)

- Fast Set High Strength concrete 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 – QSP

## Fast Set High Strength Cold/Hot Weather Repair

### 1. DESCRIPTION

BioCrete QSP is a single component ceramic powder that is water activated , and is suited for aggregate extension. Biocrete QSP can be applied in ambient temperature ranges from **-5°C to 40°C** without special mixing or curing equipment. QSP is a cementitious, very rapid setting, **self-leveling** structural repair mortar suitable for very rapid concrete repair in all climates. Sets up in approximately **20 minutes** and is ready for vehicular traffic in **60 minutes**.

### 2. RECOMMENDED USES

- Airport thin layer repair and Highways repair
- Airport runways/taxiway
- Various high strength is required lower base (bridges, sleepers)
- Rail, port facilities repairs
- Parking materials and thin layer floor construction

### 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 -5°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 : 5-10 minutes
- Final set : 15-20 minutes
- Working time : 3-5 minutes
- Critical Mix Temperature : 27°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 (18.9L) bucket ----- 3.6L(18%) 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 27°C, mix material for 2 minutes and use cold water at approximately 13°C
- If temperatures are below 22°C mix until **Critical Mix Temperature of 27°C** is reached, but **not less than 3 minutes**.
- 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 10mm ~ 13mm clean washed fractured stone up to **50% 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 QSP 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.
- **BioCret QSP has a Critical Mix Temperature of 27°C which MUST BE REACHED before placing to obtain Optimum performance.**

## 6. COLD WEATHER APPLICATION

- For cold weather applications the mix water should be **pre-heated(30~40°C)** along with the substrate surface. Cover the repair area after setting to maintain the temperature.

## 7. 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.

## 8. LIMITATIONS

- Not recommended for surface temperatures above 40°C or below -30°C
- Will not bond to polymers or epoxy
- Must be mixed with drill and paddle – BioCrete QSP cannot be mixed in grout mixer or rotating drum Concrete mixers due to rapid set times.

## 9. 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.

## 10. 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.