

PolyCrete Micro-Concrete

Cement-Based Shrinkage-Compensated Flowing Micro-Concrete

PRODUCT GROUP : CONCRETE REPAIR SYSTEM

POLYCRETE



ADVANTAGES

- User Friendly
- Shrinkage compensated
- High ultimate strength
- High flow and self compacting
- Excellent bond strength to concrete
- Chloride and iron free
- Non toxic and corrosive
- Impact and vibration resistant

DESCRIPTION

Micro-Concrete is a pre-bagged shrinkage-compensated flowing micro-concrete based on Portland cement, graded aggregates, silica fume, fibres and additives for controlled expansion in both the plastic and hardened states. It is specifically developed for large structural reinstatement without the need for addition of aggregates or smaller isolated areas with congested reinforcement where vibration and compaction are not necessary. **Micro-Concrete** has excellent chloride and carbon dioxide resistance and most suitable for large volume concrete repair in excess of 50mm in thickness. The low water requirement ensures fast strength gain and long-term durability.

AREAS OF APPLICATIONS

- Reinstatement of concrete floor
- Grouting for structural building elements
- Large honeycombs repairing
- Base plate installation
- Dam and spillway
- Repair to bridge and port structures

APPLICATION

Once mixed, **Micro-Concrete** shall be placed immediately and continuously to maintain best flow characteristic. **Micro-Concrete** shall be placed in unidirectional sequence for ensuring complete grouting of space and preventing formation of trapped air pockets. Use of grout head to assist **Micro-Concrete** flow is encouraged where necessary. Once **Micro-Concrete** has attained final set, cure it immediately with the burlaps for a least 3 days. Should there be direct sunlight exposure before final setting of **Micro-Concrete**, cover it with polyethene sheet immediately after placement to prevent early loss of surface water. **Micro-Concrete** is ideal for both gravity pour and free flow application in gap width from 25 to 150mm and for mechanical pumping with pre-packed aggregate for larger volume.

PACKING AND STORAGE

- Packing : 25 kg / bag
- Shelf life : 6 months
- Storage : Keep in cool dry condition

TECHNICAL & PHYSICAL DATA

Properties	Standard/Test	Result
Flow Property	Flow spread BS cone	> 230 mm
Aspect (after flow test)		No bleeding or settlement
Bleeding at 3 hrs	ASTM C940	0%
Expansion @ 3hrs	ASTM C940	> 0.5%
Compressive strength At 7 days At 28 days	ASTM C942	> 60N/mm ² > 75N/mm ²
Flexural strength at 28 days	B34551 : Part 1	> 10N/mm ²
Rapid Chloride Permeability	ASTM C 1202	< 1000 Coulombs
Capillary Absorption after 240 minutes at 28 days	Taywood Engineering Method	< 5.0 mm
Minimum application condition		> +5°C substrate and ambient temperature.
Disposal		In the interest of environment, please empty packs completely

SURFACE PREPARATION

All the surfaces must be clean, free from grease, oil, laitance, and remove all the dirt and contaminants, which might affect adhesion. All absorbent surfaces such as formwork or pre-packed aggregates shall be thoroughly saturated but must ensure free of surface water before grouting work commences. Ensure that the formwork is properly constructed and sealed to prevent undesirable loss of **Micro-Concrete** pressure prior to any mechanized pumping application.