

## Pre-batched Lightweight Concrete

**ST-LWC**

Proprietary pre-batched lightweight concrete offers a wide range of selection in density and compressive strength with or without early strength requirement tailor-made for different applications.



### PRODUCT DESCRIPTION

ST-LWC is a proprietary pre-batched lightweight concrete which is specifically designed for application of screeding, sunken, void/trench/gap filling, etc. ST-LWC is supplied in various hardened dry density typically ranging from ~700 kg/m<sup>3</sup> to 2000 kg/m<sup>3</sup> with corresponding compressive strength ranging from ~1 MPa to 45 MPa, with or without early strength requirement. Other dry density and compressive strength combination of lightweight concrete can also be tailor-designed subject to project requirement. ST-LWC does not only exhibit excellent thermal and noise insulation, but also has the benefit of large reduction in dead weight imposed on supporting structures. ST-LWC is convenient to use and has large flexibility in cast volume and designed properties without the risk of excessive heat generation caused by conventional ordinary ready-mixed or site batched concrete/mortar using foaming technique in particular when strength requirement exceeds 10 MPa.

### APPLICATION

There is basically no difference between ST-LWC and ordinary ready-mixed lightweight concrete regarding formwork design, casting procedure, compaction requirement and curing method. No specific skill is required for applicators.

### FEATURES & BENEFITS

- ◆ Premixed in factory
- ◆ Easy handling and storage
- ◆ One component package and is therefore easy for quality control on site
- ◆ Only require addition of water
- ◆ Thermal and noise insulation
- ◆ Large flexibility in cast volume and designed properties
- ◆ Low hydration heat therefore it can avoid thermal softening of underlying PVC pipe

### AREAS OF APPLICATION

- ◆ Filling floor, void, gap or roof slabs
- ◆ Filling up of toilet floors, pipe trenches and cavity walls
- ◆ Screeds and thickening for general purposes
- ◆ Thermal and acoustic insulation
- ◆ Insulation layer on roofs
- ◆ Infill for abandoned pipelines, ducts and conduits
- ◆ Consult Score Tech's staff for other suitable applications

## MIXING & INSTALLATION

Mix ST-LWC dry material with suitable quantity of water as recommended in the method statement provided by Score Tech with mechanical mixer. For batch mixer or when electric drill mixer is used, put gauging water into the mixer or container first and then add dry material gradually while the mixer is turned on. The required mixing time for ST-LWC depends on the type and efficiency of the mixer employed and shall be verified by site trial. Mix the lightweight concrete until a lump-free homogeneous mixture with suitable workability is achieved. The well mixed lightweight concrete can then be used for application. When other types of mixer, e.g. continuous mixer, is used, particular method statement shall be sought from Score Tech.

## CURING

Cure ST-LWC in the same way as ordinary lightweight concrete to attain its best performance.

## PACKAGE

4-ply composite paper bag or jumbo bag with packaging weight subject to density requirement (e.g. 20 kg, 25 kg, 600 kg, 1000 kg)

## SHELF LIFE

ST-LWC has a shelf life of 6 months if being well kept in dry condition on lifted floor.

## HEALTH & SAFETY

Wear NIOSH approved face mask or equivalent personal protective equipment when handling the material. ST-LWC contains cement which may cause an allergic effect or irritation to eyes and skin. When contact with eyes, flush immediately with large quantity of water.

## REFERENCE STANDARDS

- ◆ Hong Kong Standard: CS1 : 2010

## PRODUCT INFORMATION

⌵ Max. Grain Size	Subject to requirement	
⌵ Hardened Dry Density	~700 kg/m <sup>3</sup> to 2000 kg/m <sup>3</sup> subjected to customer's requirement	
⌵ Compressive Strength at 28 days	~1 MPa up to 45 MPa with corresponding density	
⌵ Typical Light-weight concrete design	Hardened Dry Density (kg/m <sup>3</sup> )	Compressive Strength (MPa)
	~700 ± 8%	≥1
	~1000 ± 5%	≥5
	~1200 ± 5%	≥10
	~1350 ± 5%	≥10
	~1850 ± 5%	≥20

Note: Other density and compressive strength combination can also be tailor-designed subject to client's requirement.

## DISCLAIMER

Note: As the application condition may vary from site to site and may not be identical to the same condition under which the parameters in the brochure are drawn, the information provided on this Technical Data Sheet is for general guidance only. Warranty will not be given to the ultimate performance and application results of this material when the material is not kept, mixed, applied or cured strictly in accordance with the requirements and/or instructions listed out in this brochure or in other supplementary document.

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Tel: 852-2165 0900  
Fax: 852-2590 0511  
Email: enquiry@scoretech.com.hk  
Website: www.scoretech.com.hk

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