

LYTALWC™

LytaLWC™ is specifically designed to meet all the requirements of modern construction, whilst overcoming the prime issue of concrete, its weight.



Description

Lytag™ Lightweight aggregate (LWA) conforming to BS EN 13055 is used in the production of lightweight concrete (LWC), which is designed in accordance with BS EN 206-1 and BS 8500.

LytaLWC™ was used in all the structures above providing the same level of structural performance as normal weight concrete as well as benefiting from substantial savings in reinforcement, foundations, CO₂e, haulage, time and associated construction costs.

Other notable projects include

Heron Tower, Broadgate Tower, Dubai International Airport, Millennium Centre Cardiff, The Gherkin



Reduces density of normal weight concrete by over 30%



Lytag™ is a secondary aggregate saving natural resources



Lytag™ is used in structural concrete capable of achieving LC80/88



LytaLWC™ meets all relevant standards



LytaLWC™ is Eurocode 2 compliant



Used on composite floor systems



Used in RC structural concrete



LytaLWC™ is extremely durable



Improved fire resistance



Greatly reduces cold bridging



Lower thermal conductivity



BREEAM credits available



Available nationally



Compressive strength classes for lightweight concrete

Compressive strength class	Minimum characteristic cylinder strength (N/mm ²)	Minimum characteristic cube strength (N/mm ²)
LC8/9	8	9
LC12/13	12	13
LC16/18	16	18
LC20/22	20	22
LC25/28	25	28
LC30/33	30	33
LC35/38	35	38
LC40/44	40	44

Higher strengths available LC45/50 to LC80/88

Classification of lightweight concrete by density

Density class	D1.0	D1.2	D1.4	D1.6	D1.8	D2.0
Range of density (kg/m ³)	≥800 and ≤1000	≥1000 and ≤1200	≥1200 and ≤1400	≥1400 and ≤1600	≥1600 and ≤1800	≥1800 and ≤2000

Comparison table

Based on 15 storey model	Normal weight concrete	LytaLWC™
Total concrete volume	2064m ³	1411m ³
Saving		31.64%
Total reinforcement weight	146 tons	96 tons
Saving		34.04%
Total cost	£294,175	£198,995
Saving		32.35%

Using LytaLWC™ can reduce the total concrete costs by over 30%

Impact

Higher tensile strain capacity and lower modulus improves resistance to impact loading.

Consistence

A range of slumps and flows are achievable.

Durability

LytaLWC™ encourages internal curing giving durable thoroughly hydrated concrete.

Cold weather working

LytaLWC™ has an improved thermal response compared to normal weight concrete.

ASR

LytaLWC™ is considered to be of low reactivity as shown in BS8500 part 2 table B.2

