

# AERCEL SP40

AERCEL LIGHTWEIGHT CONCRETE ADMIXTURE  
SYNTHETIC BASE FORMULA



CC Technique Product Data Sheet

Edition:

Division: 7

Thermal & Protection

## ■ The Product

AerCEL SP40 Is a lightweight insulating screeding material, especially designed for deck roofing and floor applications, requiring effective slopes for proper drainage or just replacing expensive and complicated thermal insulation systems. Applied on the structural deck (below the waterproofing),

AERCEL Lightweight Concrete Admixture will form a strong, continuous, fireproof, energy efficient and eco friendly lightweight screed with considerable thermal insulation properties.

AerCEL SP40 Specs:

- It is composed of Portland cement cells. The materials necessary for its manufacture are Portland cement, AERCEL Formula Lightweight Concrete Admixture and water.
- It is produced directly on the job site, according to exacting proprietary standards.
- It fills all surface irregularities on metal or decks, is easily screeded to form effective drainage slopes, and provides a smooth, resistant surface.
- It is ideal for both traditional and innovative waterproofing membrane systems.
- Is unmatched in versatility, mechanical strengths, and fire resistance by any other insulating material.

## ■ Advantages

AERCEL SP40 Lightweight Concrete agent offers exceptional versatility:

- It adapts perfectly to any roof deck or surface geometry.
- Is fire proof, will not burn, spread flame, contribute to fuel, or emit toxic fumes: AERCEL improves deck fire rating.
- Is strong: has excellent compressive strength as an insulating material.
- Has a low water retaining: the mix design uses the same water content proportions as – concrete.



There is no water retaining aggregates.

- Is similar to concrete: it behaves according to the same-general principles of durability and resistance to pets, molds, animals, etc.
- Has a low thermal expansion coefficient: generally it requires no expansion joints.
- Has excellent workability: it is easily placed and screeded, requiring much less effort than concrete.
- Is nailable: it provides nailable substrate for those waterproofing systems requiring mechanical fixing.
- Provides efficient thermal insulation: it forms a continuous insulating layer without thermally inefficient joints.
- Is lightweight: only one fifth the weight of concrete.
- Adds a safety factor to your roof: it will not deteriorate or absorb water in case of failure of the waterproofing membrane.
- Is easily repaired: it can be patched easily with Portland cement mortar.
- CC Technique guarantees quality results: only licensed applicators install AERCEL Cellular concrete.

## ■ Uses

AERCEL SP40 can be applied on new roofing, reroofing and remedial roofing as roof fill, thermal insulation, and substrate for the waterproofing system.

AERCEL's unmatched flexibility allows designers to adapt to standards as well as original architectural solutions.

## ■ Dosage

The recommended dosage to get a stable foam is 2.5% of the amount of water used.

## ■ Properties

Properties of cured Aercel Lightweight concrete.

TEST	ASTM method	Typical test results Aercel type			
		A	B	C	D
Dry density (lbs/cu.ft.) Metric - (kg/cu.m)	C-796	25 400	30 480	35 560	40 640
Wet density (lbs/cu.ft.) Metric - (kg/cu.m)	C-796	35 560	40 640	45 720	50 800
Thermal conductivity – “k” factor 75° F (B.T.U./hr sq.ft./° F/in) Metric - (W/m.°C)	C-518	0.55 0.09	0.70 0.10	0.80 0.11	0.90 0.13
Tensile splitting strength (P.S.I) Metric (kg/sq.cm)	C-796	17 1.2	25 1.8	36 2.6	51 3.7
Flammability - Flame spread Smoke developed	E-84	None None	None None	None None	None None
Thermal expansion (in/inx10.6)	C-157	5 0.0005	6 0.0006	7 0.0007	8 0.0008
Loss or air during pumping	C-796	Less than 4.5% (by volume)			
Water absorption Working temperature range		Less than 20% (by volume) Up to 1800° F			
Drying shrinkage		Less than 0.08%			

Code	Description	Unit Of Sale	Qty	Base Unit
AR101231	Aercel SP40 LWC Admixtures	Drum	210	kg

