

CONDITIONS AND RULES FOR MANUFACTURE OF SIRCONTEC LIGHTWEIGHT CONCRETES

Data Sheet No. 110

These general conditions concern foamed concretes (FC) and polystyrene concretes (PsC) manufactured according to manufacturing processes for individual modifications of light concretes (LC) and with the equipment supplied by SIRCONTEC company. Our verbal and written recommendations, contained in these general conditions, concerning the usage of SIRCONTEC LC, which we render to the customer on the basis of our experience and according to our best knowledge and to the present state of scientific and practical knowledge, are not binding and do not give rise to any relation of law or secondary liabilities. At the same time they do not deprive the customer of the duty to try hereby described processes regarding their planned usage suitability on his own responsibility.

General rules:

1. For manufacturing SIRCONTEC LC only mixtures, additions and admixtures are used, which are determined in respective „Manufacturing processes“ of SIRCONTEC company.
2. Manufacturing processes for individual SIRCONTEC LC modifications are determined by respective „Manufacturing processes“ of SIRCONTEC company.
3. The environmental temperature in the place of preparation and application of SIRCONTEC LC, also the base temperature, cannot fall below +5°C, or exceed +30°C! During setting-up it is necessary to protect the light concrete against high temperatures, premature drain and frost.
4. It is not allowed to apply SIRCONTEC LC on constructions exposed to shocks or vibrations.

Base:

1. The base must be firm, cohesive, without remains of oils and dust and other impurities.
2. It is necessary to seal off each construction before the SIRCONTEC LC application in a suitable way to prevent the applied LC from leaking.

Placement:

1. SIRCONTEC LC are placed on the construction so that the moisture drain-off from SIRCONTEC LC to the base construction is avoided. Separate layers in the form of suitable foils or sprays and paintings are used for this purpose. Before SIRCONTEC LC application it is possible to moisture the construction sufficiently with water, as far as the construction and the application place allow it.
2. SIRCONTEC LC are pumped with the equipment supplied by SIRCONTEC company. The horizontal and vertical transport distances of the LC depend on the type of LC being produced and on its consistency. It is necessary to check the maximum transport distances on every place, especially concerning the possible volume loss of the air contained in the pumped material - see the respective Check process.
3. Wet mixture of SIRCONTEC LC cannot be freely cast or sank deeper than 0.2 m.

Processing:

1. The wet mixture SIRCONTEC LC should be processed as soon as possible after it has been mixed. The concreting must take place in one process, if possible continuously in complete parts of construction. When it is not possible to keep this condition, it is necessary to divide the concreted construction into parts so that the continuous work and simultaneously smooth placing are being carried out.
2. In the case of concreting large surfaces using SIRCONTEC FC it is recommended to divide them into smaller surfaces with area corresponding to processing FC manufactured per 1 hour, but max. 4 m³ of the consumed SIRCONTEC FC. PsC is applicable without surface dividing.
3. The minimum application thicknesses of individual SIRCONTEC LC modifications—see respective Data Sheets.
4. Uneven surfaces resulting from the process can be removed by cutting, grinding or milling. Smaller surface flaws can be repaired after their removal with a suitable cement mortar.
5. Detected flaws must be removed as soon as possible by removing loose particles as far as the hard concrete or the base structure is, then they are replaced with a new LC or other permitted substitute material.

Protection:

- It is necessary to protect the applied SIRCONTEC LC especially in the period of its strength increase against:
- excessive drying by the draught, excessive solar exposure. For this purpose protective coverings (mats, foils etc.), moistening or combination of both provisions can be used. The moistening is possible as soon as the concrete is hard in such a degree that the cement is not washed out. The concrete is not to be sprinkled or moistened at the environment temperature below +5 °C.
 - strong and fast cooling and heating
 - frost
 - mechanical damage
 - effect of the rain or flowing water so that the cement is not washed out
 - excessive loading

Application of further layers:

It is possible to lay another SIRCONTEC LC when the underlayer is walkable, or when it is able to carry the next layer.

The application of further layers follows the technological regulation pertinent to the further layer.

Validity: from 1.10.2009