

Explanations and instructions for construction of concrete floors

1. Base and load-bearing layer

- 1.1 Measurement and control of the load-bearing layer base is provided by the customer.
- 1.2 The surface of the load-bearing layer should be thick and flat with irregularities of no more than +/- 1 cm.
- 1.3 In concrete floors with slope, the load-bearing layer should be laid with the respective longitudinal and cross-section gradients.
- 1.4 When constructing concrete without concrete pump the Contracting authority should provide accessible load-bearing layer for concrete mixers.
- 1.5 The design level of the upper concrete edge is provided by the Contracting authority, deposited on reinforced concrete elements or with fixed elevation.
- 1.6 Upon acceptance of the base, the Contracting authority undertakes to call us in advance, in order to be able to react promptly and qualitatively in the organization of labor, machines and materials.
- 1.7 When the grates and shafts for rainwater drainage are not built by Chemobau, the Contracting authority is responsible in case of mistake in the installation level and location of the element.
- 1.8 If we have a contract completion date for the site, it may be extended due to bad weather or lack of operating front.
- 1.9 When the Contracting authority is committed to the delivery of certain material or consumables, it's his duty to deliver them timely to the site, as well as their transportation within the site.

2. Requirements for the Contracting authority

- 2.1 The Contracting authority must build passable access for delivery of the materials, for concrete mixers and concrete pumps next to the construction site.
- 2.2 Adjacent to the construction site the Contracting authority should provide free locations for mixing and storing with sufficient size.
- 2.3 The Contracting authority must provide free electricity and water for the construction, including the necessary installation equipment next to the construction site.

2.4 Safety equipment, enclosures, securing against falling and other labor safety requirements are responsibility of the Contracting authority.

2.5 For the execution of construction works in trenches, on ceilings or other places with difficult access, the Contracting authority must provide free lifting equipment for transportation of materials, machines and equipment.

2.6 The Contracting authority must obtain administrative permits, e.g. for work during the night, if required. Additional costs, arising from termination of work, due to noise or lack of permits shall be borne by the Contracting authority.

2.7 The Contracting authority shall provide space for washing of the concrete mixers and concrete pumps when the concrete is delivered by Chemobau.

2.8 Provision, laying and removal of the protective film are the responsibility of the customer. We recommend you to leave the film for around 7 days, in order to prevent damages, caused by dehydration, as well as the possible changes in color to be within range.

2.9 Protection of sensitive surfaces using adhesive film is customer's responsibility.

3. Atmospheric influences

3.1 The construction of the floor should be carried out in an enclosed, weatherproof hall. In order to avoid air currents, all gates, doors and other openings should be able to be closed.

3.2 In the construction of outdoor concrete floors the weather condition risk is borne by the Contracting authority.

3.3 At high and low temperatures the measures, contained in DIN EN 1045/2 should be implemented. As a rule, this applies to the composition of the concrete, fresh concrete temperature and subsequent processing. These measures are "special services" and are not included in the unit prices.

3.4 Direct sunlight, air currents and high temperatures favor the appearance of cracks on the surface. Very fine cracks often occur also on the surface of high quality abrasion resistant coatings.

4. Costs, that are not included in the unit price

4.1 The unit prices do not include supplements for working on the weekends, overtime and overnight work (after 22:00 o'clock.), as well as seasonal supplements (with the exception of smoothing operations).

4.2 In case of interruptions due to weather conditions or termination of work, costs incurred shall be established and borne by the Contracting authority.

4.3 Upon refusal of the concrete work until 14 pm on the previous day, there are no additional

costs. Transportation costs, if it was in vain and in case of refusal in a shorter period shall be paid.

4.4 If the contractual average thickness of laying is exceeded, due to variations in the load-bearing layer height, overspending should be determined based on the concrete CMR consignment and must be paid. Unless otherwise agreed, the Contracting authority is responsible for checking the bearing surface height.

4.5 If the customer provides the pump, concrete is laid after the pump hose. Contracting authority is responsible, if an additional hose is required, and the service is not included in the price.

4.6 Connection of Customer embedding details to the edges is included in the price up to 5 cm/m². In case of exceeding, the work on the additional quantity shall be paid extra.

4.7. Formwork operations – Chemobau's obligation are only the formworks for stopping the daily fields. All other – encasing of holes in slabs, encasing of periphery on fields, etc. are responsibility of the Contracting authority.

5. Guidelines and features

5.1 The appearance of fine cracks on the surface in case of cement hydration is inevitable, so it is not considered a fault

5.2 During concrete setting, byproducts are released such as limestone, which are deposited on the surface and cause color and structural differences. I.e. in concrete floors it is impossible to optically achieve exactly the same surfaces, which is not treated as a defect.

5.3 Edges and corners are smoothed by hand, so they differ externally compared to machine smoothed areas.

5.4 In static calculation, prepared by Chemobau, the maximum determined width of the cracks is 0,3 mm. When the Contracting authority prepares the statistical calculations, reducing the crack width is always obligation of the designer.

5.5 Edges of the cut sham and working joints with or without coating are not included in the warranty, unless they are subject to regular control and maintenance.

5.6 In case of concrete floors, reinforced with steel fibers, depending on the fiber content and surface layout on the surface of the finished concrete could be seen single steel fibres. Quality and operation are not affected by this.

5.7 Concrete floors with steel fibres cannot take horizontal loads and therefore should not be connected to foundations and supports. In conventional reinforced concrete slabs is also possible to occur cracks due to load.

5.8 The area of the floors is measured by the actual covered surface in m², excluding openings and bends for chimneys, pilasters, columns and others with sizes, greater than 1 m² (according to the Rules for admission of floors, approved by Ordinance No.

РД – 02 – 14 – 407 of 29.12.1988 of the Council for territorial and urban planning).

6. Recommendations and guidelines

6.1 When preparing concrete floors with a slope < 1,5 % on the surface could appear wet areas.

6.2 When the concrete is delivered by the customer, we recommend contraction resistant concrete with approximately 320-340 kg/m³ cement. Portland cement without fillers, grain content less than 400 kg/m³ and water-cement-factor < 0,55. The type of cement must comply with the weather conditions.

6.3 The concrete recipe is prepared, monitored and if necessary amended by Chemobau.

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