



# Construction regulations

## BetonKanoRace 2023

1. The canoe must be hollow on the inside, this means there must be enough space to properly fit in and propel the canoe with two persons. Only single-leaf paddles may be used for this purpose, which are not attached to the boat. Soft mats are allowed to protect the knees and feet but not to spread the load on the boat.
2. The dimensions of the canoe must meet the following requirements:
  - Minimum length: 4.0 m
  - Maximum length: 6.0 m
  - Maximum width: 1.0 m
  - Maximum height: 1.0 m
  - Minimum cavity depth: 1/4 of the total height
3. The canoe must be made of concrete. The strength of the canoe must come from the profiling, reinforcement, and / or the composition of the concrete.
4. Both natural and synthetic and both impermeable and porous aggregates may be used.
  - The maximum aggregate diameter of one aggregates is 5,6 mm;
  - The binder must be cement according to EN 197;
  - The additives must not exceed 25% of the weight of the cement mix.
5. The reinforcement may consist of wire and grid elements. The reinforcement cannot contribute to the waterproofness or the buoyancy of the canoe. The buoyancy of the canoe can be created by concrete elements or by the complete concrete canoe only.
6. A buoy on a 10-meter long rope must be attached to the canoe to indicate the location of the canoe when sinking. The rope must withstand a tensile force of at least 50 kilograms and the buoy must guarantee a buoyancy of at 2 kilograms. If not, the organization will take measures.
7. A construction report (up to 10 pages A4) must be submitted by e-mail(ccr-event@u-base.org) before the 24th of April 2023. The report should, as bare minimum, include the following subjects:
  - Design: idea, name of the canoe and people who contributed
  - Explanations of the structure
  - List of used materials, including the mixing ratio
  - The fabrication process of the canoe
  - Dimensions, weight, and buoyancy
  - Sustainability of the materials used
8. Sustainability is an aspect which can result in bonus-points for a team in the sustainability-competition. When special materials are used or special techniques are used, mention these in the construction report of the canoe.
9. Regarding the environment, no material can come loose from the canoe when exposed to water. This will be tested during inspection by applying a wet sponge to the canoe.
10. When the canoe does not meet the requirements or does not conform to the construction report, the jury may impose disqualification, a reduction of points, or a time penalty. Failure to submit the construction report results in exclusion prizes. This will be announced to the relevant team before the start of the race.
11. While transporting the canoe, bystanders are required to wear safety shoes to prevent injuries.

