

## REGULATIONS FOR CONSTRUCTION

This document contains the construction regulations for the BetonKanoRace 2019 in 's-Hertogenbosch. Further information will be published in the general regulations and competition regulations. For questions please see the contact details at the bottom of the page

1. The canoe must be hollow in 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:
  - a. Minimum length: 4.0 m
  - b. Maximum length: 6.0 m
  - c. Maximum width: 1.0 m
  - d. Maximum height: 1.0 m
  - e. Minimum cavity depth:  $\frac{1}{4}$  of the total height
3. The canoe has to 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.
  - a. Min.  $D_{max}$  (aggregate diameter of one aggregates is 5,6 mm;
  - b. The binder must be cement according to EN 197;
  - c. 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.
7. A construction report (up to 10 pages A4) must be submitted by e-mail before the 1 st of May 2019. The report should at least discuss the following subjects:
  - a. Design: idea, name of the canoe, and people who contributed;
  - b. Explanations of the structure
  - c. List of the materials used, including the mixing ratio
  - d. The production process of the canoe
  - e. Dimensions, weight, and buoyancy
  - f. Sustainability of the materials that are 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 those in the construction report of the canoe.
9. With regard to the environment, no material can come loose from the canoe when exposed to water. This will be tested during the inspection by holding a wet sponge against the canoe.
10. When the canoe does not meet the requirements or does not conform to the construction report, the jury may impose a disqualification, reduction of points, or time penalty. Failure to submit the construction report results in the exclusion of the prize competition. This will be announced to the relevant team before the start of the race.
11. While moving the canoe around on the event area all of the bystanders need to wear safety shoes to prevent injuries.

### CONTACT DETAILS

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