

CHALLENGER OF RECORD & DEFENDER AMERICA'S CUP 36

Interpretation 042 of AC75 Class Rule Version 1.9 issued 20th March 2020

Rules References:

35.13 Commercial product

A classification of products controlled by Rule 8.

35.104 Uncontrolled component

A **commercial product** that is not subject to elastic modulus, construction temperature or construction pressure constraints. Examples include, but are not limited to, pre-consolidated **FRP** plate, a winch, a block, a traveller track and a hydraulic valve.

34 Dates

34.1 The following items shall be specified no later than the dates specified:

Date	Rule	Who	Item
31/03/2020	8.4 (b) (ii)	Rules Committee	Last submission of commercial products .

6 Materials

6.1 Rule 6 applies to all components except:

- (a) supplied components, such as the **foil arm stocks, foil arm leading edges**, the **FCS** and the **supplied rigging**;
- (b) material specified in the supplied **mast** drawing package;
- (c) electrical and electronic components, and their enclosures or housings, proving that:
 - (i) they have no significant structural contribution;
 - (ii) each assembly is limited to a maximum density of 11,400 kg/m³; and
 - (iii) materials with a density greater than 11,400 kg/m³ are not used in volumes that have any significant effect on the distribution of mass throughout the **yacht**.

7 Construction methods

7.1 Rule 7 applies to all components except:

- (a) supplied components, such as the **foil arms stocks, foil arm leading edges**, the **FCS** and the **supplied rigging**; and
- (b) electrical and electronic components, provided they have no significant structural contribution.

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8 Commercial products

8.1 **Commercial products** shall fall into the following categories:

- (a) **Core**;
- (b) pre-consolidated thermoplastic **FRP** components;
- (c) paints; and
- (d) **uncontrolled components**.

8.2 **Commercial products** shall:

- (a) be readily available for purchase by all **Competitors** at a reasonable market price;
- (b) have a lead time to delivery of no more than six months; and
- (c) not have been developed directly or indirectly for a **Competitor** or specific group of **Competitors**, unless prior to 31 March 2018.

8.3 The **Rules Committee** shall maintain a list of approved **commercial products** in each category. Such products can be approved and listed en masse, for example by approving an entire catalogue of products from a supplier, providing the details of the specific catalogue (e.g. publication year) are included and a permanent record of that catalogue's contents is available.

8.4 **Commercial products** can be added to the relevant list by **Competitors** submitting a request to the **Rules Committee**, where:

- (a) requests may be made at any time; and
- (b) for any item which is to be classified as a **commercial product** on a **yacht** in an **event**:
 - (i) requests must be made for that item at least 30 days before the first race of that **event**; and
 - (ii) at the latest, by the date specified in Rule 34.

8.5 On receiving a request, the **Rules Committee** shall interpret whether the item is a **commercial product** by following the procedure detailed in Rule 32. However, they may delay the start of the procedure by up to one month after receiving the request in order to deal with multiple requests in a single batch.

8.6 An initial list of approved paints shall include:

Manufacturer	Products
Alexseal	HS Base Coat; HS Clear Coat
Awlgrip	Awlcraft 2000; Topcoats G/H-Line
Cromax	3050S ChromaClear
Nautix	L2; NX194
Resene	Durepox; Durepox Extreme Clear; Durepox High Performance Clear

8.7 **Uncontrolled components**:

- (a) are restricted to a maximum combined mass of 150 kg on each **AC75 Class Yacht**;
- (b) shall make up no more than 15.0 kg of a **hull**;
- (c) shall not be used in a **foil arm fairing, foil wing, foil flap** or **rudder**; and
- (d) if **FRP**, must be sourced as pre-consolidated and cured solid laminates in standard shapes (e.g. plate, bar, rod, tube, but not honeycomb) or standard products (e.g. a winch body).

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Background:

There is a contradiction between Rule 8.4 and Rule 34.1. Rule 8.4 (a) clearly establishes that “requests may be made at any time” and Rule 34.1 establishes the 31st of March 2020 as the deadline for submission of **commercial products**.

Questions:

General to commercial products.

1. May Competitors request to the **Rules Committee** to add a **commercial product** to the relevant list:
 - o at any time (as Rule 8.4 (a) says)? Or
 - o must be this request by a Competitor sent to the **Rules Committee** prior to 31st of March 2020 (as Rule 34.1 says)?
2. Is there a requirement in the Class Rule to build the Sails using **commercial products**? and if so, in which Rule?
3. Is there a requirement in the Class Rule to build the hydraulic control circuits and components of Rule 22 (for example a hydraulic ram) using **commercial products**? and if so, in which Rule?
4. Is there a requirement in the Class Rule to build the electrical and electronic systems of Rule 23.1 letters (a), (b), (c) and (e) using **commercial products**? and if so, in which Rule?

Core.

5. Is there an obligation in the Class Rule to only use for an **AC75 Yacht** core products that have been included by the **Rules Committee** in the list of **commercial products** or is the “can” of Rule 8.4 permissive?

Pre-consolidated thermoplastic FRP components.

6. Is there an obligation in the Class Rule to only use for an **AC75 Yacht** pre-consolidated thermoplastic FRP components that have been included by the **Rules Committee** in the list of **commercial products**? and if so, in which Rule?

Paints.

7. Does Class Rule 9.1 require to only use for an **AC75 Yacht** as the outermost layer paints that have been included by the **Rules Committee** in the list of **commercial products**?
8. If a paint similar to those included in Rule 8.6, that complies with all the substantive requirements of Rule 8.2 comes to the market say in August 2020, could Competitors request its addition to the approved paints list?
9. If a paint similar to those included in Rule 8.6, that complies with all the substantive requirements of Rule 8.2 comes to the market say in August 2020, could the **Rules Committee** add it to the approved paints list of Rule 8.6 without a formal request by a Competitor?

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Uncontrolled components.

10. Is there an obligation in the Class Rule to only use for an **AC75 Yacht uncontrolled components** that have been included by the **Rules Committee** in the list of **commercial products**? and if so, in which Rule?
11. Must winches, blocks, traveller tracks, hydraulic valves and similar components that are on board an **AC75 yachts** be **commercial products**? and if that is the case, where is that requirement in the Class Rule?
12. Must winches, blocks, traveller tracks, hydraulic valves or similar components that are on board an **AC75 yachts** be **uncontrolled components**? and if that is the case, where is that requirement in the **Class Rule**?
13. May a competitor build their own or order custom winches, blocks, traveller tracks, hydraulic valves or similar components? if not please specify the Class Rule. If so, what is the applicable maximum elastic modulus of Rule 6.4 and maximum temperature or applied pressures of Rule 7.2?
14. If a team buys a commercial winch, block, traveller track or hydraulic valve and similar products is it compulsory to declare it within the 150 kg allocated to **uncontrolled components** by Rule 8.7 (a)
 - a) Always? Please state the applicable rules.
 - b) No, unless the material of the component exceeds 220 GPa of Rule 6.4.
 - c) No. Please state other applicable rules.

Interpretation:

- A) Rule 35.13 defines **commercial product** as “a classification of products controlled by Rule 8.” Rule 8 further specifies what types of products can be classified as **commercial products**, as well as laying out the process by which products are classified and approved as **commercial products**.
- B) In the context of Rule 8, Rule 9, and Rule 35.13, the **Rules Committee** interprets that the terms “classified”, “classification”, “approved”, and “approval” have functionally identical meanings.
Therefore, only those products that have been submitted to the **Rules Committee** for approval as **commercial products**, and which have been approved by the **Rules Committee** as **commercial products** and have been included on the list of **commercial products** per rule 8.3, are classified and eligible for use as **commercial products**.
For the avoidance of doubt, if a rule requires that a type of product be a **commercial product** in order to be used, it must be on the list of approved **commercial products** in order for a **Competitor** to use it.
- C) Some products may meet the general definition of a commercial product, but they are not considered **commercial products** for purposes of the **AC75 Class Rule** unless they are on the list of approved **commercial products**. This does not necessarily mean that a **Competitor** cannot use them, but it does mean that a **Competitor** cannot use them in their defined sense unless they are on the list of approved **commercial products**. Other rules may prohibit the use of those products if they do not comply with specific constraints, for example, the materials properties limits of Rule 6, or the construction constraints of Rule 7.
- D) While Rule 8.4(a) says that request for **commercial product** classification can be made at any time, 8.4(a) is joined to 8.4(b) by the conjunction “and”, such that 8.4(a) is further constrained by 8.4(b).
The timeline for the request for classification of any product as a **commercial product** for use on a **yacht** in an **event** is as outlined in 8.4(b), with the final request deadline as specified in Rule 34, as linked to by Rule 8.4(b)(ii).

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Answers:

1. See interpretation clause D), above.
2. No, but sails may be built using **commercial products**.
3. No, but such systems may be built using **commercial products**.
4. No, but such systems may be built using **commercial products**.
5. Rule 6.8 state that “Core materials shall be **commercial products** and shall not be **uncontrolled components**.” See interpretation clause B), above.
6. Rule 7.3(c)(ii) states (in part) that thermoplastic **FRP** material sourced as “...pre-consolidated solid laminate in standard shapes...must be **commercial products**...”. See interpretation clause B), above.
7. Rule 9.1 applies only to those components enumerated in that rule, not to the entire **yacht**, as is implied by the question. Paints used for compliance with Rule 9.1(a) must be “...**commercial products** approved by the **Rules Committee**...” and must therefore be on the list of approved **commercial products**. See interpretation clause B), above.
8. No. See interpretation clause D), above.
9. No. The process outlined in Rule 8.4 is the only process by which products can be added to the list of approved **commercial products**.
10. Yes. For a product to be categorized as an **uncontrolled component**, it must be an approved **commercial product**. See interpretation clause B), above.
11. No. They are not required to be **commercial products**, but they may be **commercial products**.
12. No. They are not required to be **uncontrolled components** (and therefore **commercial products**), but they may be **uncontrolled components** (and therefore **commercial products**). However, attention is drawn to Rules 6 and 7 with regard to materials properties limits and construction methods constraints that apply to the materials used in and construction methods used for such components if they are not classified as **uncontrolled components** (and therefore **commercial products**). Certain material certificates are required as per rule 6.4.
13. Yes, but since such a component is not commercially available, it cannot be classified as a **commercial product**, and must therefore comply with the applicable materials properties’ limits of Rule 6.4 for the type of materials used, and the applicable construction methods constraints of Rule 7, throughout the manufacturing process. Certain material certificates are required as per rule 6.4.
14. Generally, per supplied answer b). A commercially-available product of the type described is only required to be classified as an **uncontrolled component** (and therefore a **commercial product**) if the material properties and methods used in its construction exceed the limits set out in Rule 6.4 for the type of materials used in the product, or the construction methods permitted in Rule 7.

END.