

## *NS14 Association Class Rules*

### **SECTION 1.5 - INTENTION**

The Class Rules are intended to result in boats which yield close racing with acceptably high performance, without demanding athletic or acrobatic ability. The boats should appeal to crews (such as husband and wife) who are not attracted to existing large sail area classes. As a secondary intention the boats should be easily handled by two adults both in the water and out and have stability and sail area such that trapezes are not required. Thirdly they shall be safe, reasonably comfortable, inexpensive and durable.

### **6. GENERAL**

The NS14 is a development class sailing dinghy.

**A Boat** shall include, in their entirety, all its components as ready to race.

Before a boat can compete in a race as an NS14, the boat shall be registered and comply with the Class Rules as published from time to time.

The Class Rules presented in this section constitute the sole reference for the measurement of boats in this class.

The units of measurement shall be metric.

*The NS14 is a development class and these rules may not cover every eventuality. Rules to provide class restrictions are not to be interpreted to mean that any other item or part not mentioned is unrestricted. In cases where doubt exists, account should be taken of the intentions of the class and the matter should be referred to the National Measurer.*

*The acceptance and continued registration of a boat as an NS14 shall be at the ultimate discretion of the Executive Committee.*

*In the event that amendments to the Class Rules have the effect of disallowing any components or items of equipment of certain boats, which were built and measured according to and in compliance with the previous Class Rules, the Executive will endeavour to allow continued use of those components or items. Any alteration to the boat must be made in accordance with this version of the Class Rules and a new measurement certificate issued.*

*The Class Measurement Form is part of these rules. State Measurers must forward all Measurement Forms to the National Measurer.*

*The Class Rules are supplemented by Instructions to Measurers. These are primarily for the assistance of measurers to ensure the consistent application of the Class Rules. The Instructions to Measurers do not form part of the Class Rules.*

#### **6.1 QUALITY**

*6.1.1 Boats shall be in all respects sound, safe and seaworthy in design and construction. This includes the correct fixing of fittings and their purpose.*

6.1.2 Where an innovation, for example in design or materials, makes it difficult to determine whether the requirements stated in these rules are met, a provisional measurement certificate will be issued by the State Measurer for a period, such period to be at the state measurers discretion. The State Measurer shall inform the National Measurer of the issue of the provisional certificate and details of the certificate. The National Measurer shall determine if the requirements of these rules have been complied with and if so authorise the issue of a measurement certificate. The National Measurer may revoke a measurement certificate issued by a State Measurer if he finds any part of the boat is constructed in such a way, or from such materials so as not to comply with the Class Rules and/or class intentions.

### 6.1.3 Materials

Unusually expensive materials or equipment shall be deemed to be contrary to the intention of the class and may be prohibited in the construction of hull, spars, sails, rigging, centreboard, rudder, fittings and/or components unless prior approval has been granted in writing, from the National Measurer, to use such construction or materials.

**CHANGES TO** The approved exotic materials and their usage shall be reviewed **BY THE EXECUTIVE COMMITTEE ANNUALLY AND PUBLISHED FROM TIME TO TIME.**

Any boat found to contain material/s contrary to those approved shall have its measurement certificate revoked.

## 6.2 TYPE OF BOAT

6.2.1 Hulls shall be of a conventional dinghy-type. In any cross section of the hull, no horizontal or vertical line shall touch the hull skin more than once either side of the centreline. This excludes a gunwale assembly of normal dimensions. Scow, tunnel, catamaran and sailboard type hull forms are therefore not permitted.

## 6.3 HULL DIMENSIONS

Unless specifically required otherwise hereunder, all measurements shall be taken parallel to one of the three major axes of the hull - vertical, longitudinal or transverse - related to the waterline and fore and aft centre line of the hull. For most boats it is sufficient to estimate the waterline, which runs from near the base of the stem to the base of the transom. In case of doubt, the measurer may require the waterline to be found with the boat afloat and a crew weight of 130kg positioned as for sailing to windward.

### 6.3.1 Hull Length.

The overall length, including fittings and gunwale assembly, but not including rudder pintles, shall be between 4.25m and 4.30m as measured between perpendiculars fore and aft with the waterline horizontal. Rudder extensions are not allowed. To prevent their being fitted, any rudder fitting fixed to the boat and extending more than 50mm aft of the normal aft length measurement is to be included in the overall length. Additions to the rudder box or rudder, which artificially extend the overall length of the hull, are prohibited.

### 6.3.2 Hull Beam.

The beam of the hull including fittings and gunwale assembly, at its widest points shall be between 1.60m and 1.83m.



*The beam when measured at 2.50m aft from the fore perpendicular (as used in taking the measurement in rule 6.3.1) and 200mm above the bottom of the centreline of the hull, with the boat upright, shall not be less than 1.22m.*

### 6.3.3 Hull Curves.

*Any chine or hard point, or its projections, formed in the hull shape must form a fair continuous curve for the entire length of the boat and contain not more than one inflection point.*

*The maximum longitudinal hollow measured along a chine or hard point with a 500mm long straight edge shall be; 4mm forward of 2.50m from the bow; and, 1mm aft of 2.50m from the bow.*

*The maximum longitudinal convex measured along a chine or hard point with a 500mm long straight edge shall be 10mm.*

*All concave curves in the vertical plane must form a fair curve whose radius is greater than 150mm.*

### 6.3.4 Hull Depth.

*The depth 2.50m from the fore perpendicular (as used in taking the measurement in rule 6.3.1 and 6.3.2) measured between the bottom of the centreline of the hull and the highest point of the gunwale or deck at the 2.50m station shall be not less than 450mm. In addition the boat, including all fittings, but excluding a fixed mast pin, when upright shall pass between two parallel horizontal lines 660mm apart.*

### 6.3.5 Sectional Hollows.

*A taut tape containing any vertical transverse section of the hull including the gunwale assembly shall not pass at a greater distance from the nearest point of the hull skin than 60mm measured at right angles to the tape.*

*Additionally, a taut tape containing the vertical transverse section of the hull below the 2.50m measurement point in 6.3.2 shall not pass at a greater distance from the nearest point on the hull skin than 15mm measured at right angles to the tape for a maximum distance of 200mm along the tape from the measurement point, and from this point to the keel the taut tape must otherwise show no separation from the hull.*

## 6.4 HULL WEIGHT

*6.4.1 The minimum weight of the dry hull with permanent fittings attached, but without spars, centreboard, rudder and rudder box, sails, standing and running rigging, shall be 64.0kg. Any corrective weight necessary shall be permanently fixed not less than 300mm above the keel. Maximum weight of correctors shall be 5.0kg. Any artificial attempts to increase hull weight by the addition of non-structural, localised material will result in measurement being refused. If subsequent re-measurement by a recognised Club Measurer shows the weight of the hull has changed and the State Measurer has been notified, the corrective weight may be reduced or removed accordingly and the revised weight recorded on the measurement form.*

*6.4.2 Permanent fittings include:*

- Tow Ring

- *Jib fairleads*
- *Sidestay cars*
- *Mainsheet blocks*
- *Mainsail traveller and pulleys*
- *Non-removable compass, mounting or base (as noted on measurement form)*
- *Barber hauler for jib sheets*
- *Control lines of not more than 6mm other than mainsheet and jibsheet*
- *Vang systems*
- *Hatches, hatch covers and transom flaps.*

#### 6.4.3 Permanent fittings do not include:

- *rudder box and removable rudder pin*
- *paddle*
- *tow ropes*
- *bailing buckets*
- *mainsheet and jibsheet*
- *removable compass*

### 6.5 BUOYANCY

6.5.1 Buoyancy tanks shall be watertight. Hatch covers if not of screw-in type shall be positively secured and fitted with watertight seals. A controlled leak, to equalise air pressure, is permissible but shall not exceed an area of  $2\text{mm}^2$  and shall be in a position which is not immersed with the boat either way up.

6.5.2 The hull shall contain a minimum of .45 cubic metres of buoyancy volume. This buoyancy shall be distributed in such a way within the hull as to enable the boat to be righted and sailed on after a capsize. If the measurer is uncertain this rule has been complied with he may require a demonstration of the capacity of the boat to be righted and sailed on in heavy weather.

6.5.3 The hull complete with rudder and centreboard but without the rig, shall provide buoyancy of at least 20kg so distributed that the boat will float upright with all buoyancy compartments flooded.

### 6.6 SAILS

6.6.1 The maximum sail area shall be 9.3 square metres. A boat shall set no more than one mainsail



*and/or one jib. The mainsail shall be deemed to be the sail with the majority of the sail area.*

*6.6.2 All sails must be capable of being stowed in sailbags of normal dimensions. For the purpose of this rule, 'long' sailbags for the stowing of rolled up sails are regarded as normal. Sails may be constructed from any approved material as published by the association.*

*6.6.3 All sails intended for use by a boat racing as an NS14 in accordance with the Class Rules shall be measured by a recognised Club Measurer. The measurer shall initial the sail and mark on it the measured area and the date of measurement in lettering not less than 20mm high. All sails must have a suitable area near the tack for this measurement to be written. A measurer may request a sail to be remeasured at any time at his discretion. The Club Measurer shall forward all measurement forms to his State Measurer.*

*6.6.4 Not more than one mainsail and two jibs may be registered for use by an NS14 racing at a National or State Association Event. Additional sails may be substituted, in the case of damage, at the discretion of the Race Committee conducting the Event.*

*6.6.5 The mainsail shall be raised on a halyard and shall be capable of being raised into or lowered from sailing position from within the boat with the boat afloat and upright.*

*6.6.6 The class insignia and the registration number of the boat shall be within plus or minus 10 percent of the dimensions shown in rule 6.10.7. These shall be of a colour which clearly contrasts with, in all light conditions including backlit, the colour of the sails. The class insignia on the starboard side shall be affixed nearer the top of the mainsail and that on the port side below it. The distance from the lower part of the class insignia to the upper part of the registration number is not to be less than 150mm. All sail numbers must be at least 50mm apart. No part of the class insignia and/or the registration number shall appear below a horizontal line 1.5m above the clew of the mainsail.*

*6.6.7 Class insignia and sail number must be on sail at time of measurement. Other than a sailmakers sign (not larger than 150mm x 150mm) no other signs, symbols or insignia are allowed on the sails.*

#### *6.6.8 Measurement Method*

*The method used to measure sails shall measure surface area as distinct to projected area.*

- All measurements are overall and shall include bolt ropes, tabling etc.*
- The head of the sail is defined as the point on the Luff, or its extension, level with the highest point of the sail projected perpendicular to the Luff or its extension.*
- The clew of the sail is defined as the aftermost part of the sail projected to the foot or its extension, including foot rope, if any.*
- Sails can usually be measured by the method on the Class measurement form. All measurements are to be included. If any measurement is zero, this should be noted on the measurement form. If abnormal sails are developed which cannot be satisfactorily measured this way, a full description of the sails and the method used to measure them shall be submitted to the National Measurer. Any area which is of abnormal shape shall be divided and calculated as individual areas so as to determine the correct surface area.*



- *Sails shall be taken off spars to be measured, and laid on a flat, hard surface, with the corners tied to suitable pegs.*
- *The sail luff shall be pulled taut with sufficient tension and pegged to ensure removal of wrinkles across the line of the dimension taken.*
- *The clew of the sail shall be tensioned and pegged so as to remove wrinkles across the lines of measurement and apply equal tension to the foot and leech.*
- *The straight line measurements shown on the class measurement form shall be delineated by tying a string tightly around nails inserted in the flat surface at the corners of the sail. In the case of headboards or cut-off tacks, etc, the nails shall be inserted at the intersections of the luff and leech, etc., projected.*
- *Any straight line measurement areas are to be calculated by the areas of the triangles. i.e. half times the length times the perpendicular height.*
- *The areas of luffs, foots and roaches of normal shape and fair curve are to be calculated by multiplying the length by two-thirds the maximum offset. The edges shall be pulled out by hand if necessary to make the sail lay flat while the roaches are being measured.*
- *In the case of a sail with a deep curve, the fullness may be removed by a fold as shown at Nn on the Measurement Form. This dimension is one side of the fold and the area is  $\frac{4}{3}Nn$ .*
- *When the two sides of the sail set separately as in double luff sails, both sides of the sail shall be measured and the total area counted. This excludes the normal pocket up the luff of a jib up to 50mm in width.*
- *All measurements shall be made to the nearest millimetre. All area components shall be calculated to the nearest  $0.001m^2$ . The total area of the sail shall be quoted to the nearest  $0.1m^2$ . All rounding will be as per Australian Standard 2706 - 1984 to the number of decimal places as noted.*

## **6.7 SPARS**

*6.7.1 The mast may not extend more than 5650mm above the highest point of the deck including all fixed fittings, but excluding a mastpin. If the mast extends more than 5500mm above the highest point of the deck including all fixed fittings, but excluding a mastpin, the portion of the mast between 5500mm and 5520mm shall be painted a contrasting colour to the mast. No portion of any sail shall set above the bottom of this band.*

*6.7.2 Only one mast shall be registered for use by a boat racing as an NS14. The Club Measurer shall initial the mast and mark on it the hull number, measured length and the date of measurement in lettering not less than 20mm high. A measurer may request a mast to be remeasured at any time at his discretion. The Club Measurer shall forward all Measurement Forms to his State Measurer.*

*6.7.3 All spars, excluding fittings, shall pass through a ring of 100mm inner diameter. For the purpose of this rule, the mast track is not regarded as a fitting.*

*6.7.4 The clew of the jib may be boomed out or held on either side of the boat. A spar used for this*

*purpose may be held in the hand or fixed anywhere to the hull, spars or rigging, and when stowed shall not overhang the boat at the bow or stern.*

*6.7.5 A bowsprit is not allowed.*

*6.7.6 If any spar, or other device, other than the mast, boom, jib boom or pole increases the sail area, then the amount by which it increases the sail area shall be measured as part of the sail area.*

## **6.8 THE CREW**

*6.8.1 The crew shall weigh at least 114kg and shall consist of either:*

- two adults, eighteen years or older, in which case no limit on corrective weight applies to bring the crew up to 114kgs, or*
- two or more persons, one of whom is at least 14 years of age and none of whom is less than eight years of age, in which case corrective weight up to a maximum of 5kg is allowed to bring the crew up to 114kgs.*

*Corrective weight under this rule is defined as water-filled containers attached to the hull.*

*6.8.2 At least one member of the crew must be a member of an NS14 Association.*

## **6.9 Equipment**

*6.9.1 Boats shall at all times comply with all the requirements of the Australian Yachting Federation Safety Regulations as shall apply to the NS14 Class. Additional Safety requirements may also be included in the Class Rules.*

*6.9.2 Devices outside or extending outside the vertical projection of the gunwales may not be used to support or partially support a member of the crew outboard or partially outboard. Battened hiking pants above the knee will be deemed to comply with this rule.*

*6.9.3 No part of the boat or gear may project beyond the bow measurement station when the boat is sailing close-hauled.*

*6.9.4 Only one centreboard and one rudder shall be registered for an association event.*

*6.9.5 Instruments other than watches and clocks, compasses and direct wind-reading indicators such as feathers are banned. Items such as electronic compasses, boat speed & wind speed readouts are prohibited.*

## **6.10 REGISTRATION**

*6.10.1 Before a boat can compete in a race as an NS14 it must be registered and measured. To register, the owner must join the NS14 Association of his state, or if his state has no Association, then another State. The Registrar must be notified of all changes to ownership, and a new certificate issued.*

*6.10.2 A registration number will be issued, on application by a member of an NS14 association who has acquired, or is in the process of acquiring, a boat which has not been previously measured as an*



*NS14 and which the member intends to present for measurement as an NS14. The registration number shall apply to the hull and be displayed on the mainsail in accordance with rule 6.6.6. The association may set a fee for the issue of the registration number.*

*6.10.3 The Registrar will issue a Class Registration Certificate where a registration number has been previously issued and the boat is measured and is found to comply with the rules of the NS14 Class. The Registrar will issue a registration plate with the registration number of the hull engraved on it. Once issued, the owner shall fix this plate to the front of the cockpit in an easily visible place. The registrar must be notified of all changes to ownership, and a new certificate will be issued.*

*6.10.4 If any part of a **boat** is replaced, extensively damaged or modified, the owner shall have the replaced or modified item remeasured. (for the definition of 'a boat' see the General section at the beginning of these rules).*

*6.10.5 With the approval of the Executive Committee, the Registrar may withdraw a class registration certificate.*

*6.10.6 A boat name registered for an NS14 shall not be used by any other NS14 unless the name is qualified, in some way, such as by the addition of a numeral suffix.*

*6.10.7 Class Insignia*

