



The league is contested in the 150 g weight class. Only plastic materials are allowed for the body and weapon components.

The league is especially geared toward club activities, beginners in the hobby, and enthusiasts who want to test their creativity with all sorts of inventions, offering a level playing field. It also provides an opportunity to test plastic prototypes of parts that are usually made of metal.

The aim is to offer an affordable and safe way to engage in combat robotics by limiting the materials used in construction and making the robots less damaging.

Since creating damaging weapons from plastic is relatively ineffective, expensive electronics are more likely to stay intact compared to regular leagues.

The league encourages a lot of imagination and craftsmanship, as the robot can be built not only through 3D printing but also from almost any plastic household object, without the need for special tools.

Participation doesn't necessarily require designing your own robot. Ready-made 3D models can be downloaded from places like Thingiverse and GrabCAD. Many schools, libraries, and hacklabs provide access to 3D printers.

- The league follows the standard Robowar competition rules, except for the specific exceptions included for this league.
- The competition is held either in a fully enclosed arena or an open variant.
- Maximum robot weight and size: 150 g, maximum length 30 cm.
- Maximum allowed weapon tip speed: 20 m/s.
- Building materials:
  - Only plastic parts may be used for the body and weapons (PLA, Nylon, ABS, TPU, HDPE, rubber, polycarbonate, etc.).
  - Nylon-carbon/glass fiber filaments, metals, and body and weapon materials containing fiberglass, Kevlar, or carbon fiber are prohibited.
  - Metal screws and connectors are allowed only in joints and may not be used for weapons or armor.
  - Using metal spikes on wheels to improve grip is allowed.
  - Metal gears are allowed only inside pre-made electronic components (servos, motors).
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- Arena
  - Fully enclosed arena.
  - Sides and floor: 6 mm plywood, roof and end walls: 3 mm polycarbonate.
  - Size: 1.2 x 1.2 m.
  - Drop-out holes in two opposite corners.

#### **Variant - Open arena version:**

The Plastic League can also be contested in an open arena, where weapons that pose a risk of personal injury, shrapnel, or explosion (such as spinning, pneumatic, hydraulic, or spring-loaded weapons) are not allowed.

This variant is intended for robots that can be safely driven outside the arena, allowing for safe practice outside of competitions and clubs.