

MISSOURI 500: ALTERNATIVE MATERIALS

(INDIVIDUAL; COMPETITIVE)

DESCRIPTION:

This contest provides an opportunity for students to demonstrate their ability to design, draw, and build a product within a rigid set of specifications, and to develop a friendly spirit of competition.

GENERAL RULES AND REGULATIONS:

A contestant may enter only one (1) car.

Maximum of 25 cars per district (all levels).

All vehicles must be "Race Ready" at the time of registration. "Race Ready" means a complete vehicle with wheels and screw eyes attached, but no CO² cartridge installed.

The following specifications are:

1. Body specifications (DIMENSIONS INCLUDE WHEELS)

a. Length - 8" Minimum, 10" Maximum

b. Width - 1 1/2" Minimum at axles, 4" Maximum

c. Height - 3 1/2" Maximum

d. Shape - Body must support 50 pounds compression force end to end for 10 seconds. Body can be hollowed out. Compression testing will occur prior to racing, if it breaks it will be eliminated.

e. Weight (RACE READY) - 25 grams minimum 50 grams Maximum (NOTE: Finish adds 4-5 grams of weight.)

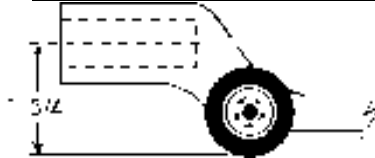
f. Material - Wood (**WOOD NOT ALLOWED**), Must be at least 2 different materials securely fastened together. Must list materials used on the evaluation sheet

g. Finish - Sanded smooth, painted finish is required. **NO WET PAINT!** (Any names, decals, detailing, etc. must be done in good taste.)

2. Power Plant Specifications

a. Size and Material - Standard 8 gram cartridge, 3/4" diameter x 2 1/2".

b. Location - Centerline 1 3/4" ABOVE THE FLOOR IN A RACE READY CAR.



c. Housing Size - 1/8" minimum thickness around cartridge at all points - 3/4" x 2" deep hole.

3. Axle, Bearing, and Wheel Specifications

a. Axle Material (Metal - any type)

b. MAXIMUM 1/16" AXLE MOVEMENT FROM SIDE TO SIDE.

c. Bearing - Sufficient material around axle hole or bearing for support and safe operation. (Judges discretion)

d. Must have least 5" between axle centers; may be located at any point.

4. Steering System Specifications

a. Screw Eye - On centerline alignment and FIRMLY ATTACHED MINIMUM SIZE SCREW EYE TO BE USED IS: #217 1/2

b. Distance between Screw Eyes - 5" minimum

CRITERIA FOR JUDGING:

Entries are judged for speed (50 ft. track) and execution of design. Any car that does not meet specifications will be disqualified from the awards. All disqualified dragsters will be raced if time permits. (NOTE: All CO² cartridges will be supplied by the Technology Exposition.)

Awards in Levels I and II.

