

Edgar County 4-H Rockets

Index

Part	Page	Contents
1	1	LEADERS, JUNIOR LEADER, IMPORTANT DATES
1	2	ESTES ROCKET SUPPLIES, AND SPECIAL ORDER - CUSTOM ROCKETS COUNTY HANDBOOK POLICY (rev.2006) COUNTY FAIR CLASS UNDERSTANDING
2	1	Special Instructors rules
2	2	Special Instructors rules
2	3	Special Instructors rules
3	1	Index and Rules of Thumb in rocketry- useful information
4	1	Rocket Construction Score Sheet
4	2	Rocket Launch Score Sheet

EDGAR COUNTY 4-H SITE: <http://web.extension.uiuc.edu/edgar/>

For handbook, exhibitor form, etc!

Aerospace division - County 4-H Handbook (Rev. 2008)

Rules and regulations, sub-class information

Rocket launch classes, and static display classes

National Association of Rocketry Safety Code (N.A.R.) Rules for Launch

<http://www.nar.org/pinkbook/index.html>

FAA Part 101 : www.v-serv.com/usr/faa.txt

Estes Rockets: www.estesrocketswholesale.com

Belleville Hobby : www.bellevillehobby.com

Rules of Thumb

Wadding- Fill body tube to depth of 2 times the body tube diameter

$\frac{1}{2}$ "d = 1" deep \ 1"d = 2" deep \ 1 $\frac{1}{2}$ " d = 3" deep

Body Tube Length- length = 10 times the diameter

Fins Pattern 3 fins = 120 degree angles / 4 fins = 90 degree angles

Center point of Gravity

1.5 +/- inches in front of the engine = launch lug placement

Fin Finish Fins should be smooth as glass, no rough bubbles!

Sand fins smooth, add sealer, sand, and seal again to prevent wind drag

Engine Series

Engines are figured according to:

1) Letter class

2) Newton seconds of thrust- NST

3) time delay for ejection - Delay

Example : A 8-3 = Standard Load Class / 8 NST / 3 seconds delay

Example : B 6-4 = 2 times A / 6 NST / 4 Delay

Example : C 6-5 = 2 times B (4 x A) / 6 NST / 5 delay

Newton Seconds = the average push exerted by the engine

4.45 Newtons = 1 Pound of Force

EXHAUST of Engines-

B6-4 = 2250 to 2650 feet per second of horizontal thrust

= roughly **300 MPH**

= roughly **2015.5 lb force**

= **.32 caliber gun hitting you!!**