

QuikLOAD, 270WSM, 130gr Nosler BalTip, 62.06gr S365

WARNING: Since we have no control over equipment or data which may be used with this program, no responsibility is implied or assumed for results obtained through its use. Input data and results may be incorrect or wrong. Therefore the use of this data for loading ammunition can cause serious injury to personnell and material. The computer-results had to be checked against data available in current loading manuals.

LOT-TO-LOT VARIATIONS OF POWDERS, PRIMER SUBSTITUTION AND COMPONENT CHANGE OFTEN RAISE PRESSURES TO UNSAFE LEVELS. THE USER MUST ASSUME THE ENTIRE RISK OF USING THIS DATA FOR LOADING PURPOSES.

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User Data:**Date:**31-Jul-2014**Time:**08:23:05**File:** *.dat**Comment****Nominal Charge set at 90% of Pmax****Cartridge / Caliber****.270 WSM****Bullet****.277, 130, Nosler BalTip 2713**

Maximum Average Pressure, allowed

63817 psi.

4400 bar (Piezo CIP)

with boattail

Groove Caliber

0,277 in.

7,04 mm

Bullet Weight

130,0 gr.

8,42 gm

Case Capacity, overflow

79,5 gr. H2O

5,162 cm³

Bullet Length

1,215 in.

30,86 mm

Case Length

2,090 in.

53,09 mm

Bullet Seating Depth

0,445 in.

11,3 mm

Cartridge O.A. Length

2,860 in.

72,64 mm

Barrel/Tube Length

24,0 in.

609,6 mm

Shot Start / Init Pressure

3626 psi.

250,0 bar

Cross Section Area of Bore

0,0596 in.²

0,3845 cm²

Propellant type**Somchem S365**

Charge Weight

62,05 gr.

4,021 gm

Load Density

215,0 gr./in.³

0,850 gm/cm³

Heat of Explosion, Potential

238,8 J/gr.

3685 J/gm

Energy Density of Charge

51308 J/in.³

3131 J/cm³

Propellant Solid Density

404,63 gr./in.³

1,6 gm/cm³

Used Ratio of Specific Heats cp/cv

1,239

Burning Rate Factor Ba

0,44 1/s

Weighting Factor

0,5

Burning Function Limit Z1

0,605

Prog.-/ Degressivity Factor a0

1,715

Factor b

2,271

Bulk Density

231,4 gr./in.³

0,915 gm/cm³

Calculated and Estimated Data:

Bullet Shank Seating Depth

0,37 in.

9,4 mm

Capacity Displaced by Seated Bullet

0,0262 in.³

0,43 cm³

Useable Case Capacity

0,2888 in.³

4,732 cm³

Bullet Travel at Muzzle Exit

22,35 in.

567,81 mm

Loading Ratio("Density") / Filling

92,9 %

Charge Fraction Burnt at Shot Start

1,57 %

Predicted Data:

Maximum Chamber Pressure

57391 psi.

3957 bar

Bullet Travel at Pmax

3,18 in.

80,7 mm

at Muzzle Exit:

Bullet Velocity

3158 fps.

962,6 m/s

Pressure at Muzzle

11615 psi.

801 bar

Bullet Energy

2879 ft.lbs.

3904 Joule

Bullet Barrel Time

1,175 ms

Propellant Burnt

100,0 %

Ballistic Efficiency

26,3 %

Check Loading Manuals for Safe Minimum Charge Weight to Avoid Hazardous Ignition Conditions like Secondary Explosion Effects !

Real maximum (peak) of pressure is reached while bullet moves within barrel.

End of combustion reached before bullet's base passes muzzle.

