

QuikLOAD, 270WSM, 130gr Nosler BalTip, 65.25gr S385

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.

QuikLOAD® V.3.8.03 #590302, © Copyright 1987-2013 - H.Broemel, Babenhausen, Germany

User Data:**Date:**31-Jul-2014**Time:**08:32:33**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 S385**

Charge Weight

65,25 gr.

4,228 gm

Load Density

225,8 gr./in.³

0,893 gm/cm³

Heat of Explosion, Potential

238,5 J/gr.

3680 J/gm

Energy Density of Charge

53881 J/in.³

3288 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

0,405 1/s

Weighting Factor

0,5

Burning Function Limit Z1

0,42

Prog.-/ Degressivity Factor a0

2,206

Factor b

1,823

Bulk Density

235,2 gr./in.³

0,930 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

96.1 %

Charge Fraction Burnt at Shot Start

1,40 %

Predicted Data:

Maximum Chamber Pressure

57504 psi.

3965 bar

Bullet Travel at Pmax

2,63 in.

66,9 mm

at Muzzle Exit:

Bullet Velocity

3139 fps.

956,8 m/s

Pressure at Muzzle

12312 psi.

849 bar

Bullet Energy

2845 ft.lbs.

3857 Joule

Bullet Barrel Time

1,176 ms

Propellant Burnt

99,3 %

Ballistic Efficiency

24,8 %

WARNING: Near Maximum Average Pressure - unknown tolerances may cause dangerous pressures !

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

End of combustion occurs after the bullet's base passes muzzle.

