Reprinted from ***Real Answers***

What do all those words and numbers on my sidewalls mean?

Volume 11, Issue 1

real QUESTIONS real ANSWERS

BRIDGESTONE

PASSION for EXCELLENCE

www.trucktires.com

1-800-543-7522

What do all those words and numbers on my sidewalls mean

The Tire Doctor Responds:
Though some of it looks like a secret code, all the information you find on the sidewalls of your tires has a purpose and a meaning. We'll try to crack some of the codes for you.


ANOTHER
FROM
volume THREE
ISSUE two
LOOK
RA

TIRE SIZE

Nominal section width:
On "low profile" tires, section width will usually be in millimeters, as in this case, "295." On "tall profile" tires, nominal section width will be in inches, as is the "11" in "11R22.5."

"R"Indicates radial construction.
A "–" (dash) indicates bias-ply construction.

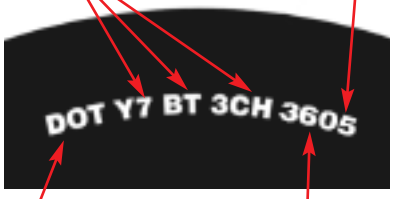
Aspect ratio:
Describes the shape of the cross-section. See diagram on page 37. On tall profile tires, considered to be "90-series" or "100-series" tires, aspect ratio is not shown as part of the tire size.

Nominal wheel diameter in inches, from bead seat to bead seat (approximately the diameter of the hole in the tire). See diagram on page 37.

DOT (Department of Transportation) NUMBER

Manufacturing codes:
Digits 1 and 2 indicate manufacturer and plant. Digits 3 and 4 are a tire size code. Digits 5, 6, 7 are for optional use.

Manufacturing date:
Digits 10 and 11 represent the last digits of the year of manufacturing, in this case, 2005.



All tires used in U.S.A. must display a D.O.T. number.
Retreads must display a retread D.O.T. number (starts with "R" instead of "D.O.T."

Manufacturing date:
Digits 8 and 9 designate the week (1-53) of the year, in this case, the 36th.

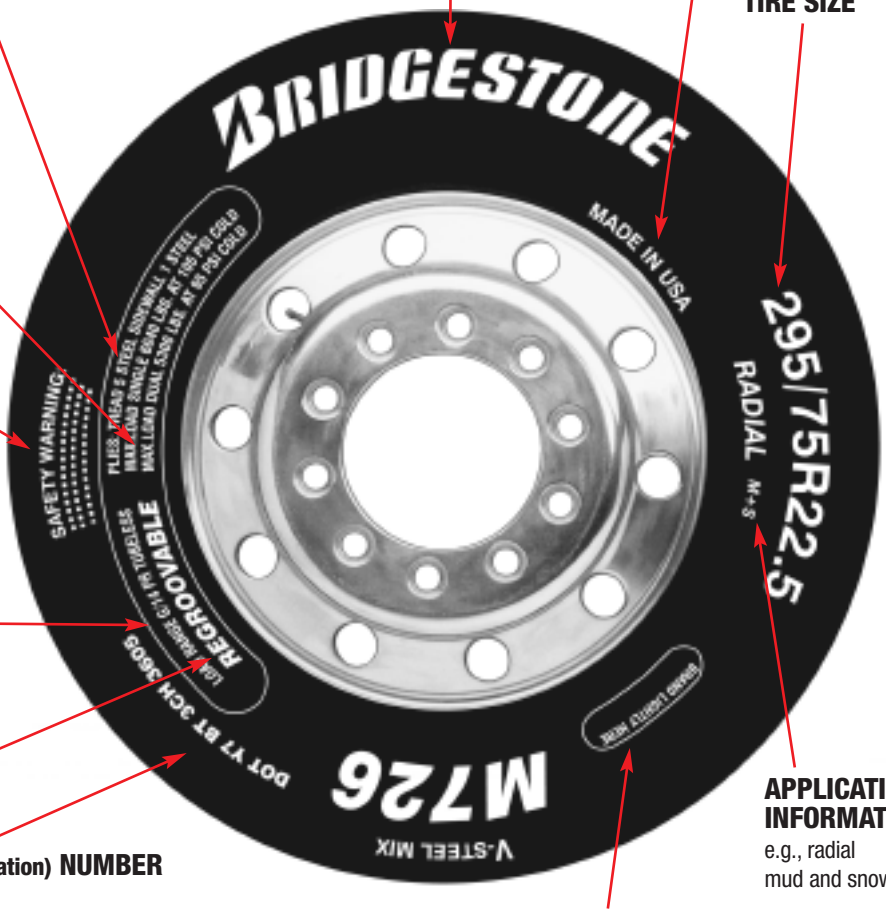
MANUFACTURER

COUNTRY OF MANUFACTURE

CONSTRUCTION INFORMATION

TIRE SIZE

MAXIMUM LOAD RATINGS



SAFETY WARNING
Serious injury may result from:
★Tire failure due to underinflation/over-loading—follow owner's manual or tire placard in vehicle.
★Explosion of tire/rim assembly due to improper mounting—use safety cage and clip-on extension of air hose

Only specially trained persons should mount tires.

LOAD & CONSTRUCTION INFORMATION

REGROOVABLE:
Sufficient rubber thickness under grooves to permit regrooving

DOT (Department of Transportation) NUMBER

APPLICATION INFORMATION
e.g., radial mud and snow

AREA FOR BRANDING
with your inventory number

Ply Rating/Load range:
The following chart shows the relationship between load range and ply rating (PR).

These designations provide a relative indication of maximum inflation pressure and the corresponding maximum load for which a tire is designed. Also sometimes considered an indicator of relative casing strength.

Ply Rating	Load Range
2	A
4	B
6	C
8	D
10	E
12	F
14	G
16	H
18	J
20	L
22	M
24	N

Maximum Load Ratings:
Maximum loads depend on inflation pressure and on whether the axle has a single tire and wheel assembly, or duals (two bolted together).

Dual load ratings are somewhat lower than single ratings to compensate for typical mismatching of inflation pressure, as well as momentary overloading if the tires encounter an uneven road surface.

Do not exceed the maximum load or maximum inflation pressures shown on the tire sidewall.

Lower inflation pressures may be used, but only with lighter loads. More detail is provided in manufacturer's load and inflation tables.

"Cold" means that the tire has been run less than one mile during the past 4 or more hours.

On an extended trip in hot weather, heat can cause tire pressures to rise by as much as 15 to 20 percent.

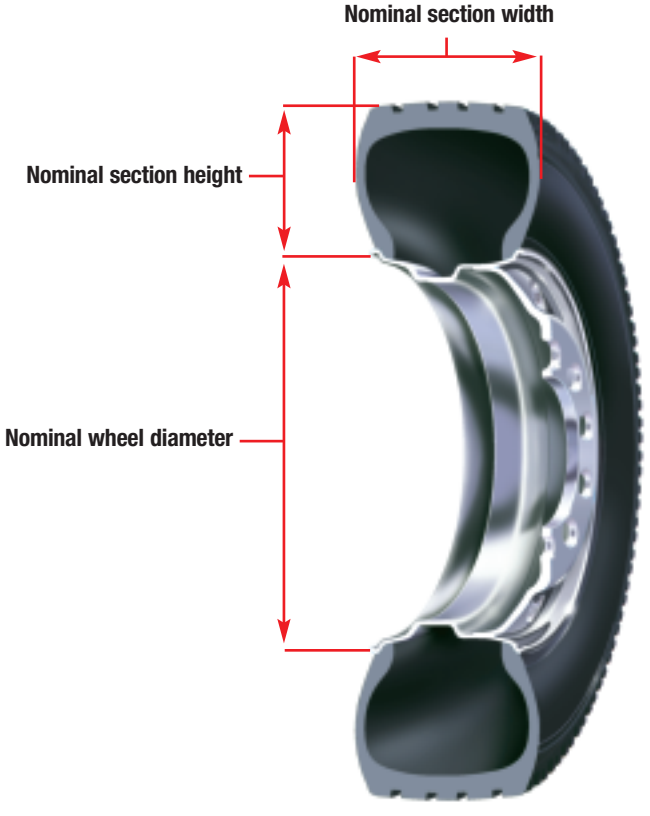
Construction information:
In this example, a single steel body ply runs from bead to bead. The sidewall, therefore, has one steel ply. Four steel belts are added between the body ply and the tread to make a total of five steel plies in the tread area.

Why are so many of the dimensions referred to as "nominal"?

Exact tire and wheel dimensions may vary slightly, and may depend to some extent on inflation pressure, loads, and other factors. "Nominal" dimensions correspond to general industry standards, and usually are close to actual dimensions.

What's the use of all these codes?

Besides providing useful information about sizes and correct usage, these codes have additional functions. The manufacturing date can be very important in determining whether a tire is in warranty, or in deciding whether or not to retread. And, for proper service, all load, inflation and safety warnings should be observed carefully by everyone who works with tires.



$$\text{Aspect Ratio} = \frac{\text{Nominal section height}}{\text{Nominal section width}} \times 100$$

Typical aspect ratios for low profile tires might be 80, 75, 70, 65, even 60. Tall profile tires are considered to have an aspect ratio of 90 or 100. Tires with a given aspect ratio are sometimes referred to as "90-series," "75-series," etc.