

## Tyre Construction and Function

- 1 Tread**
  - Thick rubber layer which directly contacts with the road
  - Protects the carcass / belt layers from the external shock or cut
  - Usually non-abrasive rubber adopted for tire mileage on compound design
- 2 Steel belt**
  - Circumferential steel topping layers as a reinforce, inserted between the tread and carcass
  - Shock absorbing performance
  - Cut off the groove-cracking or tread-cut transmitting to the carcass
  - Backup the tread stiffness
- 3 Inner liner**
  - Butyl rubber placed on inner surface.
  - Has the same function as tube (maintain air pressure)
  - Makes slow air-leak against nail puncture.
- 4 Shoulder**
  - Part of tire shoulder
  - Designed easy to exhale heat during operation  
Due to being the thickest part of the tire
- 5 Wrap(Cap ply)**
  - Placed around the edge of the belt stiffness
  - Edge wrap : only wrapping around the belt edge  
Full wrap : whole wrapping the around the steel belt
- 6 Bead**
  - Installation part with rim
  - Fixes the inflated tire from the rim
  - Compressed into the rim to prevent on air-leak
  - Bead steel wire inserted.
- 7 Sidewall**
  - Located between the shoulder and the bead at the side
  - Protects the carcass from corrosion.
  - Flexible bending and stretching exercise gives a comfortable ride
  - Size, structure, pattern, manufacturer, brand, etc are stamped on the side
- 8 Carcass**
  - Textile cord topping rubber layers between steel belt and inner liner
  - Cords are arrayed in a radial direction (Radial tire)
  - The framework of the tire.
  - Strong enough to hold a high air pressure, absorb load change and impact.

