



Tech Bulletin

World Leader in Race Fuel Technology™

Tech Bulletin prepared by Vince Colagiuri

Roo100 – FUEL STORAGE & HANDLING

Roo100 -- VP Racing Fuels are committed to offering the best race fuels available on the market today, therefore we would like all our customers to get the most performance and shelf life out of our products. Fuel storage and handling is just as important as your engine tune up, as how well you handle your Roo100 will determine its ability to perform on race day.

FUEL STORAGE & HANDLING — Due to Roo100 being an oxygenated fuel it's made of very light components (light ends) that will evaporate if it's not kept in a sealed container which will result in a loss of power. To get the most performance out of your Roo100 we recommend that all VP Racing Fuels drums (19liter or 200liter) are tightly sealed after opening to dispense fuel and are kept off the ground for long periods of time to avoid Roo100 attracting moisture. It is also recommended that you store your Roo100 drum in a cool place and out of direct sunlight as the sun's UV rays can have an effect on Roo100's lifespan. VP Racing Fuels 19liter steel drums have a handy pull up spout for easy pouring. It is highly recommended that you only pull this spout up once and leave it out as these spouts may become brittle over time from being pushed up and down which may result in them cracking and allow air to get into your drum or for the light components of Roo100 to evaporate.

PLASTIC FUEL JUGS - A plastic container is designed for fuel transfer, not storage. If you are going racing for a weekend, it's OK to put your fuel in plastic containers. We recommend that when you have finished racing to put your Roo100 back in its original VP steel drum and seal it tightly. Plastic is porous, even though the liquid fuel doesn't leak out of your jug the light ends of the fuel can evaporate out of the plastic.

AFTER A RACE – As we have mentioned the importance of your Roo100 being stored in a sealed container it pretty much goes without saying it's not good practice to leave Roo100 in your bikes fuel tank after a race event. We all know your bikes tank has a vent and it's no different to leaving the lid off your drum! Once you have finished racing or if you are racing over a period of a few days it's highly recommended to drain Roo100 out of your bikes fuel tank, pump, carburetor etc back into a sealed drum at the end of each day.

To purchase or for more information on Roo100 Contact:

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Or visit: www.vpracingfuels.com.au

The four most important properties of racing fuel

You can't make a racing fuel that has the best of everything, but you can produce one that will give your particular engine the most power. This is why we produce different fuels for different applications. The key to getting the best racing gasoline is not necessarily buying the fuel with the highest octane, but getting one that is best suited for your engine.

- OCTANE** – This is simply the rating of a fuel's ability to resist detonation and/or preignition. Octane is rated in Research Octane Numbers (RON), Motor Octane Numbers (MON), and Pump Octane Numbers (R+M/2). Pump Octane Numbers are what you see on the yellow decal at the gas stations and represents an average of RON and MON. VP reports MON ratings because this method tests a fuel's performance under a heavier load than the RON method, thus better simulates racing conditions. Most other companies use RON because it sounds better in marketing messages. Don't be fooled by high RON numbers or an average—MON is the most relevant for a racing application. However, a fuel's ability to resist preignition is more than just a function of octane.
- BURNING SPEED** - The speed at which fuel releases its energy. In a high-speed internal combustion engine, there is very little time (real time - not crank rotation) for the fuel to release its energy. Peak cylinder pressure should occur around 20° ATDC. If the fuel is still burning after this, it is not contributing to peak cylinder pressure, which is what the rear wheels see.
- ENERGY VALUE** - An expression of the potential in the fuel. The energy value is measured in BTUs per pound, not per gallon. The difference is important. The air:fuel ratio is in weight, not volume. Remember, this is the potential energy value of the fuel. This difference will show up at any compression ratio or engine speed.
- COOLING EFFECT**: The cooling effect on fuel is related to the heat of vaporization. The higher the heat of vaporization, the better its effect on cooling the intake mixture. This is of some benefit in a four-stroke engine, but can be a big gain in two-stroke engines.