We all know that water getting into an engine spells disaster, especially for the folks who unfortunately were stranded by a flash flood. However, water, when mixed with methanol, is a popular upgrade for the high-performance automobiles.

So, what is water/methanol injection?
It’s a naturally occurring volatile liquid, first widely used to boost the power output on warplanes for short runway takeoffs. It even has seen plenty of motorsports action in F1, which gave drivers an unfair advantage due to the immense power it can generate for a short burst.

How does it work?
Methanol is mixed with water to create methyl alcohol, which is then sprayed into the intake manifold through a system that oversees a safe dose delivery to the engine. This mixture has a “supercooling” effect on the hot intake temperature. This is why methanol injection is popular with super- or turbo-charged cars (although N/A setups can reap some benefits too).

The water is injected as a fine spray into the intake manifold plenum chamber where it evaporates, extracting energy from its surroundings and reducing combustion temperatures in the engine by around 25°C Celsius. With a cooler charge temperature, manufacturers can run more advanced ignition timing and/or boost to create more horsepower.

Isn’t it the same as ... “Nitrous”?
Not at all. Water/Methanol injection is mainly used as a knock suppressant and a charge cooler. The atomized water in the charge can take heat away from it cooling it down. And, it literally “steam cleans” the engine too.

A supercool method for power boostin’.

Most importantly, manufacturers like BMW are using water/methanol injection in their cars such as the 1-series to the M4 GTS to meet stricter emission regulations. By running a cooler intake charge, manufacturers can run higher compression engines to lower fuel consumption. There are many other benefits that can be had from water injection. Emissions are controlled due to the water absorbing heat from the combustion process, thus reducing the amount of exhaust gases produced such as NOx. This also keeps the engine healthier by absorbing the heat which would otherwise soak into the engine block.

A local trusted Methanol Dealer?
In Singapore, Best Chemical Co (S) Pte Ltd offers the Bestchem Methanol, which meets military spec: 0-M-232-E. Deionized water is used for the Bestchem Methanol premix to ensure that scale and foreign matter is eliminated, which prevents unnecessary contamination of the water injection system.

With a deionised water/methanol mixture of 50/50, it has been proven to be the best for charge/air cooling, excellent detonation control, and controlling cylinder temperature. Other popular blends available are 70%, 80% methanol premix and custom blend is available on request.

Best Chemical Co (S) Pte Ltd also is the exclusive distributor for other specialty solvents, chemicals and race fuels in Southeast Asia. Operating Singapore’s only 24/7 Race Fuel, Methanol and AdBlue “One-Stop-Shop”, motorsport enthusiasts will be able to walk in and purchase VP Racing Fuels, BestChem Methanol as well as Blue Sky AdBlue anytime at 60 Senoko Road, Singapore 758124 or shop online at eshop-best-chemical.com.