



PRODUCT INFORMATION SHEET

WYNN'S RACE FORMULA OCTANE BOOST

Product Number: 43905 12 X 500 ml

WYNN'S RACE FORMULA OCTANE BOOST is a premium formulated high performance fuel additive for petrol engines, that increases the octane number of any grade of petrol used, and provides valve seat recession protection.

Advantages

Petrol engine pinging causes severe damage to an engine. Prolonged pinging and detonation can cause loss of power, poor fuel economy, engine overheating, and worst of all, severe engine damage such as hammered bearings or melted pistons. One cannot always tell that a vehicle is suffering pinging or detonation. Inaudible detonation can be impossible to detect by ear. Dynamometer tests show that inaudible detonations will cause loss of horsepower and loss of ring sealing.

These problems became obvious when super leaded petrol had its octane rating reduced as a result of intense lobbying by community groups to have the lead levels lowered. Also these problems are not limited to leaded petrol. Many later model cars running on either unleaded or premium unleaded fuel suffer both audible and inaudible detonation.

Late model cars with knock sensors can retard their spark advance and inject additional petrol to suppress detonation, but this reduces power and increases fuel consumption.

Wynn's Race Formula Octane Boost will overcome these engine knocking problems with whatever grade of petrol is used – unleaded (ULP), premium unleaded (PULP) or lead replacement (LRP).

Lead was more than an octane enhancer, it was a lubricant too. And when that lubricating protection was part of every tankful of leaded petrol, most passenger vehicles were engineered with "softer" less wear-resistant valve-seats.

Today, many of those older "lead-age" cars are still on the road. But with the loss of lead lubrication, their exhaust valves can stick to the valve seating – pulling away small metal particles that oxidise and, in turn, wear away more and more of the seating every time the valve closes.

Wear of the valve seating – or valve-seat recession (VSR) can lead to increased exhaust emissions, poor idling, and a loss of power. And since precise valve-to-seat contact is need for proper valve cooling, VSR can also result in valve burning and in rare cases, - catastrophic engine failure.

The potential for VSR increases with smaller engines running at higher speeds. So as more of the fast-paced world makes the change to unleaded petrols, Wynn's Race Formula Octane Boost is the smart solution to deliver both high-octane performance and valve-seat recession protection.

Benefits

Wynn's Race Formula Octane Boost, along with VSR protection, gives petrol the octane boost for smooth, no-knock combustion.

Wynn's Race Formula Octane Boost has been specifically formulated to provide the following benefits:-

- Increases the Research Octane Number (RON) by 2 to 5 units.
- Reduces and prevents pinging of petrol engines.
- Improves engine performance and acceleration.
- Avoids mechanical damage caused by pinging (engine knocking).
- Prevent valve seat wear.
- Lowers petrol consumption.
- Helps reduce intake valve deposits.
- Can be used in leaded or unleaded petrol.
- Does not contain lead components or alcohol.
- Safe for catalytic converters and oxygen sensors.
- Safe for use in turbo-charged engines.
- Safe on vehicle components including plastics and elastomers.

Wynn's Race Formula Octane Boost provides valve-seat recession protection and high powered performance for hard-driving times.

Applications

Wynn's Race Formula Octane Boost can be used in all grades of petrol – leaded and unleaded. Add one 500ml bottle to petrol tank at every tank filling, preferable before filling up.

Wynn's Race Formula Octane Boost is combustible but non-flammable. Keep away from heat, sparks and flame. Keep out of reach of children.

Wynn's Race Formula Octane Boost will not harm catalytic convertors or oxygen sensors at the recommended treat rate.

Typical Characteristics

Appearance	Clear Thin Liquid
Density @ 15°C	0.828 (ASTM D 4052)
Colour (Visual)	Amber
Colour (ASTM D 1500)	2.0
Flash Point (°C) PMCC	65 (ASTM D 93)
Boiling Point (°C)	>190
Volatiles (%Vol)	2.5

Performance Tests

● **OCTANE ENHANCEMENT**

To test the effectiveness of Wynn's Race Formula Octane Boost on Research Octane Number (RON), various grades of petrol were treated at different dose rates.

The untreated and treated grades of petrol were evaluated and tested to the Standard ASTM D 2699.

**ASTM D 2699
RESEARCH OCTANE NUMBER**

<u>RON Before Treatment</u>	<u>Improvement After 500ml 43905 Wynn's Race Formula Octane Boost</u>		
	40 Litres	60 Litres	80 Litres
Petrol:			
91.0	+5.5	+4.7	+4.1
92.0	+4.6	+3.9	+3.4
92.7	+4.0	+3.4	+2.9
95.0	+3.3	+2.8	+2.3
96.0	+3.2	+2.7	+2.3
98.0	+2.0	+1.7	+1.5

<u>UNLEADED PETROL (ULP)</u>	AUSTRALIAN STANDARD TYPICAL	91.0 MIN 91.7–92.7
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<u>PREMIUM UNLEADED PETROL (PULP)</u>	AUSTRALIAN STANDARD TYPICAL	95.0 MIN 95.0-98.0
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<u>LEAD REPLACEMENT PETROL (LRP)</u>	AUSTRALIAN STANDARD TYPICAL	96.0 MIN 96.0-96.5
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● **VSR PROTECTION**

Results from independent CLH testing of a “critical’ European engine shows just how dramatically Wynn’s Race Formula Octane Boost can reduce valve-seat recession (VSR).

WYNN’S RACE FORMULA OCTANE BOOST	VALVE RECESSON WEAR (mm/1000hrs)
UNTREATED UNLEADED PETROL	3.7
MINIMUM DOSE RATE	0.2
MAXIMUM DOSE RATE	0.1

High engine speeds and severity of operation, increase the protection required against valve-seat recession. Most vehicles will operate satisfactorily in normal conditions but will be stretched as conditions become more severe.

Wynn’s Race Formula Octane Boost provides the opportunity to treat sufficiently for the most severe operation.