



PRODUCT INFORMATION SHEET

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Date of Issue June 2012

WYNN'S RADIATOR FLUSH & DE-OILER

Product Number: 65010 24 x 325ml

WYNN'S RADIATOR FLUSH & DE-OILER is a unique concentrate formulated to thoroughly clean all automotive cooling systems. When used as directed it will remove sludge, deposits, scale, rust, oil and restore optimum cooling system efficiency.

Introduction

Cooling system failure is the leading cause of mechanical breakdown on the highway. Rust, corrosion, scale build-up, chemical breakdown and the formation of acids, all contribute to the likelihood of cooling system failure. If the cooling system fails, the engine and/or transmission could suffer severe damage, leading to costly repairs.

Modern cooling systems utilize thinner and lighter materials in their construction and have to cope with extremes in temperature and in most cases the added burden of cooling transmission fluid. One of the emerging problems is from these changes is the contamination of the cooling system from oils and transmission fluids which have traditionally been extremely hard to remove.

As a vehicle ages, the likelihood of cooling system failure increases. A conventional drain and fill will do little to address these problems as a large quantity of the old coolant is left behind. In addition, the deposits and corrosion debris left behind will seriously impair the proper functions of the cooling system.

Automobile manufacturers require scheduled engine coolant changes in order to maintain warranty coverage. Following the warranty period, engine coolant changes are still recommended on a specific schedule to maintain optimum condition of the cooling system.

Engine blocks, heater cores, hoses and water pumps are not typically drained during a traditional cooling system fluid drain and fill. In fact, up to 60% of the used contaminated fluid can remain in the system.

Just like motor oil and transmission fluid, engine coolant deteriorates over time, forming damaging scale and deposits.

Contaminants are difficult to remove when much of the old fluid remains in the cooling system. Much of this damaging debris stays in the cooling system, slowly deteriorating internal components.

Engine coolant drain and fill services can be messy, with a high likelihood of spillage of potentially hazardous waste onto the shop floor, and additional hazard in the workplace.

The use of WYNN'S RADIATOR FLUSH & DE-OILER in conjunction with the Wynn's PowerFlush Cooling System Flush and Fill Machine is the solution to overcoming the above problems.

Advantages:

➤ WYNN'S RADIATOR FLUSH & DE-OILER

The Wynn's PowerFlush Cooling System Flush and Fill Machine makes the chore of engine coolant changes much easier by connecting to the cooling system through the upper radiator hose. The machine removes most of the old, contaminated fluid from the entire cooling system including the engine block, heater core, water pump and hoses. The cooling system is then simultaneously filled with new or recycled pre-mixed engine coolant.

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The data concerning properties and applications of the indicated products are offered in good faith and are based on our research and practical experiences. Due to the versatility of the application possibilities, it is impossible to mention all details and we do not assume any obligations or responsibilities resulting from this. When a new edition appears due to technical development, the preceding data is no longer valid



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WYNN'S RADIATOR FLUSH & DE-OILER transforms the old fluid into a safe cleaner to remove sludge, deposits, scale, rust & oil that could cause contamination of the new engine coolant.

The Wynn's PowerFlush machine makes the removal of suspended oil, sludge, deposits and wear metals possible, providing unparalleled maintenance and protection.

Deposits that can cause poor heat transfer and restrict fluid flow are safely removed from the cooling system and hoses by using Wynn's Radiator Flush in conjunction with the Wynn's PowerFlush machine.

➤ REMOVES OIL, RUST, SLUDGE AND SCALE

While the damaging effects of rust in cooling systems is generally recognised, the harmful effects of grease and sludge are often overlooked. Sludge-forming oil enters the cooling system through leaky head gaskets and the use of inferior quality soluble oil type corrosion inhibitors which rapidly break apart. This type of cooling system contamination results in sludge accumulation in the radiator and reduced coolant flow unless removed by regular flushing.

Water contains dissolved inorganic matter which is present in the composition of soil and rock materials, which the water comes into contact with.

Because of its origin, water contains different amounts and types of scale forming solids, such as calcium, magnesium and silica.

Scale acts as an insulator and reduces the amount of heat that has to be transferred away into the cooling system. For example, 0.75mm of scale has the same insulating properties of 5cm of steel. Scale formation is of particular concern in large cooling systems where scale build-up traps heat and eventually causes engine problems.

➤ LOW FOAMING

Some traditional products used to remove oil from a cooling system have the side effect of causing high levels of foaming this leads to cavitation which can cause extensive damage to cooling system components. WYNN'S RADIATOR FLUSH & DE-OILER has been formulated to remove oil from the cooling system without causing foaming or cavitation.

➤ NO NEUTRALISER NEEDED

Strong acid or strong alkali type radiator cleaners not only clean "too clean" to the extent of re-opening small holes that have been sealed over by rust and/or scale, but also continue to attack cooling system components until stopped by a neutralising agent despite thorough flushing of the system with water. Wynn's Radiator Flush contains no harsh acid or alkali compounds and can be used safely without any neutralising steps being required.

➤ HARMLESS TO ALUMINIUM

Wynn's Radiator Flush is not only safe for the usual cast iron engine blocks and component parts but also for aluminium engine blocks. It has been particularly inhibited to make it harmless to aluminium alloys and other special alloys employed in cooling systems.

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➤ HARMLESS TO RADIATOR HOSES OR GASKETS

WYNN'S RADIATOR FLUSH & DE-OILER has been specifically formulated to remove oil, rust, scale, sludge, grease and other foreign materials from automotive cooling systems without damage to hoses, gaskets, metals or other cooling system components.

Benefits:

WYNN'S RADIATOR FLUSH & DE-OILER has been formulated to provide the following benefits;

- Powerful Non-Dangerous Goods cooling system flush
- Triple Action:
 - Removes scale
 - Removes oil & grease deposits
 - Removes rust & debris
- Cleans cooling systems quickly & safely
- Restores coolant flow and heat transfer efficiency
- Safe for rubber hoses, seals and all metals in the cooling system

WYNN'S POWERFLUSH COOLING SYSTEM FLUSH AND FILL MACHINE has been designed to provide the following benefits;

- Provides the best means for a factory recommended cooling system service
- Flushes contaminated fluid from the entire cooling system including the radiator, engine block, heater core and hoses
- Eliminates cross-contamination of engine coolants.
- Performs a complete cooling system service in 20 minutes or less.
- Avoids coolant spillage by easy and quick connection to cooling system through the upper radiator hose
- Completely portable and operates on 12V DC power
- Pressure checks the cooling system

Applications:

- Recommended for "water" cooled systems of all petrol and diesel engines
- Recommended for use when changing the cooling system fluid (follow manufacturer's recommendations)
- Extremely effective when trying to remove oil from the cooling system
- Particularly effective when cleaning older cooling systems

Directions:

One 325ml bottle will treat 10 to 15 litres of coolant depending on the degree of contamination.

Follow vehicle manufacturer's recommended flushing procedures.

- With engine off, remove coolant from overflow tank using the Wynn's Rapid Evacuation Tool.
- Release the pressure in the cooling system using the Wynn's Rapid Evacuation Tool.
- Remove radiator cap & pinch centre of upper overflow hose with pinch pliers.

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- Remove coolant from radiator to a level below the upper radiator hose using the Wynn's Rapid Evacuation Tool.
- Remove hose from radiator and connect the appropriate male and female upper radiator hose adaptors.
- Securely fasten all fittings.
- Add one bottle of WYNN'S RADIATOR FLUSH & DE-OILER. Replace radiator cap & connect adaptors.
- For vehicles without a radiator cap, add one bottle of WYNN'S RADIATOR FLUSH & DE-OILER to the upper radiator hose in the above application step.
- Start engine and bring to operating temperature.
- Follow the remaining procedures outlined in the Equipment Operation Manual to complete the Wynn's PowerFlush Cooling System Flush and Fill service.
- Inspect for leaks, to prevent and stop cooling system leaks, use WYNN'S RADIATOR SEALANT.
- Follow air-bleeding procedures as per vehicle manufacturer's instructions.
- When engine cools, re-check the coolant level.

WYNN'S RADIATOR FLUSH & DE-OILER is best used in conjunction with WYNN'S RADIATOR SEALANT (Product No. 68627)

Typical Characteristics

Appearance	Clear Thin Liquid
Colour (Visual)	Orange
pH (Concentrate)	3.6 (ASTM D 1287)
pH (3% vol in Distilled Water)	3.8 (ASTM D 1287)
Density @ 20°C	1.01 (ASTM D1298 (2005))
Flash Point (°C)	None
Boiling Point (°C)	100

<u>Property</u>	<u>Wynn's Radiator Flush & De-Oiler</u>	<u>Competitor A</u>	<u>Competitor B</u>
Cleaning Properties	Excellent	Excellent	Average
Oil Removal	Excellent	Excellent	Poor
Foaming Characteristics	Very Low	Extremely High*	Very Low
Oil & Water Separator Compatibility (Quick Break)	Excellent	Average	N/A
Extra Rinse Required	No	Yes	No
Dangerous Goods	No	Yes	No
Treatment Rate	325ml in 10L	1L in 10L	300ml in 10L
Recommended Flush Time	5 - 10min	30min*	10 - 15min

*Radiator cap must be left off during flushing process

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