HAWK WATERLESS COOLANTS

Product Data Sheet

POWER COOL 180°

DESCRIPTION

Waterless Engine Coolant for performance cars.

APPLICATION

For use in performance car engines and associated cooling systems fabricated from aluminium, aluminium alloys, steel and copper components.

TYPICAL CHARACTERISTICS

Physical State :	Low Viscosity Synthetic Liquid
Boiling Point :	Above 180 °C
Freezing Point :	Below -40 °C
Colour :	Red Clear
Odour :	Almost odourless
Taste :	Slightly Sweet, Non-Toxic but not for human consumption

4-LIFE DURABILITY

Hawk Waterless Engine Coolants have been proven to last >20 years and a million miles in service without the need for replacement.

ASTM & ISO STANDARDS

Hawk in association with ASTM committee D15.22 have developed a specific range of standards for waterless engine coolants. All Hawk Coolants are manufactured in accordance with certified ISO procedural standards.

AVAILABILITY

In 2, 5, 25, 205 and 1000 Litre containers

HEALTH AND SAFETY

Toxicity :	Non-Toxic
Environmental :	Bio-degradable
Flammability :	Not classed as flammable
Transport :	Not classed as hazardous

For more H&S information please refer to Hawk SDS PC180-SDS.

BENEFITS OF WATERLESS COOLANTS

Eliminates Overheating
Hawk Waterless Coolants have a boiling point above 180°C and will not vaporise, thus eliminating overheating, boil-over and after-boil.

Reduces Pressure
Hawk Waterless Coolants generate very low vapour pressures reducing strain on engine hoses and cooling system components.

Prevents Corrosion
Water promotes corrosion via oxidation and electrolysis - Hawk Waterless Coolants contain no oxygen and are virtually non-conductive effectively preventing corrosion.

Maximise BHP
Hawk Waterless Coolants eliminate pre-ignition and detonation caused by overheating - thus increasing combustion efficiency and delivering more power.

Stops Erosion
Hawk Waterless Coolants stop cavitation and eliminate liner and cooling pump erosion.

Freeze Protection
Hawk Waterless Coolants freeze below -40ºC

Non-Toxic
Hawk Waterless Coolants are proven to be Non-Toxic. Standard anti-freeze is toxic and known to kill pets.

HAWK WATERLESS COOLANTS

Maximum Engine Cooling .
Zero Water . Pure Performance .

Converting from water-based coolant

Converting to Hawk Waterless Engine Coolant will eliminate all problems associated with water, improve engine life and prevent overheating, corrosion, erosion, pressurisation and detonation.

Conversion from a water-based coolant to Hawk is a straight forward process that can be completed by anyone with basic engine knowledge, provided the instructions below are adhered to. The time to complete a conversion will depend on experience, engine design, and workshop/tool facilities - we estimate 1 to 2 hours.

If the engine to be converted is currently filled with a water-based coolant then a two-step procedure is required, Steps 1 to 20. However if the engine is 'dry' just fill with the appropriate Hawk coolant and ensure all air has been vented from the cooling system.

1. Do not work on a hot engine, thoroughly read all instructions.
2. Whenever possible verify the total cooling system capacity, to ensure you have sufficient Prep Fluid and/or Hawk coolant to complete the conversion. If it is not possible to confirm the capacity, drain the cooling system and measure how much fluid drains – add 10% for coolant that cannot be drained.
3. Locate cooling system drain-valve or drain-plug and check it operates and/or is not seized etc. – there is no point proceeding if the engine cannot be drained.
4. Run engine up to operating temperature, open (and leave open) all heater-matrix controls.
5. Once up to temperature and pressure inspect cooling system to identify any existing leaks or badly worn components.
6. Where necessary carry out repairs to ensure the coolant is retained inside the cooling system – this step is essential when converting to any coolant. Note: Hawk coolants will exert very little pressure on hoses, radiator seams etc. but if a small leak is evident replace the faulty part prior to conversion.
7. Allow engine and coolant to cool.
8. Carefully remove the radiator or expansion tank cap.
9. Place a suitable tray underneath the drain-valve or drain-plug.
10. Open drain valve or remove drain plug and allow water-based coolant to gravity drain. This might take several minutes.
11. Once the majority of water-based coolant has drained, release the radiator top-hose (clip) and introduce some low pressure compressed air. The Prep Fluid will absorb any remaining water, 90-98% of the water-based coolant can be removed on first-drain.
12. Once all water-based coolant has been drained, verify the volume (in litres or pints) and then dispose of in accordance with the Hawk Safety Data Sheet - available on request.
13. Replace or repair any faulty or leaking cooling system components.
14. Close the drain-valve or replace the drain-plug. Reconnect the top-hose and tighten any clips etc.
15. Fill the cooling system with sufficient Prep Fluid to ensure effective circulation around the complete system.
16. Leave the radiator or expansion tank cap off, as this will enable any trapped air to be vented.
17. Run engine up to operating temperature.
18. As the engine and coolant temperature rises the coolant will expand. Also, as air is vented from the system it may displace coolant from the radiator or expansion tank. Prevent Prep Fluid (or coolant) from dripping onto the exhaust system. All engine coolants can ignite under extreme conditions, especially when in contact with a very hot exhaust.
19. Once all air has been vented and the Prep Fluid has been topped up to the normal level, replace the radiator or expansion tank cap.
20. Inspect cooling system components for leaks. Hawk coolants exert much less pressure than water-based coolants so the tendency is to prevent leaks. If the engine to be converted has a possible leak run the Prep Fluid for a week to verify system integrity.
21. Repeat steps 7 – 12 substituting references of water-based coolant with Prep Fluid. Prep Fluid can be used several times, provided it is stored in a sealed container.
22. Fill the cooling system with the appropriate Hawk coolant;
    - **PowerSports** for Motocross, Trial & Enduro Bikes.
    - **Power Cool 180°** for High Performance Cars
    - **Classic Cool 180°** for Classic Cars
    - **Vintage Cool 180°** for Vintage Cars
    - **Auto Cool 180°** for Modern Production Cars
    - **PowerSports R** for Road & Race Bikes
    - **Heavy Duty** for HGV's, Construction, Agriculture
    - **Marine Cool 180°** for boats and cruisers
    - **Aero Cool 180°** for Rotax aircraft engines

    Fill to the same Level Mark as used for water-based coolants.
23. Repeat steps 14 – 19 substituting references of Prep Fluid with Hawk Coolant.
24. Affix the aluminium backed 'Hawk - Do Not Add Water' red sticker to the radiator/expansion tank cap, plus additional plastic stickers within the engine bay or adjacent bulk-heads.
25. In the event of engine maintenance requiring drainage of the cooling system, ensure the Hawk Coolant is captured and stored in a sealed container.

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