



RCP Platinum®

Ultra Long Life Coolant Concentrate



PRODUCT OVERVIEW

PrixMax RCP Platinum® is an advanced nitrite, amine, phosphate and silicate (NAPS) free and borate free OAT corrosion inhibitor coolant concentrate that offers ultra long life corrosion protection and superior heat transfer performance for cooling systems of automotive, light duty, heavy duty (on-road and off-road), marine, agricultural, stationary and power generation applications where freeze protection is not required. This product is the first coolant to be certified 100% Carbon Neutral. Developed for super extended service performance in heavy duty engines in particular, PrixMax RCP Platinum® is the next generation in the PrixMax RCP product line, which boasts arguably the most extensive field experience in Australia and Southeast Asia in mining, oil and gas, power generation and heavy transport applications of any comparable product on the market.

PRODUCT BENEFITS

- When used as directed, protects passenger cars and light commercial vehicles for up to 8 years or 250,000kms (whichever comes first) and heavy duty engines for up to 8 years, 1,250,000kms or 24,000 hours (whichever comes first)
- Up to 25-40% better heat transfer compared with conventional glycol-based coolants
- Excellent high temperature corrosion protection
- Can be used in most OEM automotive and OEM diesel and natural gas engines
- Environmentally safe Nitrite, Amine, Phosphate and Silicate (NAPS) free formulation
- Contains no borates or heavy metals
- Readily biodegradable
- Certified Carbon Neutral
- Non-flammable
- Low toxicity to marine and animal life based on recommended mix ratio
- Compatible with all OEM system seals, hoses and plastic components
- Increases water pump life due to improved lubrication and minimal wear on water pump seals
- No Australian Poisons Schedule, HAZCHEM, Dangerous Goods or GHS hazardous chemical classification when used at the recommended mix ratio

APPLICATIONS

- PrixMax RCP Platinum® is suitable for use in all of the following applications where freeze protection is not required and where a nitrite free, silicate free product is recommended:
- Passenger cars, 4x4s, SUVs and light commercial vehicles
 - Mixed fleets where cars, light duty trucks and heavy duty trucks are being serviced
 - Construction, earthmoving and mining equipment
 - On-road, off-road and marine cooling systems
 - Stationary power generation engines
 - High temperature aluminium alloy engine blocks

SERVICE LIFE

Equipment Type	Maximum Service Life*
Passenger Cars and Light Commercial Vehicles	8 YEARS or 250,000KMS
Heavy Duty Engines (on-road and off-road)	8 YEARS or 1,250,000KMS or 24,000 HOURS
Marine and Stationary Engines	8 YEARS or 32,000 HOURS

*Whichever comes first, provided a complete flush and fill is performed, a concentration level of 7.5% is maintained and specified use and maintenance directions followed. Routine visual inspections, coolant top-off and annual coolant testing are recommended to ensure maximum service life.

Service life intervals can be extended when combined with our Coolcheck® scheduled laboratory coolant analysis service.

PERFORMANCE STANDARDS AND TESTING

PrixMax RCP Platinum® meets AS 2108-2004 Engine Coolant Type B. For temperate climates where antifreeze is not required, PrixMax RCP Platinum® is recommended for use in, or where the following performance standards or specification requirements are cited:

- ASTM D3306 and D6210
- BS 6580
- Caterpillar EC-1
- Cummins CES 14603 (following AEB 90.47 recommendations)
- Detroit Diesel (DFS93K217)
- Deutz (TR0199-99-2091)
- Ford ESD-M99B166-C and WSS-M97B44-D
- GEC Alstom
- GMW 3420 and GM 6277M
- Hitachi
- Hyundai
- International
- Isuzu
- Jaguar
- Jenbacher
- JIS K2234 (Japan) and JASO M325 (Japan)
- Kenworth
- Komatsu
- Land Rover
- Liebherr (MD1-36-130)

- Mack Trucks
- MAK (A4.05.09.01)
- MAN 248
- MAN Diesel 2 and 4-stroke engines
- Mercedes Benz
- Mercedes Benz Trucks (MB 312.0)
- Mitsubishi
- MTU (MTL 5049)
- MWM (TR0199-99-2091)
- Navistar
- Nissan
- PACCAR (Kenworth and DAF)
- Porsche
- Renault
- Ruston
- SACM Diesel (DLP799861)
- SAE J1034
- Scania (TI 2-98 0813 TB)
- Sulzer Diesel 2-cycle engines
- TMC RP 329, RP 338 and RP 364
- Toyota
- Ulstein Bergen 2.13.01 diesel & gas engines
- Volkswagen / Audi / Skoda / SEAT (TL 774D/F)
- Volvo Construction Equipment (VCE) and Volvo Truck Diesel Engines
- Wäertsilä
- Waukesha
- Yanmar
- Meets the phosphate-free and nitrite-free requirements of European manufacturers
- Meets the silicate-free and borate-free requirements of Japanese manufacturers

Seals and Components

Exceeds the industry standard CEC elastomer compatibility test L-39-T-96 for oils and coolants, after undergoing successful testing for a duration of 42 days for all CEC standard elastomers under reflux boiling conditions. This is six times greater than the standard testing duration:

- RE1 FPM Fluoro-carbon elastomer (Viton)
- RE2 ACM Polyacrylic rubber
- RE3 MVQ Methyl Vinyl Silicone (Silicone)
- RE4 NBR Nitrile-butylene elastomer (Nitrile)
- EPDM Ethylene propylene elastomer (ISO 6072 elastomer)

TECHNICAL CHARACTERISTICS

Property	Method	Typical Results
Colour		Green
pH (5% by vol)	ASTM D1287	8.1
Nitrate, amine, phosphate, borate, silicate and other heavy metals content		Nil
Solubility in water		Complete
Ethylene Glycol, wt%		Nil
Density, g/ml, 20°C	ASTM D1122	1.06
Storage Stability		>2

Technical Characteristics are typical of those obtained with normal production tolerance. Variations in product typical results are to be expected during normal manufacture.



MAINTENANCE

General

- For true long-life protection, do not mix PrixMax RCP Platinum® with other coolant products.
- The coolant should be changed out at overhaul or 6 years subject to testing.
- The shelf life of the product is at least 2 years. The product should be protected from frost and direct sunlight during storage. The product should be stored above -5°C and preferably at ambient temperatures and periods of exposure to temperatures above 35°C should be minimised.
- Always dispose of the used coolant in accordance with local, state and federal guidelines.
- For frost protection against sub-zero temperatures use the ethylene glycol based concentrate PrixMax MEG95 antifreeze/coolant.
- Full technical support of the PrixMax laboratory is available through our comprehensive Coolcheck® scheduled coolant analysis program, which at least annually determines the overall condition of the coolant and cooling system.
- A basic coolant maintenance check every oil change or 250 service hours can be performed using PrixMax Coolant Test Strips or a hand-held refractometer to identify problems with maintenance procedures and operational practices.

Recommended Coolant Concentration

This product is a super concentrate and must be diluted with good quality water before use. For optimum corrosion protection for all applications, the recommended treat rate of PrixMax RCP Platinum® concentrate is 75ml for every 1 litre of cooling system capacity (7.5%). At this concentration, 750ml of PrixMax RCP Platinum® concentrate will treat up to 10 litres of cooling system capacity. This product can be used at a minimum concentration of 5.5% in petrol engine passenger cars, however service life may be reduced. It is not recommended to exceed a concentration level of 10% in the cooling system.

Mixing

- PrixMax RCP Platinum® contains no ethylene glycol but the product is compatible with most conventional inhibited glycol or water based engine coolants.
- If mixed with more than 15% conventional coolant, treat the cooling system as if it contains conventional coolant or drain and flush the system and refill with PrixMax RCP Platinum® at the correct concentration in demineralised or good quality water.
- Always start off with a clean cooling system using PrixMax Radiator Flush or similar commercial cleaner at the change interval if previously using conventional coolants. After draining the cleaner, flush thoroughly with clean water. Inspect the cooling system. Make necessary repairs and tighten all hose connections.
- Before mixing PrixMax RCP Platinum® with other coolants contact the Coolcheck® laboratories.

PACK SIZES

Part No	Pack Size
RPLAT-C500	500ml
RPLAT-C1	1 litre
RPLAT-C5	5 litre
RPLAT-P20	20 litre
RPLAT-D205	205 litre
RPLAT-B1000	1,000 litre

Please contact us for further enquires.

TOXICITY AND SAFETY

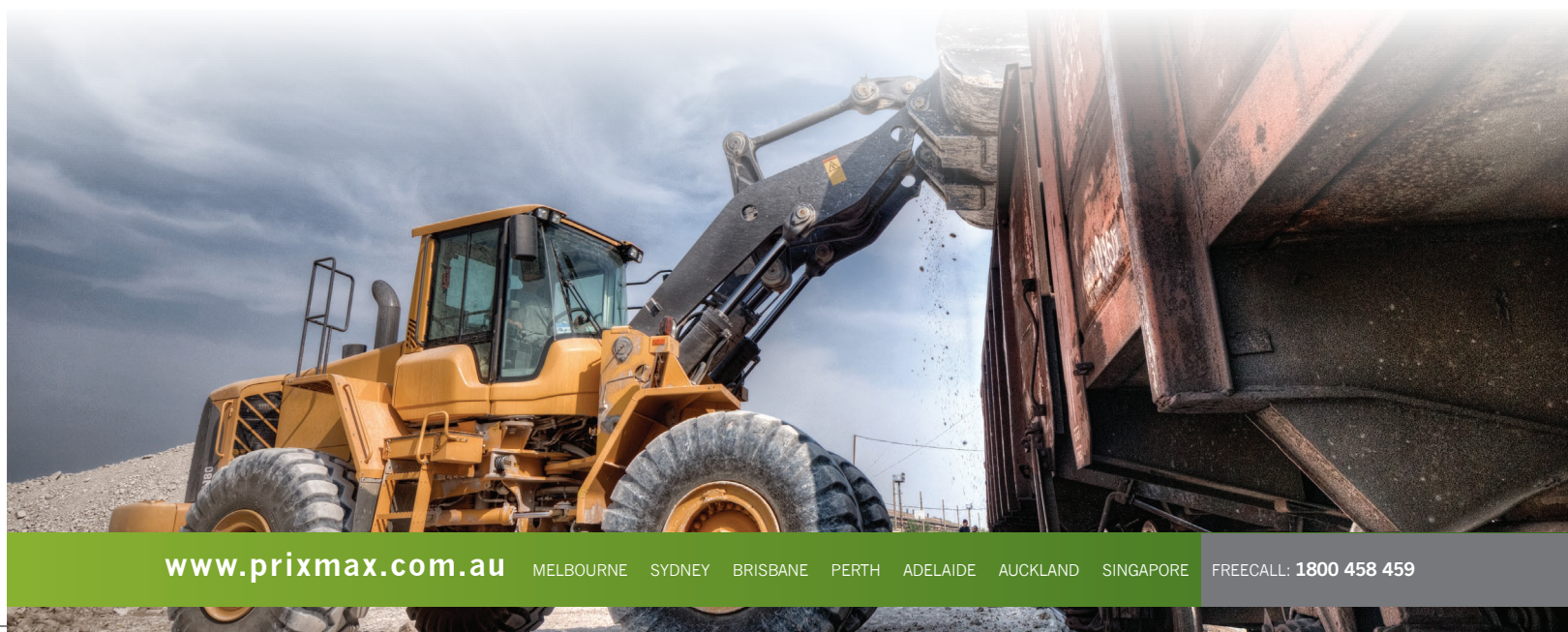
The PrixMax proprietary organic carboxylate technology has undergone extensive independent toxicological and biodegradability testing. PrixMax RCP Platinum® has a very low toxicity to aquatic fauna and mammals and is classified Readily Biodegradable (attained 84% degradation after 7 days AS4351 Part 2 testing).

Further ENVIRONMENT, HEALTH and SAFETY Information is available on this product in the **Safety Data Sheet (SDS)**. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal.

To obtain the SDS for this product, please contact us.

COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV GL
= ISO 9001 =

COMPANY WITH
ENVIRONMENTAL SYSTEM
CERTIFIED BY DNV GL
= ISO 14001 =



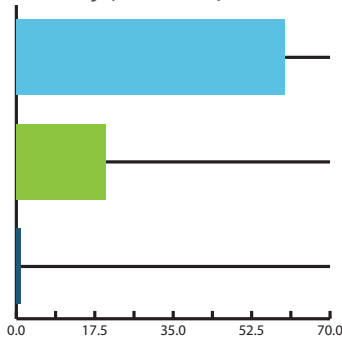
HEAT TRANSFER BENEFITS

PrixMax RCP Platinum® is up to 25-40% more efficient at transferring heat than conventional silicate containing glycol based antifreeze coolants.

Glycol-containing antifreeze coolants are many times more viscous than the water-based PrixMax RCP Platinum®. Figure 1 shows that Ethylene Glycol (EG) is around 20 times more viscous than water, with Propylene Glycol (PG) being around 60 times more viscous than water. The viscosity affects how freely the coolant can flow through the cooling passages. The lower viscosity of PrixMax RCP Platinum® contributes to the increased cooling efficiency of the system.

Figure 1

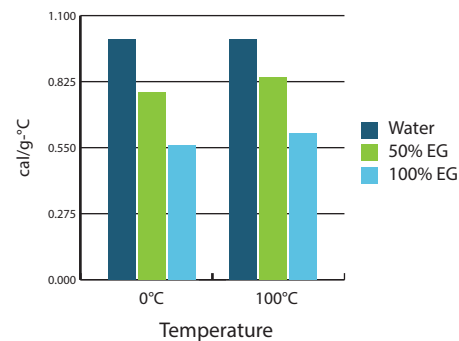
Viscosity (cP at 20°C)



As shown in Figure 2, water has a significantly higher specific heat capacity than both EG and PG. Having a higher specific heat capacity means that water can absorb energy much more readily and more effectively remove heat from the engine. In fact, as Figure 2 shows, a 50% EG solution can only absorb about 3/4 as much heat as water in a given time period. This means that for an EG based coolant to achieve the same result as water, you would have to either put much more coolant into the system, or circulate it much faster.

Figure 2

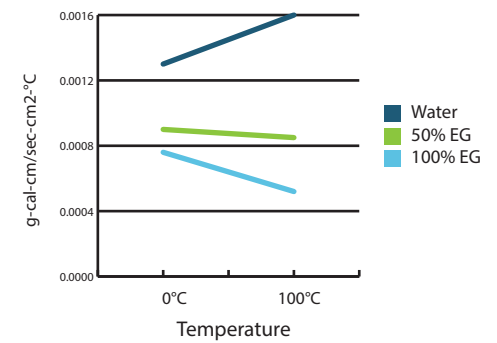
Specific Heat Capacity (Ability to Absorb Heat)



As shown in Figure 3, a 50% Ethylene Glycol and water mix in a typical anti-freeze/anti-boil coolant is 25-40% less efficient at transferring heat when compared to the water-based PrixMax RCP Platinum®.

Figure 3

Thermal Conductivity (Heat Transfer Capacity)



Finally, the silicate and phosphate-free formulation does not contribute to deposit build up, which can be seen with phosphate and silicate containing coolants, helping to promote and maintain heat transfer efficiency in the system.

