4801.00

Blue Coolant Hybrid

Engine coolant/anti-freeze based on ethylene glycol, with a corrosion inhibitor package based on organic acids salts and silicates (Hybrid Coolant). Free of nitrites, amines, phosphates. Concentrate product. TO BE DILUTED WITH WATER BEFORE USE. Suitable also for latest generation hybrid vehicles.

PAKELO BLUE COOLANT HYBRID is an innovative coolant/anti-freeze, easily biodegradable, containing a corrosion inhibitor package based on organic acid salts and silicates (Hybrid Coolant).
It is free of nitrites, amines and phosphates.
Mono Ethylene Glycol based coolant, PAKELO BLUE COOLANT HYBRID effectively protects engine cooling systems against overheating, frost, corrosion and deposits.

Through its special inhibitors the product protects all metallic engine components against corrosion for a longer period than the one of conventional coolants.

PAKELO BLUE COOLANT HYBRID provides several properties both to Constructors and to end user.
The use of this special product guarantees:

- better heat transfer properties;
- better compatibility with new generation aluminium heat exchangers;
- reduced maintenance of circuit components (thermostat, radiator, water pump, etc.);
- superior anti-corrosion protection for long periods;
- application in mixed fleets (cars, vans, heavy duty systems, excavators, etc.);
- more environmentally friendly thanks to the easy biodegradability of the product;
- greater reliability due to the highly stabilized inhibitor agents;
- difficult incidental ingestion due to the bitter taste of the product.

Water dilution

PAKELO BLUE COOLANT HYBRID is a concentrate product to be diluted with water before use.
It can be mixed with water at any percentage and provides good stability also if mixed with hard waters.

The product should be mixed with demineralized, deionized water or soft water.
It is also allowed the use of not hard tap water (water hardness less than 2,7 mmol/l).
Do not use sea water, waste water, industrial waste water, etc. and water with chloride and sulphate content more than 100ppm each.

The optimal blend of coolant and water is at a 50/50 volume ratio.
In this way frost protection provided is up to -38°C.
To guarantee a good protection against corrosion we recommend the use of coolant in water between 33% and 60% in volume corresponding to a frost protection between -18°C and -55°C.
It is important to prepare coolant/water mix outside of cooling circuit and before filling it.

Miscibility with other coolants

In order to obtain the best performance and longer drain intervals, we recommend using PAKELO BLUE COOLANT HYBRID only.
Mixing with other coolants is not recommended.

4801.00

Blue Coolant Hybrid

Application fields

PAKELO BLUE COOLANT HYBRID is a protection fluid for cooling and heat exchange systems of recent and previous generation engines.
The product is particularly recommended for new generation cooling systems using last generation metal alloys and gaskets.

PAKELO BLUE COOLANT HYBRID provides longer working life and has been developed for cooling systems of light duty, heavy duty vehicles and stationary engines.
It can also be used in cooling systems of latest generation hybrid vehicles.

Please follow performance levels and approval recommendations to know the suitable application for the product.
For maximum drain intervals (kilometers or operating times, whichever comes first) please follow OEM's Recommendations.

Performance levels

AFNOR NF R 15-601, **AS** 2108-2004, **ASTM** D3306 / D4985, **BS** 6580:2010, **China GB** 29743-2013, **CUNA** NC956-16, **JIS** K 2234:2006, **ÖNORM** V 5123, **SAE** J1034, **SANS** 1251:2005.
Audi/Seat/Skoda/VW TL 774-C, **Bez. Reg. Arnsberg**, **Dept. of Mining and Energy** 84.12.22.63-2001-2, **BMW** GS 94000 / LC-87, **Deutz** DQC CA-14, **Jenbacher** TA-Nr. 1000-0201, **Liebherr** Minimum LH-00-COL3A, **MAN** 324 Type NF, **Mercedes Benz** MB-Approval 325.0 / 326.0 (Ready Mix) / DTFR 29C100, **MTU** MTL 5048, **MWM** TR 0199-99-2091-12 DE, **Opel/Vauxhall** B 040 0240, **Porsche** (for 924, 928, 944, 968), **Saab** 6901599, **Volkswagen** G11, **Volvo Truck** (until MY 2005).

Approvals

MAN 324 Type NF, **MB**-Approval 325.0 / DTFR 29C100.

Chemical-Physical Characteristics

Blue Coolant Hybrid	Method analysis	Unit measure	Value
Colour	-	-	blue-green
Water content	ASTM D1123	% (w/w)	< 3,5
Ash content	ASTM D1119	% (w/w)	< 1,5
Density at 15°C	ASTM D1122	kg/l	1,126
Boiling point	ASTM D1120	°C	> 165
Reserve alkalinity (pH 5,5)	ASTM D1121	ml(HCl)	13 - 15
pH	ASTM D1287	-	7,1 - 7,3
Foaming at 88°C, break time (v/v - 33gl./67wa.)	ASTM D1881	ml (s)	< 50 (< 3)
Frost protection (50 vol. % solution with water)	-	°C	-38
Frost protection (33 vol. % solution with water)	-	°C	-18

The data just above refer to average values and must not be understood as guaranteed characteristics.