

HEADQUARTERS - FACTORY P. E. Borondo - Aluminio 2-3 28510 Campo Real (Madrid) - Spain

ANTICONGELANTE 50% G12++ COOLANT/ANTIFREEZE

Pg. 1 of 2

DESCRIPTION:

New generation direct use antifreeze-coolant (no dilution required) manufactured with organic hybrid technology with stable silicates (Lobrid Si-OAT Extended Life Coolant), for use in closed circuits of all types of vehicles and engines where a high quality, long service life coolant is required.

PROPERTIES AND ADVANTAGES:

With hybrid additives (Lobrid Si-OAT) based on organic acids (OAT) and long-lasting stable silicates.

Its formulation, in line with the most modern technology, combines the advantages of organic and inorganic antifreeze technologies, obtaining an end product with all the properties and characteristics required for optimum performance in modern engines of all types of vehicles where this type of coolant is required.

- Antifreeze, with protection down to -37 °C.
- Boiling protection up to +145 °C (+293 °F) in circuit at 2 atm. pressure, protecting the engine in overheating situations.
- Non-corrosive. Its immediate action additives effectively protect all types of radiators, especially those made of aluminium and aluminium/magnesium alloys.
- Anti-cavitation, preventing the formation of foam and air retention, facilitating optimum pump operation.
- NAP-free corrosion inhibitors: free of Nitrites, Amines and Phosphates, as well as other harmful or dangerous components for the ecosystem such as boron and molybdate compounds.
- Complete biodegradation in 20 days, calculated based on the main component.
- Compatible with all types of couplings, seals (silicone and polycarbonate) and plastics.
- Long service life product:
 - ✓ Up to 650,000 km or 5 years in heavy goods vehicles and buses.
 - ✓ Up to 8,000 hours or 5 years in construction equipment and agricultural machinery.
 - ✓ Up to 250,000 km or 5 years in light vehicles.
 - ✓ Up to 32,000 hours or 5 years in stationary engines.

TECHNICAL DATA:

| PHYSICOCHEMICAL PROPERTIES | STANDARD | VALUE |
|--|--------------|-----------------|
| Colour | Visual | Violet |
| Glycol content (%) | UNE 26-361/2 | 50 |
| Density (kg/L) | ASTM D-1122 | 1.07 |
| Crystallisation point (°C) (°F) | ASTM D-3321 | ≤ -35 (-31) |
| Boiling point at 1 atm (°C) (°F) typical | ASTM D-1120 | 108 ± 2 (226,5) |
| Boiling point at 2 atm (°C) (°F) typical | ASTM D-1120 | 145 ± 2 (293) |
| рН | ASTM D-1287 | 8.0 - 9.0 |

Note: These data represent average values after different tests. Due to the wide variety of operating conditions, they do not constitute a basis for specifications.

HOW TO USE:

ANTICONGELANTE 50% G12++ is for direct use. Always replenish the levels directly with the same 50% antifreeze, never directly with water and, if possible, with an antifreeze of the same nature and concentration. ANTICONGELANTE G12++ can be used in any engine that uses both hybrid and organic coolants, such as G13, G12 EVO, G12++ and G12+. To obtain the maximum performance from our product, it is advisable to dispose of the remaining fluids in use in the circuit before making changes between different specifications. We advise not mixing with G11 or inorganic coolants.





HEADQUARTERS - FACTORY P. E. Borondo - Aluminio 2-3 28510 Campo Real (Madrid) - Spain

ANTICONGELANTE 50% G12++ COOLANT/ANTIFREEZE

Pg. 2 of 2

SPECIFICATIONS / QUALITY LEVEL:

ANTICONGELANTE 50% G12++ complies with, among others, the following international standards:

| ASTM D-3306: | BS 6580 (GB) | |
|---------------------------------------|--------------------|--|
| (ASTM-D-1384, D-4340, D-2570, D-2809) | CUNA NC 956-16 (I) | |
| ASTM D-4985 | EMPA (CH) | |
| UNE 26361-88 (E) | FVV Heft R 443 (D) | |
| AFNOR R 15/601 (F) | KSM 2142 (K) | |
| SAE J1034* | JIS K2234 (J)* | |
| NATO S-759 | | |
| *except alkaline reserve | | |

ANTICONGELANTE 50% G12++ exceeds, among others, the following specifications of engine manufacturers of heavy machinery, transportation (truck and bus), as well as tractors:

| CUMMINS: CES 14603 | MAN DIESEL & TURBO: BASF-CW-GLY00G40-01 |
|----------------------------------|---|
| DEUTZ: DQC CC-14 | MB TRUCK & BUS: 325.5 (concentrado para diluir) (*) |
| DEUTZ FAHR: >04/2017 | MB TRUCK & BUS: 326.5 (de uso directo al 50%) (*) |
| IRIZAR: >09/2016 | MTU: MTL-5048 |
| LIEBHERR: Minimun LH-01-COL3A | SCANIA: TB-1451 |
| MAN TRUCK & BUS: 324 Type Si-OAT | SETRA: MB 325.5 |

ANTICONGELANTE 50% G12++ guarantees maximum protection and exceeds, among others, the following specifications of private car manufacturers:

| AUDI: TL 774-G (G12++) | PORSCHE: > 2010 |
|---|------------------------------|
| BENTLEY: TL 774-G (G12++) | SEAT: TL 774-G (G12++) |
| BUGATTI: TL 774-G (G12++) | SKODA: TL 774-G (G12++) |
| LAMBORGHINI: TL 774-G (G12++) | SMART: MB 325.5 and MB 325.6 |
| MB CARS: 325.6 (concentrate for dilution) (*) | VOLKSWAGEN: TL 774-G (G12++) |
| MB CARS: 326.6 (for direct use at 50%) (*) | |

(*) OLIPES ANTIFREEZE 50% G12++ is supplied under standard 326.5 and 326.6, prepared at 50% for direct use. Do not dilute.

PACKAGING:

5 L bottle, 20L jerrycan, 200 L drum and 1,000 L IBC container.