

## HIGHTEC ANTIFREEZE COOLANT AN 13

Premium long service life coolant concentrate of the current generation based on monoethylene glycol with high corrosion protection and frost protection. Nitrite-free, amino-free, phosphate-free. Reliable protection for aluminium engines and cast iron engines.

### Description

HIGHTEC ANTIFREEZE COOLANT AN 13 is a premium long service life coolant concentrate of the latest generation with high corrosion protection and frost protection based on monoethylene glycol and glycerine. The proportionate utilisation application with glycerine, which is based on renewable raw materials, reduces CO2 emissions during production by approx. 11%. HIGHTEC ANTIFREEZE COOLANT AN 13 is nitrite-free, amine-free and phosphate-free and thereby contributes to environmental protection measures.

### Application

HIGHTEC ANTIFREEZE COOLANT AN 13 has been specially developed to fulfil the latest Volkswagen G13 coolant specification (TL 744-J). It is backwards compatible with the earlier specifications G12++/ G12+ (TL 774-G/-F) and reliably protects aluminium engines and cast iron engines from deposits and foam formation, thereby also ensuring optimum heat dissipation.

### Specifications

- ASTM D3306/D4985
- SAE J1034
- BS 6580
- VW TL 774-J (G13)

### ROWE recommendations

- JIS K 2234

### Advantages

- It meets the latest VW specification TL 774-J (G13)
- It is backward compatible with the former VW specifications G12++ and G12+ (TL 774-G/-F)
- Available for use in cast iron and aluminium engines
- Reduction in CO2 emissions by approximately 11% during production
- Free of nitrites, amines and phosphates, thus also playing a role in protecting the environment
- Prevention of deposits in a reliable manner
- Very good and permanent corrosion protection
- Unsurpassed protection against cavitation
- Minimal tendency to foam
- Miscible and compatible with other antifreeze concentrates of the same specification. However, in order to exploit the full product benefits of HIGHTEC ANTIFREEZE COOLANT AN 13, a complete coolant change is recommended.

### Notes

- The antifreeze protection can only be determined with special 'G13' refractometers due to the proportion of glycerol used. The use of standard refractometers leads to incorrect measurement results.

## Mixing table

| Frost protection up to [°C / °F]     | ANTIFREEZE COOLANT | H2O |
|--------------------------------------|--------------------|-----|
| -36 / -33                            | 1                  | 1   |
| -24 / -11                            | 1                  | 1,5 |
| -17 / 1                              | 1                  | 2   |
| Siedepunkt / Boiling Point [°C / °F] | ANTIFREEZE COOLANT | H2O |
| 109 / 228                            | 1                  | 1   |
| 107 / 225                            | 1                  | 1,5 |
| 105 / 221                            | 1                  | 2   |

## Typical characteristics

| Property                    | Method      | Unit              | Value       |
|-----------------------------|-------------|-------------------|-------------|
| Color                       |             | visual            | magenta     |
| Boiling point               | ASTM D 1120 | °C                | > 170       |
| pH                          | ASTM D1287  | -                 | 8,6         |
| Reserve alkalinity          | ASTM D1121  | ml 0,1 M HCl/10ml | ≈ 6         |
| Freezing point 1:1 AF:Water | ASTM D1177  | °C / °F           | -36 / -32,8 |
| Density at 20 °C            | ASTM D5931  | g/cm³             | 1.12        |

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