

**Engine** 100, 102, 103, 104, 110, 111, 112, 113, 114, 115, 116, 117, 119, 120, 121, 123, 127, 129, 130, 133, 137, 152, 155, 156, 157, 159, 166, 176, 177, 178, 180, 256, 266, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 285, 601, 602, 603, 604, 605, 606, 607, 611, 612, 613, 615, 616, 617, 621, 626, 628, 629, 640, 642, 646, 647, 648, 651, 654, 668, 780.001/990/996

**Engine** 780.991 in model 169.090

**Engine** all

### Coolant composition

Car and commercial vehicle engines (normal case):

#### Coolant composition OM 607 or M 200 in model 415

Hot countries:

60% water and 40% anticorrosion or antifreeze.

#### Tasks of anticorrosion/antifreeze agent

- Corrosion and cavitation protection for all components in the engine cooling system
- Antifreeze
- Increase the boiling point so that coolant does not evaporate so rapidly. Avoiding ejection of coolant at high coolant temperatures.

### Water

Use water which is clean and not too hard. Drinking water often satisfies the requirements, but not always. The amount of dissolved substances in the water may be of significance for the occurrence of corrosion. If doubt exists, analyze the water.

For fresh water specifications refer to **MB Specifications for Operating Fluids**.

#### Operational monitoring of coolant

Inspect the coolant for resistance to low temperatures before the start of the cold season.

In countries with high ambient temperatures, check concentration of anticorrosion/antifreeze agent once a year.

The corrosion protection in the coolant is depleted during operation. Old coolant, in which the corrosion protection is mainly depleted, is extremely corrosive.

#### Disposing of coolants

Observe the legal provisions and local waste water regulations.

The following brochure is available about disposing of waste products in auto repair trade for the location Federal Republic of Germany:

50% water and 50% anticorrosion or antifreeze.

For different coolant composition for CV engines, refer to **MB Specifications for Operating Fluids**.

Cold countries:


50% water and 50% anticorrosion or antifreeze.

In the model series 415 the anticorrosion/antifreeze "Arteco ETX 9536 B" (yellow fluorescent) is used at the factory. With this anticorrosion/antifreeze, the antifreeze protection configured at the factory will change in comparison to previous Mercedes-Benz van model series. The antifreeze protection is set between -25 °C and -37 °C ex factory and does not need to be adjusted. This results in a different coolant composition. Observe **MB-Specifications for Operating Fluids**.

#### Antifreeze

50% anticorrosion or antifreeze by volume provides antifreeze protection for up to approx. **-37 °C**. A higher concentration is only necessary if the ambient temperatures are even lower. 55% anticorrosion or antifreeze agent by volume provides antifreeze protection for up to approx. **-45 °C**.

For model series 415 with OM 607 or M 200, the factory-adjusted anticorrosion or antifreeze agent by volume is 40\_% (hot countries) or 50\_% (cold countries). This provides up to **-25 °C** or up to **-37 °C**.


 A concentration of more than 55% anticorrosion/antifreeze agent by volume should not be used as the maximum antifreeze protection is already reached at this concentration.


An even higher concentration reduces the anti-freeze protection and impairs heat dissipation. Reduced heat dissipation can result in damage to components of the engine cooling system and to the engine.

#### Period of use


The maximum permissible period of use of the coolant is given in the maintenance booklet, the applicable "Service/Maintenance Sheet" or the **MB-Specifications for Operating Fluids**.


For the period of use for a deviating coolant composition for CV engines, refer to **MB Specifications for Operating Fluids**.

 Before pouring in fresh coolant, flush the used coolant out of the engine cooling system.

 In case of severe soiling or oil fouling, clean engine cooling system.

Otherwise engine cooling system components may be damaged.

 If the drained coolant is used again, it is essential that the coolant is filtered before being filled into the engine cooling system.

 Dust particles must not enter into the engine cooling system. Otherwise engine cooling system components may be damaged.

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