RAVENOL ATF ZMS was developed with a high-quality synthetic base oil and a special selection of additives and inhibitors to produce excellent thermal and oxidation stability and adhesion factor performance. This guarantees the perfect functioning of the automatic transmission.

RAVENOL ATF ZMS demonstrates excellent flow properties at low temperatures.

RAVENOL ATF ZMS is a new generation ATF (Automatic-Transmission-Fluid) for ZF automatic transmissions of commercial vehicles. Guarantees maximum wear protection in every operating status.

RAVENOL ATF ZMS supports oil-change intervals up to 150,000 km, or a maximum of up to 3 years.

RAVENOL ATF ZMS enhances the reliability of older ZF transmissions, counters vibrations, ensures particularly soft gear changes as well as good driving comfort and also possesses friction-reducing properties.

RAVENOL ATF ZMS can contribute towards optimizing your servicing and operating costs by extending oil-change intervals. It is particularly recommended for applications with oil sump temperatures from 80°C up to 110°C according to ZF specification.

Application Notes

RAVENOL ATF ZMS was specially developed for heavy-duty ZF automatic transmissions used in local and regional public transport systems. Extreme loads, such as e.g. demanding topography, stop-and-go traffic and frequent retarder operation are not a problem for RAVENOL ATF ZMS.

RAVENOL ATF ZMS can be mixed with all ATF types of the ZF lubricant list TE-ML 04D.

- Oil and filter change intervals for Ecomat transmissions in busses up to 150,000 km, or every 3 years.

- Oil and filter change intervals for Ecomat transmissions in trucks, construction machinery and special vehicles during normal use (fire engines, construction vehicles and dumpers with high driving distances) after 2000 h or every 2 years.

- Oil and filter change intervals under demanding conditions (refuse collection vehicles, vehicles with high

RAVENOL ATF ZMS

FABRICATION SYNTHETIC
RECOMMENDATIONS  MAN 339 TYP Z3 | MAN 339 TYP Z4 (ZF ECOMAT 150 000 KM) | ZF TE-ML 04D | ZF TE ML 14E | ZF TE-ML 16N | ZF TE-ML 16Q | ZF TE-ML 20F | ZF 0671 072 120 | ZF 0671 072 130

RAVENOL ATF ZMS

ART.-NR. 1211102

1 L | 1211102-001
4 L | 1211102-004
10 L | 1211102-010
20 L | 1211102-020
208 L | 1211102-208
208 L | 1211102-D28
1000 L | 1211102-700
off-road times (low distance, high gear shift rate) after 1500 h or once a year.

**Characteristics**

**RAVENOL ATF ZMS** offers:

- Very good lubricant properties, even in low winter temperatures
- High, stable viscosity inde
- Very good oxidation stability
- Excellent protection against wear, corrosion and frothing
- Excellent friction coefficient consistency
- High thermal and oxidative stability
- Excellent cooling properties

RAVENOL special transmission fluid is special development for special gear and cannot be selected on the basis of technical parameters (viscosity, etc.). Therefore the decision was made not to give technical data. Please note: RAVENOL special transmission fluid is exclusively to apply under the original number, as indicated in the product information. Not sure of the correct transmission fluid, you can ask your garage or the car dealer with respect to the original OEM gear type and number or consult our advisers. It must be specified the VIN code (Vehicle Identification Number) of your vehicle. Misapplication of RAVENOL special transmission fluid can lead to malfunction of the transmission shifting problems, increased fuel consumption, unwanted slip behavior, etc. cause and cause the failure of the transmission. Ravensberger Schmierstoffvertrieb GmbH does not liable for transmission failures in case of wrong selection of RAVENOL special transmission fluid.
<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Data</th>
<th>Audit</th>
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<tr>
<td>Density at 20°C</td>
<td>kg/m³</td>
<td>843</td>
<td>EN ISO 12185</td>
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<tr>
<td>Colour</td>
<td>blau</td>
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<td>visual</td>
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<tr>
<td>Pourpoint</td>
<td>ºC</td>
<td>-51</td>
<td>DIN ISO 3016</td>
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All information correspond to the best of our knowledge to the actual situation of the cognitions and our development. Subject to alterations. All references made to DIN-norms are only for the description of the goods. There is no guarantee. In case there will be any problems please contact the technical service.

Release: 23. August 2019