Technical information

COOL-CORE READY PLUS
Coolant ready for use, for motor spindle systems
Formulated for Step Tec

Description
COOL-CORE READY PLUS is used as coolant and an anti-corrosion agent in motor spindle cooling systems, in particular where there is an inadequate supply of clean drinking water available for mixing purposes. The substances it contains passivate the various materials and provide long-term protection against corrosion.

Advantages
- Prevents electrochemical corrosion
- Protects aluminium, ferrous and non-ferrous metals
- Low-maintenance
- Long-term protection
- Frost-resisting to -30°C

Maintenance
COOL-CORE READY PLUS must be checked periodically in accordance with the spindle resp. machine manufacturer’s specifications. (see maintenance instruction on page 2). If COOL-CORE READY PLUS is to be used in a system that was previously filled with a product from another manufacturer, the cooling system must first be treated with 3% CS-CLEANER for 48 hours of operation before the fluid is changed. For this, please follow the spindle manufacturer’s maintenance instructions.

Application
COOL-CORE READY PLUS is ready to use: do not add any water. An average operating temperature of 20 – 25°C will provide very effective long-term protection for elastomers. If the coolant is used under optimal operating conditions while proper maintenance has been performed according to the instructions the coolant’s service life may be up to 4 years.

Important: Galvanised components or similar materials must not be used either in the cooling system or in the mixing or storage containers.

Storage
Store COOL-CORE READY PLUS in the original container at 5 – 35°C. The max. storage period in sealed original containers is 4 years.

Synergy Project
“Using synergies and letting them influence products to the advantage of the user,” is the maxim of the MOTOREX Synergy Project. Products that are influenced by the results of existing synergies between machine and tool manufacturers, users and MOTOREX are labelled as Synergy Projects at MOTOREX.

Typical technical data

<table>
<thead>
<tr>
<th>Properties</th>
<th>Unit</th>
<th>Test according to</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td></td>
<td>DIN ISO 2049</td>
<td>pink</td>
</tr>
<tr>
<td>Density at 20 °C</td>
<td>g/ml</td>
<td>ASTM D 4052</td>
<td>1.066</td>
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<tr>
<td>pH value at 20 °C</td>
<td></td>
<td>DIN 51785</td>
<td>8.0 – 8.6</td>
</tr>
<tr>
<td>Pourpoint</td>
<td>°C</td>
<td>ASTM D 5950</td>
<td>-30</td>
</tr>
<tr>
<td>Utilization temperature range</td>
<td>°C</td>
<td></td>
<td>4 - 80</td>
</tr>
<tr>
<td>Concentration</td>
<td>%</td>
<td></td>
<td>50 - 60</td>
</tr>
<tr>
<td>Factor for hand-held refractometers</td>
<td>%Brix¹</td>
<td></td>
<td>*1.6</td>
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</tbody>
</table>

Water hazard class: WGK1
Disposal code: VeVA / EWC 120109
*(Reading value of refractometer 34 => effective 54.4%)
Important information on the use of COOL-CORE READY PLUS

1. Initial commissioning of the spindle cooling system
   Before a cooling system is brought into operation first time, it must be cleaned prior to remove solids and germs. Neglecting this procedure may result in damage of components in the system or may spoil the coolant.
   - Flush the circuit thoroughly for approx. 2 hours using a mixture of COOL-CORE READY PLUS treated with 3% CS-CLEANER.
   - Drain the circuit completely.
   - Fill the coolant tank with COOL-CORE READY PLUS, following the filling instructions.

2. Regular maintenance
   COOL-CORE READY PLUS is a low-maintenance product providing long-term corrosion protection. In order to guarantee long-term protection and constant quality of the coolant, we recommend regular checks of the following parameters:
   - Appearance
   - Odour
   - pH value
   - Concentration

   Adjusting concentration due to evaporation:
   If the concentration exceeds the limit values it must be adjusted in steps by adding pure drinking water (acc. to specification below) to meet the target concentration of 30%.
   - Water hardness max. 3.6 mmol/l
   - Chloride max. 100 ppm
   - Sulphate max. 100 ppm

   Example: current concentration 60%, set concentration 55%, current coolant volume 25 Liter

   Replacement volume = current coolant vol. - \left( \frac{\text{current coolant vol.} \times \text{set concentration}}{\text{current concentration}} \right)

   Replacement volume = 25 - \left( \frac{25 \times 55}{60} \right) = 2.0 \text{ Liter}

   Therefore, 2.0 liters of drinking water must be added to the coolant tank.

3. Changing coolant
   Interval between changes:
   With an optimum environment and deployment conditions the coolant can remain in use for a maximum of 4 years.

   Procedure for a coolant change:
   1. Add 3 % CS-CLEANER to the “old” coolant. Then continue to work at least 48 hours.
   2. Then drain the tank completely and clean well. Important: Follow the regulations for the disposal of fluid.
   3. When the cooling circuit was heavily contaminated, we recommend before refill to flush the cooling circuit for 10 minutes with drinking water.
   4. Refill the tank with COOL-CORE READY PLUS.

4. Disposal of the old coolant
   The old coolant fluid must not be drained down the sewage system. It must be disposed of in the same way as water-miscible cooling lubricants. See the water hazard class and disposal code on page 1.

5. General information
   The above information reflects the current state of the art. Measurement and production tolerances customary in the branch apply to the key data shown here. Our products undergo constant development. We therefore reserve the right to amend the data contained in this product information at any time without prior notice. MOTOREX AG accepts no guarantee whatsoever for contaminated circuits, mechanical defects or similar which are attributable to defective maintenance, failure to comply with directives, or the use of materials/substances that are not recommended. The general terms and conditions of sale and delivery (AVLB) of MOTOREX AG LANGENTHAL apply.