

for cooling lubricants

General:

In many metal working processes (cutting, shaping, bending), water miscible cooling lubricants are used in the form of emulsions. Here, a regular check of the cooling lubricant emulsion is not only a significant prerequisite for its optimum use, but is also important for the safety of the user. A significant factor here is the nitrite content and the pH-value of the emulsions. Although today, many cooling lubricants are free of nitrite, it is possible that nitrite ions are produced in the emulsions due to a bacterial breakdown of nitrates in the water additive, or due to contamination. Thus, the nitrite content in cooling lubricants, among other factors, is an indication of the bacterial infection in the emulsion. According to TRGS 611¹⁾, a maximum limit value of 20 mg/l should not be exceeded.

Measuring the pH-value provides information on the serviceability of a cooling lubricant. Normal pH-values lie between pH 8.0 and 9.3. A lower pH-value reduces corrosion protection and the stability of the emulsion. With a high pH-value there is a danger of skin irritation.

QUANTOFIX® Nitrite/pH provides an easy method of checking the nitrite content and the pH-value directly in the cooling lubricant emulsions.

Instructions for use:

Remove only the required number of test strips and reseal the container immediately after use. Do not touch the test paper zones. Dip test strips **with all test fields** for 1 second into the test solution and shake off excess liquid. After 1 minute compare the colour of test fields with the colour scale.

Warning: Do not hold the test strips in the flow of cooling lubricant. Always remove a small sample.

Note:

Further details on evaluating the results can be obtained from the relevant manufacturer of the cooling lubrication and from Customer Services handling industrial liquids.

Literature:

¹⁾ Technische Regeln für Gefahrstoffe: Verwendungsbeschränkungen für wassermischbare und wassergemischte Kühlschmierstoffe, bei deren Einsatz N-Nitrosamine auftreten können (TRGS 611), Ausg. Oktober 2002, BArBl. (2002) Nr. 10, S. 67-72.

[Technical Regulations for Dangerous Materials: Restrictions on use for water-mixed cooling lubricants, where N-nitrosamines can occur (TRGS 611), Published October 2002, BArBl. (2002) No. 10, P. 67-72.]

Storage conditions:

Protect the test strips from sunlight and humidity. Store the container in a cool and dry place (storage temperature must not exceed +30°C).