

# LAB REPORT

Unit ID **CHP combined heat/power unit**  
 Component **Coolant**  
 Lab number **1704027**



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OELCHECK GmbH · Kerschelweg 28 · 83098 Brannenburg

Machine type: **BHKW**  
 Manufacturer: **CHP Manufacturer**  
 Coolant: **Standard Coolant**

Example report  
 Analysis scope: Coolant Kit All Inclusive Premium

## Diagnosis for the current laboratory values

The sample is transparent and shows a slightly increased amount of solid contaminants. The typical anti-freeze (glycol) additives and the glycol concentration are visible. The pH-value has slightly increased. Copper has slightly increased. Please observe further changes with the next sample. Please send a control analysis to the laboratory soon.

Dipl.-Ing. Matthias Aßmann

## Sample Rating



## Caution

ANALYSIS RESULTS		Current sample	Previous samples		
LAB NUMBER		1704027	1704028	1704029	1704030
SAMPLE RATING					
Date tested		20.01.2025	07.01.2025	06.12.2024	18.11.2024
Date of sample taken		12.01.2025	22.12.2024	01.12.2024	10.11.2024
Date of last coolant change		-	-	-	-
Top-up since change		-	-	-	-
Operating time since change	h	1500	1000	500	0
Total operating time	h	1620	1120	620	120
Coolant changed		-	-	-	no
CONDITION					
Color	-	pink	pink	pink	pink
Refractive index 20°C	-	1.3851	1.3853	1.3854	1.3856
Glycol concentration	% [Vol/Vol]	50.9	51.1	51.2	51.4
Density 20°C	kg/m³	1074	1075	1075	1075
pH value 25°C	-	8.4	8.4	8.3	8.0
Conductivity 25°C	µS/cm	330	335	333	338
Freezing point	°C	-48.8	-48.6	-48.6	-48.7
WATER QUALITY					
Water hardness	°dH	7.2	7.3	7.3	7.2
Alkaline earths	mmol/l	1.28	1.30	1.30	1.29
Calcium	Ca mg/l	24.2	24.8	24.4	24.3
Magnesium	Mg mg/l	16.3	16.6	16.9	16.2
Sulphate	mg/l	19.3	20.4	20.4	14.0
Chloride	mg/l	25.8	25.8	34.4	18.3
ADDITIVES					
Sodium	Na mg/l	< 10.0	< 10.0	< 10.0	< 10.0
Phosphorus	P mg/l	13.0	14.0	13.0	13.0
Boron	B mg/l	< 10.0	< 10.0	< 10.0	< 10.0
Potassium	K mg/l	342.0	352.0	347.0	350.0
Silicon	Si mg/l	96.0	101.0	106.0	109.0
Molybdenum	Mo mg/l	< 1.0	< 1.0	< 1.0	< 1.0
Effective silicate	mg/l	205.4	216.1	226.8	233.3
Nitrate	mg/l	< 5.0	< 5.0	< 5.0	< 5.0
Nitrite	mg/l	< 5.0	< 5.0	< 5.0	< 5.0
Phosphate	mg/l	< 5.0	< 5.0	< 5.0	< 5.0
Adipic acid	mg/l	3885.7	3879.7	3941.0	3929.1
Benzoic acid	mg/l	< 10.0	< 10.0	< 10.0	10.8
Sebacic acid	mg/l	14780.4	14693.1	14853.3	14682.4
Benzotriazole	mg/l	< 10.0	< 10.0	< 10.0	< 10.0
2-ethylhexanoic acid	mg/l	< 50.0	< 50.0	< 50.0	< 50.0
Tolyltriazole	mg/l	1162.1	1126.6	1115.9	1079.3
Isononanoic acid	mg/l	< 50.0	< 50.0	< 50.0	< 50.0
Octanoic acid	mg/l	< 50.0	< 50.0	< 50.0	< 50.0
Mercaptobenzothiazole	mg/l	< 10.0	< 10.0	< 10.0	< 10.0
Toluic acid	mg/l	< 10.0	< 10.0	< 10.0	< 10.0
Acetat	mg/l	92.5	88.7	86.2	81.3

Bottle and cap



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WEAR						
Iron	Fe	mg/l	< 0.1	< 0.1	< 0.1	< 0.1
Chrome	Cr	mg/l	< 0.1	< 0.1	< 0.1	< 0.1
Aluminum	Al	mg/l	< 0.2	< 0.2	< 0.2	< 0.2
Nickel	Ni	mg/l	< 0.1	< 0.1	< 0.1	< 0.1
Copper	Cu	mg/l	2.7	2.3	1.5	< 0.1
Lead	Pb	mg/l	< 0.1	< 0.1	< 0.1	< 0.1
Zinc	Zn	mg/l	< 0.1	< 0.1	< 0.1	< 0.1
Tin	Sn	mg/l	< 1.0	< 1.0	< 1.0	< 1.0
DEGRADATION PRODUCT						
Glycolate	mg/l		29.0	21.5	15.1	8.6
Formiate	mg/l		< 5.0	< 5.0	< 5.0	< 5.0
Oxalate	mg/l		< 5.0	< 5.0	< 5.0	< 5.0
CONTAMINATION						
Fluoride	mg/l		< 5.0	< 5.0	< 5.0	< 5.0
Bromide	mg/l		< 10.0	< 10.0	< 10.0	< 10.0
Manganese	Mn	mg/l	< 1.0	< 1.0	< 1.0	< 1.0
Titanium	Ti	mg/l	< 0.1	< 0.1	< 0.1	< 0.1
Vanadium	V	mg/l	< 0.1	< 0.1	< 0.1	< 0.1
Silver	Ag	mg/l	< 0.1	< 0.1	< 0.1	< 0.1
Lithium	Li	mg/l	< 1.0	< 1.0	< 1.0	< 1.0

