



TEST REPORT

- 1. Applicant:**
Company: MAGRON CO., LTD.
Address: #403 - 3dong, Gyeonggi Technopark, 705 Haeon-ro, Sangnok-gu, Ansan-si, Gyeonggi-do, 15588 (post code), Republic of Korea
- 2. Date of Application:** October 21, 2025
- 3. Purpose of Analysis:** Research
- 4. Sample Name:** Refer to Table 1
- 5. Appearance:** Liquid
- 6. Test Item:** Refer to Table 2
- 7. Test Method:** Refer to Table 2
- 8. Testing Period:** October 23, 2025 ~ October 27, 2025
- 9. Test Result:** Refer to Table 2
- 10. Analysis assistant:** Jihye Nam / Senior Researcher

Affirmation	Tested by Name: Jihye Nam  (Signature)	Technical Manager Name: Hyunseok Jang  (Signature)
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Issued Date: October 28, 2025

Tested by
Korea Polymer Testing & Research Institute (KOPTRI), Ltd.
Accredited by KOLAS, Republic of KOREA

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Table 1. Sample Information

No.	Sample Name	Koptri ID	Picture of the Sample
1	Ferrofluid	Koptri- 25-05-05314-1	

Table 2. Test Result

Koptri ID	Test Item	Unit	Test Method	Test Result
Koptri- 25-05-05314-1	Vapour Pressure (20 °C)	Pa	OECD Test Guideline 104 (Effusion method)	1.5×10^{-10}
	Vapour Pressure (25 °C)	Pa	OECD Test Guideline 104 (Effusion method)	4.2×10^{-10}

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* Raw Data

1. Test Method

- (1) Test Method: OECD Test Guideline 104
- (2) Analytical Instrument: Thermogravimetric analyzer
- (3) Test Procedure: The test substance is exposed to a slowly flowing inert gas under pressure. Mass loss is observed over an appropriate period under a limited isothermal condition at temperature $T(K)$ to determine the evaporation rate (v_T). Vapor pressure is calculated from the v_T value using the linear relationship between $\log P_T$ and $\log v_T$. A regression analysis of $\log P_T$ versus $1/T$ is used to estimate the vapor pressure at 20 °C and 25 °C.
- (4) Test Temperature Range: 220 ~ 280 °C

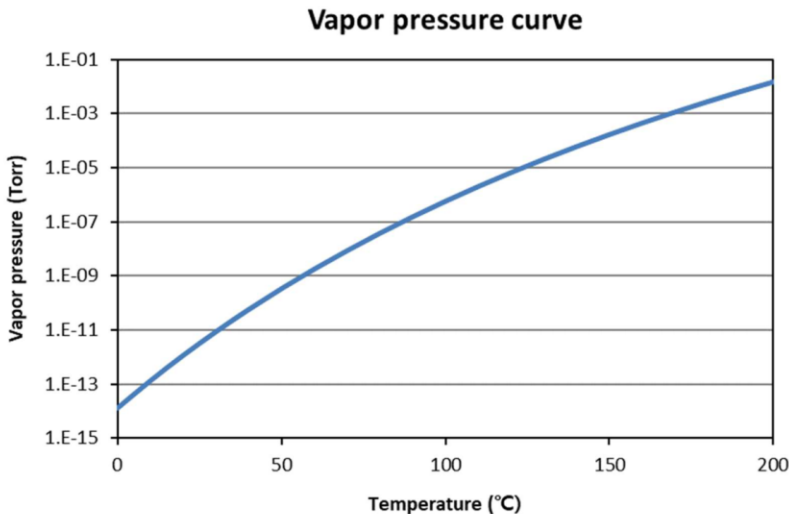
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2. Test Result

Table 3. Estimated Vapor Pressure of Koptri-25-05-05314-1 at Various Temperatures

Temperature (°C)	Vapor Pressure (Torr)	Temperature (°C)	Vapor Pressure (Torr)	Temperature (°C)	Vapor Pressure (Torr)
0	1.28×10^{-14}	80	3.73×10^{-8}	160	4.44×10^{-4}
20	1.13×10^{-12}	100	5.68×10^{-7}	180	2.77×10^{-3}
40	5.65×10^{-11}	120	6.56×10^{-6}	200	1.48×10^2
60	1.76×10^{-9}	140	5.98×10^{-5}	-	-

Figure 1. Vapor Pressure Curve of Koptri-25-05-05314-1 by Temperature



End of Test Report.

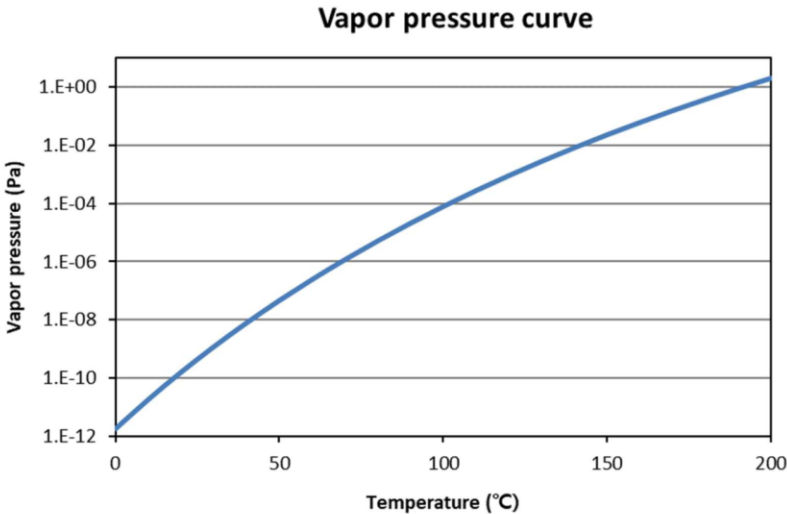
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2. Test Result

Table 3. Estimated Vapor Pressure of Koptri-25-05-05314-1 at Various Temperatures

Temperature (°C)	Vapor Pressure (Pa)	Temperature (°C)	Vapor Pressure (Pa)	Temperature (°C)	Vapor Pressure (Pa)
0	1.70×10^{-12}	80	4.97×10^{-6}	160	5.92×10^{-2}
20	1.51×10^{-10}	100	7.57×10^{-5}	180	3.69×10^{-1}
40	7.53×10^{-9}	120	8.74×10^{-4}	200	1.97×10^0
60	2.35×10^{-7}	140	7.97×10^{-3}	-	-

Figure 1. Vapor Pressure Curve of Koptri-25-05-05314-1 by Temperature



End of Test Report.