

# Test Report No. 7191361171-CHM25-02-YL

Date: 29 JUL 2025

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Client's Ref: PO-8080450695



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## **SUBJECT**

Formaldehyde Abatement Test

## **CLIENT**

Akzo Nobel Vietnam Ltd  
12<sup>th</sup> Floor, Vincom Centre Dong Khoi Building  
72 Le Thanh Ton Street, Ben Nghe Ward, District 1 70000  
Vietnam

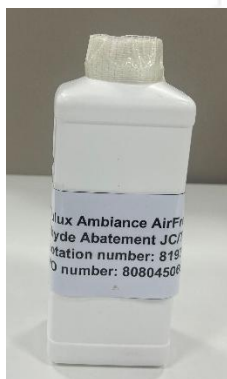
Attn: Ms Thi My Duyen Nguyen

## **SAMPLE SUBMISSION / TEST DATE**

30 Jun 2025 / 10 Jul 2025 – 29 Jul 2025

## **DESCRIPTION OF SAMPLE**

One paint with sample name "Dulux Ambiance AirFresh Matt" as below was received for test. The sample is classified into Class I (for decoration and renovation usage), Type IS (water-based liquid) and Type W (non-photocatalytic air purification by purification mechanism) in JC/T 1074-2021 (see Appendix A).



## **TEST METHOD**

JC/T 1074-2021 Purification performance of coatings with air purification



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## **PROCEDURES AND CALCULATION**

The test was done in partner lab with the following conditions and procedures.

### **Conditions:**

Test chamber size: 1 m<sup>3</sup>

Temperature: 25±1 °C

Relative humidity: 50±5%

Paint dosage: 250g coated on 4×500mm×500mm glass plates inside (default value)

Test duration: 24 hours per cycle for 3 cycles

### **Procedures (brief introduction):**

1. Install four blank glass plates in control chamber. Install paint coated four glass plates in sample chamber.
2. Dose formaldehyde into control chamber.
3. Dose same amount of formaldehyde into sample chamber.
4. At end of 24 hours, measure formaldehyde concentration in sample chamber and record as **n<sub>1</sub>** (1<sup>st</sup> Cycle).
5. At end of 24 hours, measure formaldehyde concentration in control chamber and record as **n<sub>24h</sub>**.
6. Repeat step 3 and step 4. Record formaldehyde concentration in sample chamber as **n<sub>2</sub>** (2<sup>nd</sup> Cycle).
7. Repeat step 3 and step 4. Record formaldehyde concentration in sample chamber as **n<sub>3</sub>** (3<sup>rd</sup> Cycle).

### **Calculation:**

Purification efficiency (1<sup>st</sup> cycle) :  $r = \frac{n_{24h} - n_1}{n_{24h}} \times 100\%$

Purification durability (3<sup>rd</sup> final cycle):  $r_f = \frac{n_{24h} + n_2 - n_3}{n_{24h} + n_2} \times 100\%$



**RESULTS**

Item	Result of Dulux Ambiance AirFresh Matt	Specification in Table 1, JC/T 1074-2021 for Type (IS/W), Class I Paint (Appendix A)	Remark
Formaldehyde end concentration in control chamber, 1st Cycle (24 Hrs) (mg/m <sup>3</sup> )	0.98	-	-
Formaldehyde end concentration in sample chamber, 1st Cycle (24 Hrs) (mg/m <sup>3</sup> )	0.18	-	-
Formaldehyde end concentration in sample chamber, 2 <sup>nd</sup> Cycle (24 Hrs) (mg/m <sup>3</sup> )	0.24	-	-
Formaldehyde end concentration in sample chamber, 3 <sup>rd</sup> Cycle (24 Hrs) (mg/m <sup>3</sup> )	0.33	-	-
Purification efficiency (%)	81.6	≥ 80	Pass
Purification durability (%)	73.0	≥ 70	Pass

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EXECUTIVE CONSULTANT  
ELEMENTAL ANALYSIS  
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**DR TANG SONGBAI**  
PRODUCT MANAGER  
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**Appendix A** Specification in Table 1, JC/T 1074-2021 Purification performance of coatings with air purification (Translated)

Table 1 Purification performance of indoor air purification coating materials

Item				Class I		Class II		
				Type IS	Type IF			
Target pollutant				Formaldehyde	Formaldehyde	Formaldehyde	Toluene	
Type W	Purification efficiency, %			≥ 80	≥ 80	≥ 90	≥ 50	
	Purification durability, %	C3		≥ 70	-	-	≥ 30	
		C6		-	≥ 70	≥ 80	-	
Type G	Purification efficiency, %	Light	Ultraviolet light source	-	-	≥ 90	≥ 50	
			Visible light source	≥ 80	≥ 80	≥ 85	≥ 50	
		No light		Measured value				
	Purification durability, %	Light	Ultraviolet light source	C3	-	-	-	≥ 30
				C6	-	-	≥ 80	
			Visible light source	C3	≥ 70	-	-	≥ 30
				C6	-	≥ 70	≥ 75	-
No light		Measured value						

Note:

- By purpose of usage, the coating materials (paints) are classified into Class I for indoor decoration and renovation and Class II for remediation, where Class I is further classified into water-based liquid coating materials (Type IS) and powder coating materials (Type IF) by materials.
- By purification mechanism, the coating materials (paints) are classified into non-photocatalytic air purification coating materials (Type W) and photocatalytic air purification coating materials (Type G).
- Pollutants such as Toluene etc. shall be tested for Class I products. For Class II products, can choose one of the pollutants for testing.
- If result of purification efficiency does not meet specification, it would be not necessary to continue for purification durability test.
- C3 means the third test cycle.
- C6 means the sixth test cycle.
- Ultraviolet light source is only necessary for Class II materials.
- Testing with and without light source for comparison is only necessary for Type G materials.

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Effective 27 March 2024

