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TEST REPORT

(This report is issued subject to the terms & conditions set out below)

Your Ref:	4504805213-G58	**Date: 28/10/2025**
Our Ref:	**CHEM-25-04184-1**	
Subject:	Analysis on sample submitted by Knauf Vietnam Co., Ltd on 14/08/2025 and test commenced on 14/08/2025.	
Tested For:	**Knauf Vietnam Co., Ltd** Headoffice Ho Chi Minh City 35 Nguyen Hue Street, Ben Nghe Ward, District 1 HO CHI MINH CITY 700000, VIETNAM **Attention: Thong Nguyen**	
Sample Description:	**FireShield 9.5mm, 12.7mm & 15.9mm**	

No.	Test Parameter	Test Method	Unit	Result	Reporting Limit
1)	Asbestos	ISO 22262-1: 2012 / PLM Method	%	N.D.	0.1
2)	***Test Chamber Parameters*** *Temperature: 23 ± 2 °C* *Relative Humidity: 50 ± 5%* *Chamber Air Exchange Rate: 0.88* *Chamber Loading Factor: 1.0* **10 days pre-conditioning and followed by 24, 48 & 96hrs sampling and testing**				
	Volatile Organic Compounds (VOCs) Emission *(A Toluene)* *(24,48 & 96 Hours)*	In accordance with CDPH V1.2 Test Method	mg/m^3	N.D.	0.05

Notes:	N.D. - Not Detected (< Reporting Limit)
	For VOCs Emission target compound at total 14 days, refer to the appendix.

Conclusion: The product has been tested according to CDPHv1.2-2017 and complies with the VOC limits in Table 4-1. The range of TVOC after 14 days (336 hours) is reported at 0.5 mg/m3 or less.

Signed for and on behalf of Eurofins Stats Asia Pacific Pte Ltd

LEI ZHI PEI
DIRECTOR

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Summary and Evaluation of the Results

Comparison with Limit Values of CDPH

Parameter	Test After 14 Days			
	SER in Test Chamber µg/(m²h)	Concentration in Classroom [µg/m³]	Concentration in Office Room [µg/m³]	½ CREL [µg/m³]
TVOC	< 50	< 25	< 80	-
Single compounds (With Defined CREL Values) **Toluene**	< 1	< 1	< 2	150
Formaldehyde	< 2	< 1	< 4	< 9

Conversion of Emission Rates to CDPH Reference Room Concentrations

The CDPH method requires calculation of the measured emission rates into concentrations in given reference rooms. The equation and parameters figured below have been applied to calculate the concentrations in an office room or a classroom as required in the CDPH. The area used in the calculation varies depending on the expected usage of the product and therefore several entries can be found. Small and Very Small areas are not provided within the CDPH but are adapted from definitions given in EN 16516 and ISO 16000-9.

$$C_{Calculated} = \frac{SER_A \cdot A}{n \cdot V}$$

		Classroom Parameters	Office Room Parameters
n	Air Change, h^{-1}	0.82	0.68
V	Volume of Reference Room, m^3	231	30.6
A	Walls Area, m^2	94.3	33.4

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Appendix

Table 4-1 Target CREL VOCs and their maximum allowable concentrations

No.	Compound Name	CAS No.	Allowable Conc.[a] (μg/m³)	Results
1	Acetaldehyde	75-07-0	70	N.D.
2	Benzene	71-43-2	1.5 [b]	N.D.
3	Carbon disulfide	75-15-0	400	N.D.
4	Carbon tetrachloride	56-23-5	20	N.D.
5	Chlorobenzene	108-90-7	500	N.D.
6	Chloroform	67-66-3	150	N.D.
7	Dichlorobenzene (1,4-)	106-46-7	400	N.D.
8	Dichloroethylene (1,1)	75-35-4	35	N.D.
9	Dimethylformamide (N,N-)	68-12-2	40	N.D.
10	Dioxane (1,4-)	123-91-1	1,500	N.D.
11	Epichlorohydrin	106-89-8	1.5	N.D.
12	Ethylbenzene	100-41-4	1,000	N.D.
13	Ethylene glycol	107-21-1	200	N.D.
14	Ethylene glycol monoethyl ether	110-80-5	35	N.D.
15	Ethylene glycol monoethyl ether acetate	111-15-9	150	N.D.
16	Ethylene glycol monomethyl ether	109-86-4	30	N.D.
17	Ethylene glycol monomethyl ether acetate	110-49-6	45	N.D.
18	Formaldehyde	50-00-0	9 [c]	N.D.
19	Hexane (n-)	110-54-3	3,500	N.D.
20	Isophorone	78-59-1	1,000	N.D.
21	Isopropanol	67-63-0	3,500	N.D.
22	Methyl chloroform	71-55-6	500	N.D.
23	Methylene chloride	75-09-2	200	N.D.
24	Methyl *t*-butyl ether	1634-04-4	4,000	N.D.
25	Naphthalene	91-20-3	4.5	N.D.
26	Phenol	108-95-2	100	N.D.
27	Propylene glycol monomethyl ether	107-98-2	3,500	N.D.
28	Styrene	100-42-5	450	N.D.
29	Tetrachloroethylene	127-18-4	17.5	N.D.
30	Toluene	108-88-3	150	N.D.
31	Trichloroethylene	79-01-6	300	N.D.
32	Vinyl acetate	108-05-4	100	N.D.
33-35	Xylenes, technical mixture (m-, o-, p-xylene combined)	108-38-3, 95-47-6, 106-42-3	350	N.D.

Notes: N.D. – Not Detected

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