

Test Report

No.: VNLSL2403008624TX

Date: Mar 30, 2024

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ENGINEERED CUSTOM COATINGS

1002 HICKORY ST. PEWAUKEE WI 53072

The following sample was submitted and on behalf of the client as:

Sample No.	Sample Description
A	41-0302 Defender Repellent RSL test

Color Submitted : /

Country of Origin : Vietnam

Country of Destination : Global

Sample Receiving Date : Mar 20, 2024 PM. Confirmation Date: Mar 21, 2024 PM

Test Performing Period : Mar 26, 2024 – Mar 30, 2024

Performed Test Summary : Selected test(s) as requested by applicant against Client’s specified requirement.

Test Results : Please refer to the next page(s).

Conclusion : PASS

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Chemical Tests:

Overall Result

	(A)
Free Formaldehyde	M
Total Cadmium	M
Total Lead On Substrate	M
Total Arsenic	M
Organotin Compounds	M
Phthalates	M
SVHC	N/A
Toy Safety Test	N/A
Total Fluorine Screening	M
Perfluorooctanesulfonate (PFOS) · its salts and PFOS-related substances Content	
PFOA, its salts and PFOA-related substances.	N/A
C9-C14 linear and branched Perfluorocarboxylic acids (PFCA), its salts and PFCA-related substances Content	
Organic Solvents	M
Alkylphenols (AP) & Alkylphenol Ethoxylates (APEO)	M
Dimethyl Formamide (DMFa)	N/A
N,N-Dimethylacetamide (DMAC)& 1-Methyl-2-pyrrolidone (NMP)	M
Synthetic Polymer Microplastics	N/A

Remarks: M = Meets Client's requirement
 F = Below Client's requirement
 N/A = Not Applicable

Note: Conclusions on pass/fail are based on the test result from the actual sampling of the received sample(s).

Signed for and on behalf of
SGS Vietnam LTD



Rhodora Quinto
 Softlines Lab Manager

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Component List / List of Material

Sample No.	Component	Material	Color	Fiber Type	Remark
A1	Transparent liquid	Liquid	Transparent	-	-

PHOTO OF SUBMITTED SAMPLE



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Test Results:

Free Formaldehyde (*)

Test Method: In-house method of steam distillation, Analysis was performed by UV/VIS spectrophotometer.

		Result (mg/kg)
	CAS-No.	A1
Formaldehyde	50-00-0	n.d.
Conclusion	--	PASS

Note: n.d. = not detected
mg/kg = ppm
Reporting Limit = 5 mg/kg

Client's Requirement:

< 36 months **16 mg/kg**
> 36 months **75 mg/kg**
Packaging **150 mg/kg**

Total Cadmium (*)

Test Method: In-house method. Analysis was performed by ICP-OES.

		Result (mg/kg)
	CAS-No.	A1
Cadmium (Cd)	7440-43-9	n.d.
Conclusion	--	PASS

Note: n.d. = not detected
mg/kg = ppm
Reporting Limit = 5 mg/kg

Client's Requirement: 40 mg/kg

Total Lead on substrate

Test Method: Non-metallic materials: With reference to CPSC-CH-E1002-08.3.
Analysis was performed by ICP-MS.

		Result (mg/kg)
	CAS-No.	A1
Lead (Pb)	7439-92-1	n.d.
Conclusion	--	PASS

Note: n.d. = not detected
mg/kg = ppm
Composite test has been performed and the result is calculated using the minimum sample weight.
Reporting Limit: 20 mg/kg

Client's Requirement: 60 mg/kg (others)

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Total Arsenic (*)

Test Method: With reference to QB/T 4340-2012. Analysis was performed by ICP-MS.

		Result (mg/kg)
	CAS-No.	A1
Arsenic (As)	7440-38-2	n.d.
Conclusion		PASS

Note: n.d. = not detected
mg/kg = ppm
Reporting Limit: 20 mg/kg

Client's Requirement: 100 mg/kg

Organotin Compounds (*)

Test Method: With reference to ISO/TS 16179:2012. Analysis was performed by GC-MS.

		Result (mg/kg)
	CAS-No.	A1
Tributyltin (TBT)	--	n.d.
Triphenyltin (TPhT)	--	n.d.
Dibutyltin (DBT)	--	n.d.
Diocetyl tin (DOT)	--	n.d.
Monobutyltin (MBT)	--	n.d.
Tripropyltin (TPT)	--	n.d.
Trimethyltin (TMT)	--	n.d.
Tricyclohexyltin (TCyT)	--	n.d.
Triocetyl tin (TOT)	--	n.d.
Conclusion		PASS

Notes: n.d. = not detected
mg/kg = ppm
Reporting limit = 0.02 mg/kg

Client's Requirement:

TBT	0.05 mg/kg < 24 months
TPhT	0.5 mg/kg > 24 months
TPT	0.5 mg/kg
DBT, DOT, TPT, MBT, TMT	1.0 mg/kg (each)
TCyT, TOT	1.0 mg/kg (each)

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Phthalates

Test Method: With reference to CPSC-CH-C1001-09.4. Analysis was conducted by GC-MS.

		Result (mg/kg)
	CAS-No.	A1
Dibutylphthalate (DBP)	84-74-2	n.d.
Bis-(2-ethylhexyl)phthalate (DEHP)	117-81-7	n.d.
Benzylbutylphthalate (BBP)	85-68-7	n.d.
Di-isononylphthalate (DINP)	28553-12-0 / 68515-48-0	n.d.
Di-n-octylphthalate (DNOP)	117-84-0	n.d.
Di-isodecylphthalate (DIDP)	26761-40-0/ 68515-49-1	n.d.
Di-n-Hexylphthalate (DnHP/ DHEXP)	84-75-3	n.d.
Di-iso-butylphthalate (DIBP)	84-69-5	n.d.
Di-n-pentyl phthalate (DPENP)	131-18-0	n.d.
Dicyclohexyl Phthalate (DCHP)	84-61-7	n.d.
Diethylphthalate (DEP)	84-66-2	n.d.
Di-C6-8-branched alkylphthalates (DIHP)	71888-89-6	n.d.
Di-C7-11-branched alkylphthalates (DHNUP)	68515-42-4	n.d.
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8	n.d.
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (DPP)	84777-06-0	n.d.
N-pentyl-isopentyl phthalate (NPIPP)	776297-69-9	n.d.
Diisopentylphthalate (DIPP)	605-50-5	n.d.
Dimethyl Phthalate (DMP)	131-11-3	n.d.
Dipropyl Phthalate (DPrP)	131-16-8	n.d.
Diisooctyl Phthalate (DIOP)	27554-26-3	n.d.
Di-hexylphthalate, branched and linear (DHxP)	68515-50-4	n.d.
Di-iso-hexylphthalate (DIHxP)	71850-09-4	n.d.
Conclusion	--	PASS

Notes: n.d. = not detected
mg/kg = ppm
Reporting Limit: 50 mg/kg (for individual compound)

**Client's Requirement: 500 mg/kg (Each)
1000 mg/kg (Sum)**

SVHC

Not Applicable

Toy Safety Test

Not Applicable

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Total Fluorine Screening

Test Method: Test Method: With reference to EN 14582:2016. Analysis was conducted by Ion Chromatography.

		Result (mg/kg)
	CAS-No.	A1
Fluorine content	--	n.d.
Conclusion	--	PASS

Notes: n.d. = not detected
mg/kg = ppm
Reporting limit = 50 mg/kg

Client's Requirement: 50 mg/kg

Remark: If detected over 50 ppm additional documentation such as MSDS, testing of All targeted PFAS chemicals will be requested by Buyer's compliance team.

Perfluorooctanesulfonate (PFOS), its salts and PFOS-related substances Content

PFOA, its salts and PFOA-related substances

C9-C14 linear and branched Perfluorocarboxylic acids (PFCA), its salts and PFCA-related substances

Content

Not Applicable

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Organic Solvents (*)

Test Method: In-house method – solvent extraction. Analysis was performed with GC-MS.

	<u>CAS-No.</u>	<u>Result</u>
		<u>(mg/kg)</u>
Benzene	71-43-2	n.d.
Phenol	108-95-2	n.d.
Tetrachloroethane	79-34-5/ 630-20-6	n.d.
Toluene	108-88-3	33
Xylene	--	n.d.
Trichloroethylene	79-01-6	n.d.
Dichloromethane	75-09-2	n.d.
Methylphenol	1319-77-3	n.d.
Carbon Tetrachloride	56-23-5	n.d.
Chloroform	67-66-3	n.d.
Cyclohexanone	108-94-1	n.d.
1,2-Dichloroethane	107-06-2	n.d.
1,1-Dichloroethylene	75-35-4	n.d.
Pentachloroethane	76-01-7	n.d.
Tetrachloroethylene (PER)	127-18-4	n.d.
Ethylbenzene	100-41-4	n.d.
1,1,1-Trichloroethane	71-55-6	n.d.
1,1,2-Trichloroethane	79-00-5	n.d.
Carbon disulfide	75-15-0	n.d.
Conclusion	--	PASS

Note: n.d. = not detected
mg/kg = ppm

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<u>Solvents</u>	<u>Client's Requirement</u> <u>(mg/kg)</u>	<u>Reporting Limit</u> <u>(mg/kg)</u>
Benzene	5.0	1.0
Phenol	10	3.0
Tetrachloroethane	1000	5.0
Toluene	1000	5.0
Xylene	1000	5.0
Trichloroethylene	1000	5.0
Dichloromethane	1000	5.0
Methylphenol	1000	5.0
Carbon Tetrachloride	1000	5.0
Chloroform	1000	5.0
Cyclohexanone	1000	5.0
1,2-Dichloroethane	1000	5.0
1,1-Dichloroethylene	1000	5.0
Pentachloroethane	1000	5.0
Tetrachloroethylene (PER)	1000	5.0
Ethylbenzene	1000	5.0
1,1,1-Trichloroethane	1000	5.0
1,1,2-Trichloroethane	1000	5.0
Carbon disulfide	1000	5.0
Sum	1000	-

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Alkylphenols (AP) & Alkylphenol Ethoxylates (APEO) (*)

Test Method: In house Method – Solvent Extraction. Analysis was conducted by LC-MS

		Result (mg/kg)
	CAS-No.	A1
Sum of Aps (NP+OP)	--	n.d.
Sum of APEOs (NPEO+OPEO)	--	n.d.
Sum of APs+APEOs	--	n.d.
Conclusion	--	PASS

Note: n.d. = not detected
 mg/kg = ppm
 Reporting limit = Total AP: 3 mg/kg; Total APEO: 20 mg/kg

Client's Requirement:

APs 10 mg/kg (Sum)
APs+APEOs 100 mg/kg (Sum)

Dimethyl Formamide (DMFa)

Not Applicable

N,N-Dimethylacetamide (DMAC)& 1-Methyl-2-pyrrolidone (NMP) (*)

Test Method: All other materials: With reference to DIN CEN ISO/TS 16189:2013. Analysis was conducted by GC-MS.

		Result (mg/kg)
	CAS-No.	A1
N,N-Dimethylacetamide (DMAC)	127-19-5	n.d.
1-Methyl-2-pyrrolidone (NMP)	872-50-4	n.d.
Conclusion	--	PASS

Note: n.d. = Not detected
 mg/kg = ppm
 Reporting limit = 50 mg/kg (each)

Client's Requirement: 1000 mg/kg(each)

Synthetic Polymer Microplastics

Not Applicable

Remarks: Above tests except (*) are accredited ISO 17025: 2017 by VILAS.
 The test results are considered as conform to specification based on the general consideration simple acceptance as stated in ISO/IEC GUIDE 98-4:2012.

Report results refer to submitted sample(s) only

*** End of Report ***

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