

TEST REPORT

Test Report No. RPT/H(FCM)/25/002332
Dated 2025.08.14



TEST REPORT

Test Report No. RPT/H(FCM)/25/002332

Dated 2025.08.13



Applicant	:	RELIANCE INDUSTRIES LIMITED -,Product Application & Research Centre, (PARC),P.O. Ranoli Vadodara;Gujarat-391346 India
Attention	:	Mr. Vikrant Sorte
Tested Sample	:	Received on 2025.07.03, 12:24 PM
Test Period	:	2025.07.03 to 2025.08.14
Sample Description	:	Sample A: RELWOOD (18mm PVC WPC FOAM BOARD)
Purpose of Examination	:	1. Overall migration 2. Specific migration of heavy metals 3. Specific migration of phthalates 4. Phthalates / Phthalates content 5. Specific migration of primary aromatic amines (PAAs) 6. Specific migration of vinyl chloride 7. Total Vinyl chloride Monomer Content 8. Sensory verification of Odour / Smell 9. Sensory verification of Taste/Look 10. Vinyl Chloride Monomer Content 11. Total Chloroform Soluble Extractives 12. Overall migration 13. Color Migration-Qualitative 14. Specific migration of heavy metals 15. Specific migration of phthalate (DEHP) 16. Specific migration of antimony 17. Sensory verification of Odour / Smell 18. Sensory verification of Taste/Look

Note: The submitted sample is Not Drawn by the Laboratory. Sample tested as received.

Unless otherwise agreed upon, PASS or FAIL verdicts are given based on the measured values without any considerations of measurement uncertainties. Every test method has a measurement uncertainty which has been evaluated by the laboratory and are available on request. By taking measurement uncertainties into account it might happen that measured values can neither be assessed as PASS nor as FAIL.

1. The testing conditions are followed as per the reported test standard. For additional test conditions, apart from the reported test conditions, the laboratory can be contacted for details. 2. The laboratory will retain the sample(s) for 45 days except for the mandatory retention period specified by the Regulatory Bodies and unless otherwise specified by the client.

Remarks:

1. Sample(s) is / are tested as on-received basis.
2. Test(s) performed as requested by applicant.
3. As confirmed by applicant, the submitted product is intended for single / one-time use.
4. Selection of test conditions for all tests was done considering worst case scenario, as requested by applicant.
5. Tests are Subcontracted to TUV SUD South Asia Pvt Ltd., Gurugram (India) except Phthalates.

Laboratory:

TUV SUD South Asia Pvt. Ltd.
S. F. No. 139/1B,
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Tamil Nadu, India

Phone :+91 4172 281 300
Fax :+91 4172 281 303
E-Mail : Vivek.G@tuvsud.com
Url : www.tuvsud.com
ControlNo:15310221.020223.010

Registered Office:

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Authorized By

Balakrishnan Pichaipillai
(Authorised Signatory)

Please contact :

For any technical issues : C. Arun at C.Arun@tuvsud.com

For any complaint: R.Rakesh at rakesh.r@tuvsud.com



By accepting this document the customer hereby agrees and accepts the 'Terms & Conditions' and the relevant 'Testing & Certification Regulations' of TÜV SÜD South Asia Pvt. Ltd. which are available at Company's website at the link-<https://www.tuvsud.com/en-in/terms-and-conditions>
Note: The test report is electronically generated. Hence original signature is not required.

Note : (1) The results relate only to the items tested, (2) The test report shall not be reproduced except in full without the written approval of the laboratory, (3) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (4) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same

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Summary of Test Result(s)

S. No.	Test(s)	Conclusion
1	Overall migration	Pass
2	Specific migration of heavy metals	Pass
3	Specific migration of phthalates	Pass
4	Phthalates / Phthalates content	Pass
5	Specific migration of primary aromatic amines (PAA)	Pass
6	Specific migration of vinyl chloride	Pass
7	Total Vinyl chloride Monomer Content	Pass
8	Sensory verification of Odour / Smell	Pass
9	Sensory verification of Taste/Look	Pass
10	Vinyl Chloride Monomer Content	Pass
11	Total Chloroform Soluble Extractives	Pass
12	Overall migration	Pass
13	Color Migration-Qualitative	Pass
14	Specific migration of heavy metals	Pass
15	Specific migration of phthalate (DEHP)	Pass
16	Specific migration of antimony	Pass
17	Sensory verification of Odour / Smell	Pass
18	Sensory verification of Taste/Look	Pass

Remarks : S.No. 1 to 9 as per EU Regulation, S.No. 10 & 11 as per US regulation & S.No. 12 to 18 as per IS Regulation.

Material list / List of material(s) (As confirmed by applicant)

Component No.	Component description	Material Type	Color
A	Relwood (18mm PVC WPC Foam Board)	-	-

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Sampling plan

S. No.	Test	Component No.
1	Overall migration	A
2	Specific migration of heavy metals	A
3	Specific migration of phthalates	A
4	Phthalates / Phthalates content	A
5	Specific migration of primary aromatic amines (PAA)	A
6	Specific migration of vinyl chloride	A
7	Total Vinyl chloride Monomer Content	A
8	Sensory verification of Odour / Smell	A
9	Sensory verification of Taste/Look	A
10	Vinyl Chloride Monomer Content	A
11	Total Chloroform Soluble Extractives	A
12	Overall migration	A
13	Color Migration-Qualitative	A
14	Specific migration of heavy metals	A
15	Specific migration of phthalate (DEHP)	A
16	Specific migration of antimony	A
17	Sensory verification of Odour / Smell	A
18	Sensory verification of Taste/Look	A

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Test Results: Non-Accredited Parameters

Overall migration

Test Specification(s) / Regulation(s): Commission Regulation (EU) No. 10/2011 & its amendments;
Test method(s) adopted: (For Olive Oil) EN 1186-3:2002 & (For 10% ethanol & 3% acetic acid) EN 1186-2:2002;
Simulant(s) used: Refer below;
Test condition(s): Refer below (under repeat- use condition / 3 Migration).

S.No.	Simulant used	Test condition	Test Result (mg/kg) Component No. A	Compliance requirement / Limit Max. (mg/kg)	Conclusion
1.	10% (v/v) ethanol	40°C for 10 days	ND	60	Pass
2.	3% (w/v) acetic acid	40°C for 10 days	ND	60	Pass
3.	Vegetable (Olive) Oil	40°C for 10 days	ND	60	Pass
Overall Conclusion					Pass

Limit of quantification: 12.0 mg/kg

Note: (1) "mg/kg" denotes milligram per kilogram & is equivalent to ppm (parts per million); (2) "°C" denotes degree Centigrade / Celsius; (3) "%" denotes percent; (4) "ND" denotes Not Detected or below limit of quantification.

(5) "% (w/v)" denotes percent in terms of mass/weight per unit volume. (6) "% (v/v)" denotes percent by volume.

Remarks: White marks observed on the sample in simulants – 10% ethanol

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Specific migration of heavy metals

Test Specification(s) / Regulation(s): Commission Regulation (EU) 2020/1245 amending and Correcting Regulation (EU) 10/2011 and its amendment;

Test method(s) adopted: With reference to EN 13130-1:2004 followed by analysis using ICP – MS;

Simulant(s) used: 3 % (w/v) acetic acid;

Test condition(s): 60°C for 10 days (Repeated use condition / 3rd Migration);

Equipment(s) used: ICP – MS (Inductively Coupled Plasma – Mass Spectrometer).

S.No.	Heavy metals	Test Result (mg/kg) Component No. A	Limit of Quantification (mg/kg)	Compliance requirement / Limit Max. (mg/kg)	Conclusion
1.	Aluminium (as Al)	ND	0.1	1	Pass
2.	Antimony (as Sb)	ND	0.01	0.04	Pass
3.	Arsenic (As)	ND	0.01	ND (DL:0.01)	Pass
4.	Barium (as Ba)	ND	0.01	1	Pass
5.	Cadmium (as Cd)	ND	0.002	ND (DL:0.002)	Pass
6.	Chromium (as Cr)	ND	0.01	ND (DL:0.01)	Pass
7.	Cobalt (as Co)	ND	0.01	0.05	Pass
8.	Copper (as Cu)	ND	0.1	5	Pass
9.	Europium (as Eu)	ND	0.01	0.05	Pass
10.	Gadolinium (as Gd)	ND	0.01	0.05	Pass
11.	Iron (as Fe)	ND	0.1	48	Pass
12.	Lanthanum (as La)	ND	0.01	0.05	Pass
13.	Lead (as Pb)	ND	0.01	ND (DL:0.01)	Pass
14.	Lithium (as Li)	ND	0.1	0.6	Pass
15.	Manganese (as Mn)	ND	0.05	0.6	Pass
16.	Mercury (as Hg)	ND	0.005	ND (DL:0.005)	Pass
17.	Nickel (as Ni)	ND	0.01	0.02	Pass
18.	Terbium (as Tb)	ND	0.01	0.05	Pass
19.	Zinc (as Zn)	ND	0.1	5	Pass
Overall Conclusion					Pass

Note: (1) “mg/kg” denotes milligram per kilogram & is equivalent to ppm (parts per million); (2) “°C” denotes degree Centigrade / Celsius; (3) “% (w/v)” denotes percent in terms of mass / weight per unit volume; (4) “ND” denotes Not Detected or below limit of quantification; (5) “DL” denotes Detection Limit

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Specific migration of phthalates

Test Specification(s) / Regulation(s): Commission Regulation (EU) No. 10/2011 & its amendments EU 2023/1442;

Test method(s) adopted: With reference to EN 13130-1:2004 (Total immersion method) followed by analysis using GC – MS;

Simulant(s) used: 3 % (w/v) acetic acid;

Test condition(s): 60°C for 10 days (Repeated use condition / 3rd Migration);

Equipment(s) used: GC – MS (Gas Chromatograph – Mass Spectrometer).

S.No.	Parameter (Refer Note 1)	Test Result (mg/kg) Component No. A	Limit of Quantification (mg/kg)	Compliance requirement / Limit Max. (mg/kg)	Conclusion
1.	Diethylhexyl phthalate (DEHP)	ND	1	1.5	Pass
2.	Dibutyl phthalate (DBP)	ND	0.3	0.3	Pass
3.	Benzylbutyl phthalate (BBP)	ND	1	30	Pass
4.	Diisononyl phthalate (DINP)	ND	1	-	-
5.	Diisodecyl phthalate (DIDP)	ND	1	-	-
6.	Diisononyl phthalate (DINP) + Diisodecyl phthalate (DIDP)	ND	-	9	Pass
7.	Adipic acid, bis(2- ethylhexyl) ester (DEHA) (CAS No. 0000103-23-1)	ND	1	18	Pass
8.	Bis(2-ethylhexyl terephthalate) (CAS No. 6422-86-2)	ND	1	60	Pass
9.	Diallyl phthalate (CAS No. 0000131-17-9)	ND	1	Shall be "Not Detected"	Pass
Overall Conclusion					Pass

Note: (1) Refer table of "Phthalates / Phthalates content" for CAS No. of these chemicals; (2) "mg/kg" denotes milligram per kilogram & is equivalent to ppm (parts per million); (3) "ND" denotes Not Detected or below limit of quantification; (4) "°C" denotes degree Celsius; (5) "%" denotes percent.

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Phthalates / Phthalates content

Test Specification(s) / Regulation(s): Commission Regulation (EU) No. 10/2011 & its amendments;

Test method(s) adopted: Based on EN ISO 14389:2022;

Equipment(s) used: GC – MS (Gas Chromatograph – Mass Spectrometer).

S.No.	Test Parameter	CAS No.	Test Result (mg/kg) Component No. A	Limit of Quantification (mg/kg)	Compliance requirement / Limit Max.	Conclusion
1.	Bis-2-ethylhexyl phthalate (DEHP)	117-81-7	ND	50	1000 mg/kg or 0.1%	Pass
2.	Dibutyl phthalate (DBP)	84-74-2	ND	50	500 mg/kg	Pass
3.	Benzylbutyl phthalate (BBP)	85-68-7	ND	50	1000 mg/kg or 0.1%	Pass
4.	Di-isononyl phthalate (DINP)	28553-12-0 68515-48-0	ND	50	1000 mg/kg or 0.1%	Pass
5.	Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	50	1000 mg/kg or 0.1%	Pass
Overall Conclusion						Pass

Note: (1) “mg/kg” denotes milligram per kilogram & is equivalent to ppm (parts per million); (2) “%” denotes percent & conversion from % to mg/kg can be done by multiplying with 10,000; (3) “ND” denotes Not Detected or below limit of quantification.

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Specific migration of primary aromatic amines (PAA)

Test Specification(s) / Regulation(s): Commission Regulation (EU) 2020/1245 amending and Correcting Regulation (EU) 10/2011;

Test method(s) adopted: With reference to EN 13130-1:2004 followed by analysis using LC-MS

Simulant(s) used: 3 % (w/v) acetic acid;

Test condition(s): 60°C for 10 days (Repeated use condition / 3rd Migration);

Equipment(s) used: LC-MS/MS

S.No.	Primary Aromatic Amines	CAS No.	Result (mg/kg) Component No. A	Compliance requirement / Limit Max. (mg/kg)
1.	biphenyl-4-ylamine 4-aminobiphenyl xenylamine (*) (#)	92-67-1	ND	Requirement as per REACH Annex XVII Appendix 8: Entry 43: (#) Primary aromatic amines shall be less than 0.002 mg/kg for each analyte Requirement as per JRC Technical guidelines (Refer Note 7): (*) Sum of Primary aromatic amines shall be less than 0.01 mg/kg
2.	Benzidine (*) (#)	92-87-5	ND	
3.	4-chloro-o-toluidine (*) (#)	95-69-2	ND	
4.	2-naphthylamine (#)	91-59-8	ND	
5.	o-aminoazotoluene 4-amino-2',3-dimethylazobenzene 4-o-tolylazo-o-toluidine (#)	97-56-3	ND	
6.	5-nitro-o-toluidine (#)	99-55-8	ND	
7.	4-chloroaniline (*) (#)	106-47-8	ND	
8.	4-methoxy-m-phenylenediamine (*) (#)	615-05-4	ND	
9.	4,4'-methylenedianiline 4,4'-diaminodiphenylmethane (*) (#)	101-77-9	ND	
10.	3,3'-dichlorobenzidine 3,3'-dichlorobiphenyl-4,4'-ylenediamine (#)	91-94-1	ND	
11.	3,3'-dimethoxybenzidine o-dianisidine (#)	119-90-4	ND	
12.	3,3'-dimethylbenzidine 4,4'-bi-o-toluidine (*) (#)	119-93-7	ND	
13.	4,4'-methylenedi-o-toluidine (*) (#)	838-88-0	ND	
14.	6-methoxy-m-toluidine p-cresidine (*) (#)	120-71-8	ND	
15.	4,4'-methylene-bis-(2-chloro-aniline) 2,2'-dichloro-4,4'-methylene-dianiline (#)	101-14-4	ND	
16.	4,4'-oxydianiline (*) (#)	101-80-4	ND	
17.	4,4'-thiodianiline (#)	139-65-1	ND	
18.	o-toluidine 2-aminotoluene (*) (#)	95-53-4	ND	
19.	4-methyl-m-phenylenediamine (*) (#)	95-80-7	ND	
20.	2,4,5-trimethylaniline (*) (#)	137-17-7	ND	
21.	o-anisidine 2-methoxyaniline (*) (#)	90-04-0	ND	
22.	4-amino azobenzene (#)	60-09-3	ND	
23.	Aniline (ANL) (*)	62-53-3	ND	
24.	Aniline (ANL) (*)	95-68-1	ND	
25.	2,6-Dimethylaniline (2,6-DMA) (*)	87-62-7	ND	
26.	m-Phenylenediamine (m-PDA) (*)	108-45-2	ND	
27.	p-Phenylenediamine (p-PDA) (*)	106-50-3	ND	
28.	2,6-Toluenediamine (2,6-TDA) (*)	823-40-5	ND	
Conclusion			Pass	

Limit of quantification: 0.002 mg/kg

Note: (1) "mg/kg" denotes milligram per kilogram; (2) "°C" denotes degree Celsius; (3) "%" denotes percent; (4) "ND" denotes Not Detected or below limit of quantification. (5) "% (w/v)" denotes percent in terms of mass/weight per unit volume; (6) "% (v/v)" denotes percent by volume; (7) Migration part Subcontracted to TUV SUD South Asia Pvt Ltd., Gurugram (India)

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Specific migration of vinyl chloride

Test Specification(s) / Regulation(s): Commission Regulation (EU) No. 10/2011 & its amendments;
Test simulant(s) / extractant (s): 3% Acetic Acid;
Extraction / test condition(s): 60 °C for 10 Days.

Component No.	Test Result (mg/kg)	Compliance requirement / Limit Max. (mg/kg)	Conclusion
A	ND	0.01	Pass

Limit of quantification: 0.01 mg/kg

Note: (1) "mg/kg" denotes milligram per kilogram & is equivalent to ppm (parts per million); (2) "°C" denotes degree Centigrade / Celsius; (3) "%" denotes percent; (4) "ND" denotes Not Detected or below limit of quantification.

Total Vinyl chloride Monomer Content

Test Specification(s) / Regulation(s): Commission Regulation (EU) No. 10/2011 & its amendments;

Component No.	Test Result (mg/kg)	Compliance requirement / Limit Max. (mg/kg)	Conclusion
A	ND	1	Pass

Limit of quantification: 1 mg/kg

Note: (1) "mg/kg" denotes milligram per kilogram & is equivalent to ppm (parts per million); (2) "ND" denotes Not Detected or below limit of quantification.

Sensory verification of smell / odour

Test Specification(s) / Regulation(s): Regulation (EC) No. 1935/2004 (Article 3 para (1-c));
Test method adopted: DIN 10955:2004;
Simulant(s) used: Distilled water;
Test condition(s): 10 days at 40°C

Component No.	Result (Rating)	Compliance Requirement / Limit Max.	Conclusion
A	0	Less than 2.5	Pass

Note:

(Intermediate grades are allowed)

0 = No discernible deviation in Odour/Look/Taste

1 = Just noticeable deviation, still difficult to define threshold in Odour/Look/Taste

2 = Weak deviation, definable detection threshold in Odour/Look/Taste

3 = Significant deviation in Odour/Look/Taste

4 = Strong deviation in Odour/Look/Taste

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Sensory verification of taste

Test Specification(s) / Regulation(s): Regulation (EC) No. 1935/2004 (Article 3 para (1-c));

Test method adopted: DIN 10955:2004;

Simulant(s) used: Distilled water;

Test condition(s): 10 days at 40°C

Component No.	Result (Rating)	Compliance Requirement / Limit Max.	Conclusion
A	0	Less than 2.5	Pass

Note:

(Intermediate grades are allowed)

0 = No discernible deviation in Odour/Look/Taste

1 = Just noticeable deviation, still difficult to define threshold in Odour/Look/Taste

2 = Weak deviation, definable detection threshold in Odour/Look/Taste

3 = Significant deviation in Odour/Look/Taste

4 = Strong deviation in Odour/Look/Taste

Sensory verification of Look

Test Specification(s) / Regulation(s): Regulation (EC) No. 1935/2004 (Article 3 para (1-c));

Test method adopted: DIN 10955:2004;

Simulant(s) used: Distilled water;

Test condition(s): 10 days at 40°C

Component No.	Result (Rating)	Compliance Requirement / Limit Max.	Conclusion
A	0	Less than 2.5	Pass

Note:

(Intermediate grades are allowed)

0 = No discernible deviation in Odour/Look/Taste

1 = Just noticeable deviation, still difficult to define threshold in Odour/Look/Taste

2 = Weak deviation, definable detection threshold in Odour/Look/Taste

3 = Significant deviation in Odour/Look/Taste

4 = Strong deviation in Odour/Look/Taste

Vinyl Chloride Monomer Content

Test Specification(s) / Regulation(s): US FDA ;

Component No.	Test Result (mg/kg)	Compliance requirement / Limit Max. (mg/kg)	Conclusion
A	ND	1	Pass

Limit of quantification: 1 mg/kg

Note: (1) "mg/kg" denotes milligram per kilogram & is equivalent to ppm (parts per million); (2) "ND" denotes Not Detected or below limit of quantification.

Laboratory:

TUV SUD South Asia Pvt. Ltd.

S. F. No. 139/1B,
Ammananthangal Village,
Chennai – Bangalore Road (NH – 46)
Walajapet – 632513, Ranipet district,
Tamil Nadu, India

Phone :+91 4172 281 300

Fax :+91 4172 281 303

E-Mail : Vivek.G@tuvsud.com

Url : www.tuvsud.com

ControlNo:15310221.020223.010

Registered Office:

TUV SUD South Asia Pvt. Ltd.

TUV SUD House

Off Saki Vihar Road

Saki Naka, Andheri (East),

Mumbai – 400072. India

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Total Chloroform Soluble Extractives

Test Specification(s) / Regulation(s): US FDA 21 CFR 175.300;

S.No.	Simulant used	Test condition	Test Result (mg/kg) Component No. A	Compliance requirement / Limit Max. (mg/kg)	Conclusion
1.	Distilled water	120 °F for 24 Hours	ND	930	Pass
2.	n-Heptane	70 °F for 30 minutes	ND	930	Pass
3.	8% Ethanol	120 °F for 24 Hours	ND	930	Pass

Overall Conclusion

Limit of quantification: 0.1 mg/kg

Note: (1) "mg/kg" denotes milligram per kilogram & is equivalent to ppm (parts per million); (2) "°F" denotes degree Fahrenheit; (3) "%" denotes percent; (4) "ND" denotes Not Detected or below limit of quantification.

Overall migration

Test Specification(s) / Regulation(s): FSSAI notification dated 24th December 2018 with respect to Food Safety and Standards (Packaging) Regulation, 2018. Version IV (Dated 09/09/2022)

Test method(s) adopted: IS 9845: 1998 (Reaffirmed 2020).

Simulant(s) used: Refer below;

Test condition(s): Refer below (under repeat- use condition / 3 Migration).

S.No.	Simulant used	Test condition	Test Result (mg/kg) Component No. A	Compliance requirement / Limit Max. (mg/kg)	Conclusion
1.	Distilled Water	40°C for 10 Days	ND	60	Pass
2.	3% acetic acid	40°C for 10 Days	ND	60	Pass
3.	10% ethanol	40°C for 10 Days	ND	60	Pass
4.	50% Ethanol	40°C for 10 Days	ND	60	Pass
5.	n-heptane	38°C for 30 mins	ND	60	Pass

Overall Conclusion

Limit of quantification: 2 mg/kg

Note: (1) "mg/kg" denotes milligram per kilogram & is equivalent to ppm (parts per million); (2) "°C" denotes degree Centigrade / Celsius; (3) "%" denotes percent; (4) "ND" denotes Not Detected or below limit of quantification.

(5) "% (w/v)" denotes percent in terms of mass/weight per unit volume. (6) "% (v/v)" denotes percent by volume.

Remarks: White marks observed on the sample in simulants – 10% ethanol & 50% ethanol

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Color Migration-Qualitative:

Test Specification(s) / Regulation(s): Commission Regulation FSSAI notification dated 24th December, 2018 ;

Test method(s) adopted: IS 9833 With reference to IS 9845 (Reaffirmed 2020)

Simulant(s) used: Refer below;

Test condition(s): Refer below.

S. No.	Simulant used	Test condition(s)	Result Component No. A	Compliance requirement / Limit Max.	Conclusion
1.	Distilled Water	40°C for 10 Days	No Colour Migration	No Colour Bleeding and any colour change	Pass
2.	3% acetic acid	40°C for 10 Days	No Colour Migration		Pass
3.	10% ethanol	40°C for 10 Days	No Colour Migration		Pass
4.	50% Ethanol	40°C for 10 Days	No Colour Migration		Pass
5.	n-heptane	38°C for 30 mins	No Colour Migration		Pass
Overall Conclusion					Pass

Note: (1) "°C" denotes degree Centigrade / Celsius (2) "%" denotes percent;

Specific migration of heavy metals

Test Specification(s) / Regulation(s): FSSAI notification dated 24th December 2018 with respect to Food Safety and Standards (Packaging) Regulation, 2018; Version IV (Dated 09/09/2022).

Test method(s) adopted: GTP_Chem_CPS_25149C.2019 Issue No. 2 October 21

Simulant(s) used: 3 % (w/v) acetic acid;

Test condition(s): 40°C for 10 days (Repeated use condition / 3rd Migration);

Equipment(s) used: ICP – MS (Inductively Coupled Plasma – Mass Spectrometer).

S.No.	Heavy metals	Test Result (mg/kg) Component No. A	Limit of Quantification (mg/kg)	Compliance requirement / Limit Max. (mg/kg)
1.	Barium (as Ba)	ND	0.1	1.0
2.	Cobalt (as Co)	ND	0.01	0.05
3.	Copper (as Cu)	ND	0.1	5.0
4.	Iron (as Fe)	ND	0.1	48.0
5.	Lithium (as Li)	ND	0.1	0.6
6.	Manganese (as Mn)	ND	0.05	0.6
7.	Zinc (as Zn)	ND	0.1	25.0
Conclusion				Pass

Note: (1) "mg/kg" denotes milligram per kilogram & is equivalent to ppm (parts per million); (2) "°C" denotes degree Centigrade / Celsius; (3) "% (w/v)" denotes percent in terms of mass / weight per unit volume; (4) "ND" denotes Not Detected or below limit of quantification;

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Specific migration of phthalate (DEHP)

Test Specification(s) / Regulation(s): Draft Food Safety and Standards (Packaging) Amendment Regulation, 2020 (Note: This regulation is in draft stage and not yet effective for the current period of time); Version IV (Dated 09/09/2022).

Test method(s) adopted: GTP_Chem_CPS_25146B.2016 (Issue No. 1 November 30)

Simulant(s) used: 10% Ethanol;

Test condition(s): 40°C for 10 days (under repeat-use condition / 3rd Migration);

Equipment(s) used: GC – MS (Gas Chromatograph – Mass Spectrometer).

S.No.	Parameter	Test Result (mg/kg) Component No. A	Limit of Quantification (mg/kg)	Compliance requirement / Limit Max. (mg/kg)	Conclusion
1.	Diethylhexyl phthalate (DEHP)	ND	1.0	1.5	Pass

Overall Conclusion

Pass

Note: (1) Refer table of “Phthalates / Phthalates content” for CAS No. of these chemicals; (2) “mg/kg” denotes milligram per kilogram & is equivalent to ppm (parts per million); (3) “ND” denotes Not Detected or below limit of quantification; (4) “°C” denotes degree Celsius; (5) “%” denotes percent.

Specific migration of antimony

Test Specification(s) / Regulation(s): Draft Food Safety and Standards (Packaging) Amendment Regulation, 2020 (Note: This regulation is in draft stage and not yet effective for the current period of time). Version IV (Dated 09/09/2022).

Test method(s) adopted: GTP_Chem_CPS_25149C.2019 (Issue No. 2 October 21);

Simulant(s) used: 3 % (w/v) acetic acid;

Test condition(s): 40°C for 10 days (Repeated use condition / 3rd Migration);

Equipment(s) used: ICP – MS (Inductively Coupled Plasma – Mass Spectrometer).

	Test Result (mg/kg) Component No. A	Limit of Quantification (mg/kg)	Compliance requirement / Limit Max. (mg/kg)	Conclusion
Antimony	ND	0.01	0.04	Pass

Note: (1) “mg/kg” denotes milligram per kilogram & is equivalent to ppm (parts per million); (2) “°C” denotes degree Centigrade / Celsius; (3) “% (w/v)” denotes percent in terms of mass / weight per unit volume; (4) “ND” denotes Not Detected or below limit of quantification

Sensory verification of Odour / Smell

Test Specification(s) / Regulation(s): FSSAI notification dated 24th December 2018 with respect to Food Safety and Standards (Packaging) Regulation, 2018. Version IV (Dated 09/09/2022)

Test method(s) adopted: With reference to DIN 10955:2004;

Simulant used: Distilled water

Test condition: 40°C for 10 Days;

Component No.	Test parameter	Result	Compliance Requirement / Limit Max.
A	Rating	0	Less than 2.5

Conclusion of “Sensory verification (Transfer of Odour / Smell)” was drawn as per contemporary & accepted industrial practice.

Note:

(Intermediate grades are allowed)

0 = No discernible deviation in Odour/Look/Taste

1 = Just noticeable deviation, still difficult to define threshold in Odour/Look/Taste

2 = Weak deviation, definable detection threshold in Odour/Look/Taste

3 = Significant deviation in Odour/Look/Taste

4 = Strong deviation in Odour/Look/Taste

Laboratory:

TUV SUD South Asia Pvt. Ltd.

S. F. No. 139/1B,
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Sensory verification of Taste

Test Specification(s) / Regulation(s): FSSAI notification dated 24th December 2018 with respect to Food Safety and Standards (Packaging) Regulation, 2018. Version IV (Dated 09/09/2022)

Test method(s) adopted: With reference to DIN 10955:2004;

Simulant used: Distilled water

Test condition: 40°C for 10 Days;

Component No.	Test parameter	Result	Compliance Requirement / Limit Max.
A	Rating	0	Less than 2.5

Conclusion of "Sensory verification (Transfer of taste)" was drawn as per contemporary & accepted industrial practice.

Note:

(Intermediate grades are allowed)

0 = No discernible deviation in Odour/Look/Taste

1 = Just noticeable deviation, still difficult to define threshold in Odour/Look/Taste

2 = Weak deviation, definable detection threshold in Odour/Look/Taste

3 = Significant deviation in Odour/Look/Taste

4 = Strong deviation in Odour/Look/Taste

Sensory verification of Look

Test Specification(s) / Regulation(s): FSSAI notification dated 24th December 2018 with respect to Food Safety and Standards (Packaging) Regulation, 2018. Version IV (Dated 09/09/2022)

Test method(s) adopted: With reference to DIN 10955:2004;

Simulant used: Distilled water

Test condition: 40°C for 10 Days;

Component No.	Test parameter	Result	Compliance Requirement / Limit Max.
A	Rating	0	Less than 2.5

Conclusion of "Sensory verification (Transfer of Look)" was drawn as per contemporary & accepted industrial practice.

Note:

(Intermediate grades are allowed)

0 = No discernible deviation in Odour/Look/Taste

1 = Just noticeable deviation, still difficult to define threshold in Odour/Look/Taste

2 = Weak deviation, definable detection threshold in Odour/Look/Taste

3 = Significant deviation in Odour/Look/Taste

4 = Strong deviation in Odour/Look/Taste

-- END OF THE TEST REPORT --

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