

TEST REPORT

REPORT No.: YNHN230526-29564E

Date: June 12, 2023

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A DONG PLASTIC JOINT STOCK COMPANY

HO: No 30/64 Ly Ai Street, Song Phuong, Hoai Duc, Ha Noi, Viet Nam

Factory: Rd. D1, Yen My II Industrial Zone, Yen My, Hung Yen, Vietnam

Report on the submitted samples said to be:

Sample Description : Sample2: Calmast PP (MF530, MF550, MF570, MN570)
Sample Material : Sample 2: Calmast PP (MF530, MF550, MF570, MN570)
Style/Item No : Sample 2: Calmast PP (MF530, MF550, MF570, MN570)
Country of Destination : Vietnam
Country of Origin : Vietnam
Supplier : ADC PLASTIC., JSC
Manufacturer : ADC PLASTIC., JSC
Sample Receiving Date : May 26, 2023
Testing Period : From May 26, 2023 to June 12, 2023
Results : Please refer to next page(s).


Summary of Test Results:


TEST REQUEST

Regulation (EC) No.1935/2004 of the European Parliament and Regulation (EU) No 10/2011 and its amendment directives on materials and articles intended to come into contact with food

1. Overall Migration	Pass
2. Specific Migration of Primary Aromatic Amines (PAAs) Content	Pass
3. Specific Migration of Heavy Metals of Plastic Content	Pass

Signed for and on behalf of BACL

Checked by: 
Nguyen Thanh Hang

Approved by: 
William Wei

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Results:

Tested part(s):

- (1) Translucent plastic film (PP)

In accordance with Regulation (EC) No.1935/2004 of the European Parliament and Regulation (EU) No 10/2011 and its amendment directives (EU) 2020/1245 on materials and articles intended to come into contact with food

1. Overall Migration

Test method: With reference to EN 1186-1:2002 & EN1186-3-2022.

Item	Test Condition	Unit	RL	Results	Limit
				(1)	
Overall Migration	10% ethanol (w/v) at 40°C for 10 days	mg/dm ²	3.0	N.D.	10
	3% acetic acid (w/v) at 40°C for 10 days	mg/dm ²	3.0	N.D.	10
	50% ethanol (w/v) at 40°C for 10 days	mg/dm ²	3.0	N.D.	10
	95% ethanol (w/v) at 40°C for 10 days	mg/dm ²	3.0	N.D.	10
	Iso-octane (w/v) at 20°C for 2 days	mg/dm ²	3.0	N.D.	10
Conclusion	/	/	/	Pass	/

Note:

- mg/dm² = milligram per square decimeter
- N.D. = Not Detected or less than RL
- RL = Report Limit
- Limit is according to Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments.

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2. Specific Migration of Primary Aromatic Amines (PAAs) Content

Test method: Analysis was performed by Liquid Chromatographic/Tandem Mass Spectrometer (LC/MS/MS).

Simulant Used: 3% acetic acid (w/v) in aqueous solution

Test Condition: 40 °C for 10 days (1st migration)

No.	Items	CAS No.	Unit	RL	Results	Limit	
					(1)		
1	Biphenyl-4-ylamine/4-aminobiphenyl/xenylamine	92-67-1	mg/kg	0.002	N.D.	0.002	
2	Benzidine	92-87-5	mg/kg	0.002	N.D.	0.002	
3	4-chloro-o-toluidine	95-69-2	mg/kg	0.002	N.D.	0.002	
4	2-naphthylamine	91-59-8	mg/kg	0.002	N.D.	0.002	
5	o-aminoazotoluene/ 4-amino-2',3'-dimethylazobenzene/ 4-o-tolylazo-o-toluidine	97-56-3	mg/kg	0.002	N.D.	0.002	
6	5-nitro-o-toluidine	99-55-8	mg/kg	0.002	N.D.	0.002	
7	4-chloroaniline	106-47-8	mg/kg	0.002	N.D.	0.002	
8	4-methoxy-m-phenylenediamine	615-05-4	mg/kg	0.002	N.D.	0.002	
9	4,4'-methylenedianiline 4,4'-diaminodiphenylmethane	101-77-9	mg/kg	0.002	N.D.	0.002	
10	3,3'-dichlorobenzidine 3,3'-dichlorobiphenyl-4,4'-ylenediamine	91-94-1	mg/kg	0.002	N.D.	0.002	
11	3,3'-dimethoxybenzidine/o-dianisidine	119-90-4	mg/kg	0.002	N.D.	0.002	
12	3,3'-dimethylbenzidine/ 4,4'-bi-o-toluidine	119-93-7	mg/kg	0.002	N.D.	0.002	
13	4,4'-methylenedi-o-toluidine	838-88-0	mg/kg	0.002	N.D.	0.002	
14	6-methoxy-m-toluidine/p-cresidine	120-71-8	mg/kg	0.002	N.D.	0.002	
15	4,4'-methylene-bis-(2-chloro-aniline)/ 2,2'-dichloro-4,4'-methylene-dianiline	101-14-4	mg/kg	0.002	N.D.	0.002	
16	4,4'-oxydianiline	101-80-4	mg/kg	0.002	N.D.	0.002	
17	4,4'-thiodianiline	139-65-1	mg/kg	0.002	N.D.	0.002	
18	o-toluidine/ 2-aminotoluene	95-53-4	mg/kg	0.002	N.D.	0.002	
19	4-methyl-m-phenylenediamine/ 2,4-Toluenediamine	95-80-7	mg/kg	0.002	N.D.	0.002	
20	2,4,5-trimethylaniline	137-17-7	mg/kg	0.002	N.D.	0.002	
21	o-anisidine/ 2-methoxyaniline	90-04-0	mg/kg	0.002	N.D.	0.002	
22	4-amino azobenzene	60-09-3	mg/kg	0.002	N.D.	0.002	
23	m-Phenylenediamine	108-45-2	mg/kg	0.002	N.D.	Sum: 0.01	
24	Aniline	62-53-3	mg/kg	0.002	N.D.		
25	2,4-Dimethylaniline / 2,4-xylidine	95-68-1	mg/kg	0.002	N.D.		
26	2,6-Dimethylaniline / 2,6-xylidine	87-62-7	mg/kg	0.002	N.D.		
27	p-Phenylenediamine/1,4-phenylenediamine	106-50-3	mg/kg	0.002	N.D.		
28	2,6-Toluenediamine	823-40-5	mg/kg	0.002	N.D.		
29	1,5-Diaminenaphthalene	2243-62-1	mg/kg	0.002	N.D.		
Conclusion		/	/	/	Pass		/



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Note:

- mg/kg = milligram per kilogram of foodstuff in contact with
- N.D. = Not Detected or less than RL
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3. Specific Migration of Heavy Metals of Plastic

Test method: With reference to EN 13130-1:2004, analysis was performed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) and Inductively Coupled Plasma Optical Emission Spectrometer with Mass Detector (ICP-MS).

Simulant Used: 3% acetic acid (w/v) in aqueous solution

Test Condition: 40 °C for 10 days (1st migration)

Items	Unit	RL	Results	Limit
			(1)	
Aluminium (Al)	mg/kg	0.05	N.D.	1
Ammonium	mg/kg	-	N.D.	-
Antimony (Sb)	mg/kg	0.01	N.D.	0.04
Arsenic (As)	mg/kg	0.01	N.D.	N.D.
Barium (Ba)	mg/kg	0.1	N.D.	1
Cadmium (Cd)	mg/kg	0.002	N.D.	0.002
Calcium (Ca)	mg/kg	0.01	28.25	-
Chromium (Cr)	mg/kg	0.01	0.01	0.01
Cobalt (Co)	mg/kg	0.05	N.D.	0.05
Copper (Cu)	mg/kg	0.01	0.08	5
Iron (Fe)	mg/kg	0.01	0.04	48
Lead (Pb)	mg/kg	0.01	N.D.	N.D.
Lithium (Li)	mg/kg	0.1	N.D.	0.6
Magnesium (Mg)	mg/kg	0.01	N.D.	-
Manganese (Mn)	mg/kg	0.05	N.D.	0.6
Mercury (Hg)	mg/kg	0.01	N.D.	N.D.
Nickel (Ni)	mg/kg	0.02	N.D.	0.02
Potassium (K)	mg/kg	0.01	N.D.	-
Sodium (Na)	mg/kg	0.01	N.D.	-
Lanthanum (La)	mg/kg	0.01	N.D.	Sum: 0.05
Europium (Eu)	mg/kg	0.01	N.D.	
Gadolinium (Gd)	mg/kg	0.01	N.D.	
Terbium (Tb)	mg/kg	0.01	N.D.	
Zinc (Zn)	mg/kg	0.01	0.05	5
Conclusion	/	/	Pass*	/

Note:

- mg/kg = milligram per kilogram of foodstuff in contact with
- N.D. = Not Detected or less than RL
- RL = Report Limit
- **Pass*** = Meet the requirement of Client

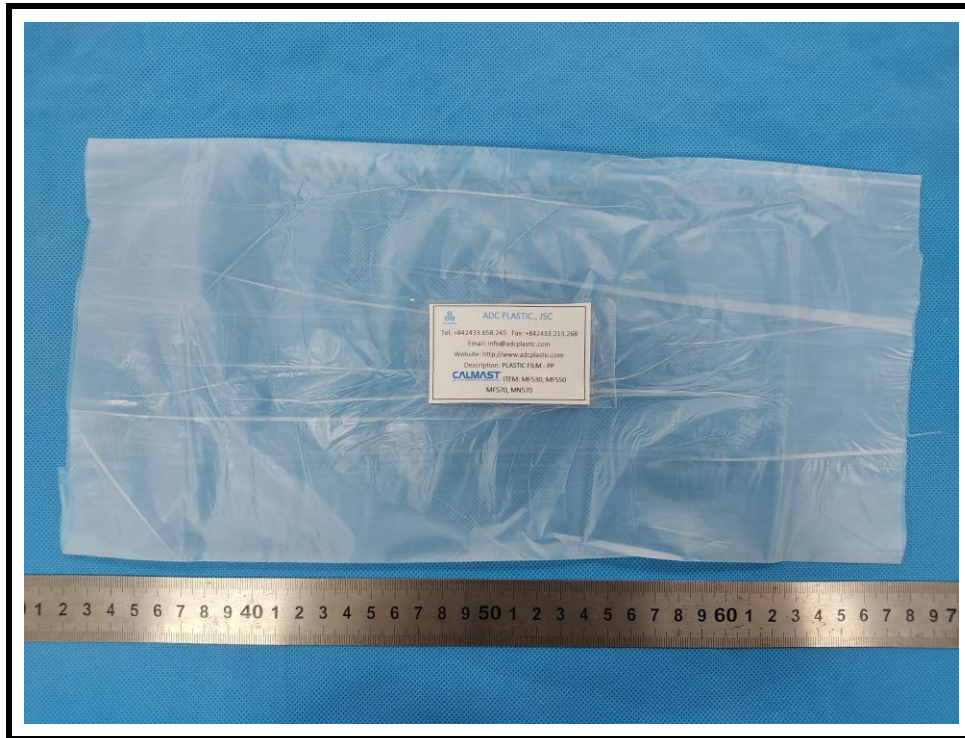
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Photograph of Sample



BACL authenticate the photo on original report only

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Directions:

1. This report cannot be reproduced except in full, without prior written approval of the Company.
2. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
3. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The information which provided by the applicant, such as sample description, sample name, material component, style/item No., P.O. No., manufacture, age phase, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.
6. The test samples were in good condition before testing.
7. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

*** End of Report ***