

02-Feb-20

تاریخ:  
شماره:  
پیوست:

پتروپاک مشرق زمین  
PETRO PAAK MASHREGH ZAMIN

To: Whom it may concern

### FOOD CONTACT CERTIFICATION FOR HIPS

It is hereby declared that all HIPS grades produced by PETROPAAK MASHREGH ZAMIN petrochemical company has been tested in accordance with the food packing requirements as tabulated bellow and found confirming. Test reports are attached.

Best regards

Petropaak Mashregh Zamin

پتروپاک مشرق زمین  
(سهامی خاص)  
Petro Paak Mashregh Zamin

پتروپاک  
PETROPAAK  
www.petropaak.com

تهران، شهرزیا، میدان الفحیر، خیابان اردوشاهی (مخابرات سابق)، خیابان رز، کوچه حامد، پلاک ۲۴ تلفن: ۰۲۱-۴۷۱۹۹۰ فکس: ۰۲۱-۴۴۳۱۳۱۸۹



## Test Report

Ref. No.: CRS/H/20-75559L04  
Page 1 of 9

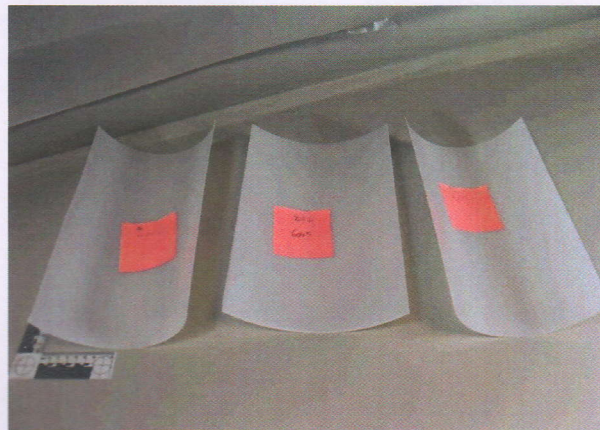
Ref to test report no. CL19-08034

**Client Name:** Petropaak Mashreghzamin Co.

**Address:** No. 24, Hamed Alley, Rose St., Ordoushahi St., Al Qadir Sq., Shahr e Ziba, Tehran, Iran

Tel: +98 21 47199, Fax: +98 21 44313189

**Product :** 3 GRADES OF HIPS  
**Order :** Agreement of the estimate CRS/H/SA/9872491-R1  
**Recieved :** 09/12/2019  
**Use :** 1 minute in  $\mu$ -waves but  $T^{\circ} < 100^{\circ}C$  (single use)



The samples have been sent to SGS laboratory in France and the results are re-issued by SGS Iran.

Tests Requested/Standards	Conclusion
BPA content presence in material(s) – French Law n° 2012-1442	Pass #
Compliance on plasticized materials according to the 10/2011/EC Regulation (and modifs) + French DGCCRF organic materials (synthetic matters) file	Pass
Food contact compliance: 1935/2004/CE regulation art. 3, 2007/766 Decree on items tested	Pass

Uncertainties are not taken into account to define compliance on analysis except on specific customer request

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## Test Report

Ref. No.: CRS/H/20-75559L04  
Page 2 of 9

Ref to test report no. CL19-08034

### Quote=====

Description: 3 Grades of HIPS

Food Contact Materials: Plastics

Beginning of Tests: 12/12/2019

End of Tests: 15/01/2020

Ratio [area (dm<sup>2</sup>) / volume (ml)] for overall migrations: 1 dm<sup>2</sup> / 100 ml

Ratio followed for recalculated specific migrations: 0.6 dm<sup>2</sup> / 100 ml

Pre-wash article before test: No (according to client request or no specification)

**REMARK:** The ban of the use of BPA in all articles in contact with food is effective since the 1<sup>st</sup> January 2015 (in addition to the first term of the 1<sup>st</sup> January 2013 for some childcare articles)

#### For plasticized materials:

# PASS: no BPA value in the material(s) exceeding our analytical limit of 0.1 mg/kg, was found.

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## Test Report

Ref. No.: CRS/H/20-75559L04  
Page 3 of 9

Ref to test report no. CL19-08034

1<sup>st</sup> specific migration: primary aromatic amines

selon EN13130-1 (1essi\1 simulant)

+ Règlement 10/2011/CE (modifs) -  
Annexe II


		CL19-08034.001	CL19-08034.002	CL19-08034.003
		TRANSLUCENT HIPS 4125	TRANSLUCENT HIPS 6045	TRANSLUCENT HIPS 5073
Limits		Results	Results	Results
Simulant		Acetic Acid 3%	Acetic Acid 3%	Acetic Acid 3%
Migration Duration		10j	10j	10j
Migration Temperature		40 °C	40 °C	40 °C
Used Simulant Volume		100 ml	100 ml	100 ml
Used Surface		0.6 dm <sup>2</sup>	0.6 dm <sup>2</sup>	0.6 dm <sup>2</sup>
1 <sup>st</sup> Specific PAA Migration	<0.01 mg/kg	<0.01 mg/kg	<0.01 mg/kg	<0.01 mg/kg
Conclusion		Pass	Pass	Pass

Butadiene residue content (1)

EN 13130-4 – Headspace with GC/MS

		CL19-08034.001	CL19-08034.002	CL19-08034.003
		TRANSLUCENT HIPS 4125	TRANSLUCENT HIPS 6045	TRANSLUCENT HIPS 5073
Limits		Results	Results	Results
Residual Butadiene Content	<1 mg/kg	<1 mg/kg	<1 mg/kg	<1 mg/kg
Conclusion		Pass	Pass	Pass

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## Test Report

Ref. No.: CRS/H/20-75559L04  
Page 4 of 9

Ref to test report no. CL19-08034

**Bisphenol A Content (1)**

Loi Française 2012-1442 - Ultrasons  
Dichlorométhane/Toluene 30 min.70°C  
+ LC-MS-MS

		CL19-08034.001	CL19-08034.002	CL19-08034.003
		TRANSLUCENT HIPS 4125	TRANSLUCENT HIPS 6045	TRANSLUCENT HIPS 5073
	<b>Limits</b>	<b>Results</b>	<b>Results</b>	<b>Results</b>
Bisphenol A Content		<100 µg/kg	<100 µg/kg	<100 µg/kg
Conclusion		# Pass	# Pass	# Pass

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## Test Report

Ref. No.: CRS/H/20-75559L04  
Page 5 of 9

Ref to test report no. CL19-08034

**Specific migration of 9 heavy metals on plasticized materials**

selon EN13130-1 (1 essai \1 simulant)  
+ Règlement 10/2011/CE (modifs)  
- Annex II (modifs)

		CL19-08034.001	CL19-08034.002	CL19-08034.003
		TRANSLUCENT HIPS 4125	TRANSLUCENT HIPS 6045	TRANSLUCENT HIPS 5073
Limits		Results	Results	Results
Simulant		Acetic Acid 3%	Acetic Acid 3%	Acetic Acid 3%
Migration Time		10j	10j	10j
Migration Temperature		40 °C	40 °C	40 °C
Volume		100 ml	100 ml	100 ml
Surface		0.6 dm <sup>2</sup>	0.6 dm <sup>2</sup>	0.6 dm <sup>2</sup>
Aluminum Migration	< 1 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg
Barium Migration	< 1 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg
Cobalt Migration	< 0.05 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg
Copper Migration	< 5 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg
Iron Migration	< 48 mg/kg	< 1 mg/kg	< 1 mg/kg	< 1 mg/kg
Lithium Migration	< 0.6 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg
Manganese Migration	< 0.6 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg
Nickel Migration	< 0.02 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg
Zinc Migration	< 5 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg
Conclusion		Pass	Pass	Pass

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## Test Report

Ref. No.: CRS/H/20-75559L04  
Page 6 of 9

Ref to test report no. CL19-08034

Overall migration: 3% acetic acid (°)(R)

Réglement 10/2011/CE (et modifs) - NF  
EN 1186

		CL19-08034.001	CL19-08034.002	CL19-08034.003
		TRANSLUCENT HIPS 4125	TRANSLUCENT HIPS 6045	TRANSLUCENT HIPS 5073
Limits		Results	Results	Results
Method		1186-3_Immersion (A)	1186-3_Immersion (A)	1186-3_Immersion (A)
Migration Time		10j	10j	10j
Migration Temperature		40 °C	40 °C	40 °C
Final Result: Test 1		< 1 mg/dm <sup>2</sup>	< 1.1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>
Final Result: Test 2		< 1 mg/dm <sup>2</sup>	< 1.1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>
Final Result: Test 3		< 1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>
Average Result from 1 <sup>st</sup> migration	<10 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>
Conclusion		Pass	Pass	Pass

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## Test Report

Ref. No.: CRS/H/20-75559L04  
Page 7 of 9

Ref to test report no. CL19-08034

Overall migration: 10% ethanol (°)(R)

Réglement 10/2011/CE (et modifs) - NF  
EN 1186

		CL19-08034.001	CL19-08034.002	CL19-08034.003
		TRANSLUCENT HIPS 4125	TRANSLUCENT HIPS 6045	TRANSLUCENT HIPS 5073
Limits		Results	Results	Results
Method		1186-3_Immersion (A)	1186-3_Immersion (A)	1186-3_Immersion (A)
Migration Time		10j	10j	10j
Migration Temperature		40 °C	40 °C	40 °C
Final Result: Test 1		< 1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>
Final Result: Test 2		< 1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>
Final Result: Test 3		< 1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>
Average Result from 1 <sup>st</sup> migration	<10 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>	< 1 mg/dm <sup>2</sup>
Conclusion		Pass	Pass	Pass

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## Test Report

Ref. No.: CRS/H/20-75559L04  
Page 8 of 9

Ref to test report no. CL19-08034

Overall Migration: Olive Oil

Réglement 10/2011/CE (et modifs) - NF  
EN 1186

		CL19-08034.001	CL19-08034.002	CL19-08034.003
		TRANSLUCENT HIPS 4125	TRANSLUCENT HIPS 6045	TRANSLUCENT HIPS 5073
Limits		Results	Results	Results
Method		1186-2_Immersion (A)	1186-2_Immersion (A)	1186-2_Immersion (A)
Migration Time		10j	10j	10j
Migration Temperature		40 °C	40 °C	40 °C
Migration Test 1		5.2 mg/dm <sup>2</sup>	4.8 mg/dm <sup>2</sup>	5.7 mg/dm <sup>2</sup>
Migration Test 2		4.2 mg/dm <sup>2</sup>	5.1 mg/dm <sup>2</sup>	6.5 mg/dm <sup>2</sup>
Migration Test 3		4.7 mg/dm <sup>2</sup>	5.0 mg/dm <sup>2</sup>	5.9 mg/dm <sup>2</sup>
Migration Test 4		4.0 mg/dm <sup>2</sup>	6.0 mg/dm <sup>2</sup>	6.3 mg/dm <sup>2</sup>
Reduction Coefficient		1.0	1.0	1.0
Average Result from 1 <sup>st</sup> migration	<10 mg/dm <sup>2</sup>	4.5 mg/dm <sup>2</sup>	5.2 mg/dm <sup>2</sup>	6.1 mg/dm <sup>2</sup>
Conclusion		Pass	Pass	Pass

**NOTE 1:** Our "Pass" conclusion, about overall migration tests, takes into account the standardized analytical tolerances as:

10 mg/dm<sup>2</sup> with 2 mg/dm<sup>2</sup> tolerance for aqueous simulants or 3 mg/dm<sup>2</sup> for fatty food simulants  
60 mg/dm<sup>2</sup> with 12 mg/dm<sup>2</sup> tolerance for aqueous simulants or 20 mg/kg for fatty food simulants

**NOTE 2:** Food contact compliance is declared subject to European and National authorized substances list respect, i.e. use and specifications and/or limitations for food contact materials manufacturing.

  
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## Test Report

Ref. No.: CRS/H/20-75559L04  
Page 9 of 9

Ref to test report no. CL19-08034

### Specific Migration of Some Phthalates

selon EN13130-1 (1 essai \1 simulant)  
+ Règlement 10/2011/CE (modifs)  
- Dosage GC/MS

		CL19-08034.001	CL19-08034.002	CL19-08034.003
		TRANSLUCENT HIPS 4125	TRANSLUCENT HIPS 6045	TRANSLUCENT HIPS 5073
Limits		Results	Results	Results
Simulant		Isooctane	Isooctane	Isooctane
Migration Duration		2j	2j	2j
Migration Temperature		20 °C	20 °C	20 °C
Simulant Volume		100 ml	100 ml	100 ml
Material Surface		0.6 dm <sup>2</sup>	0.6 dm <sup>2</sup>	0.6 dm <sup>2</sup>
Diallyl Phthalate Migration	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg	< 0.01 mg/kg
Dibutyl Phthalate Migration	< 0.3 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg
Benzyl Butyl Phthalate Migration	< 30 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg
Bis-(2-ethylhexyl) Phthalate Migration	< 1.5 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg	< 0.1 mg/kg
Diisononyl + Diisodecyl Phthalate Migration	< 9 mg/kg	0.8 mg/kg	0.8 mg/kg	0.8 mg/kg
Conclusion		Pass	Pass	Pass

**Unquote**=====

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**Signed and dated by SGS IRAN Ltd.: February 02, 2020**  
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