

Report No.: 1203044056-01

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Client: WONDERFUL PLASTIC LIMITED PARTNERSHIP.
259 Moo 12, T.Klongdan A.Bangbor Samutprakarn 10550.

Identification/
Model No(s): LDPE

Sample Receiving date: 2016-02-03

Testing Period: 2016-02-03 - 2016-02-09

Delivery condition: Apparent good, Samples tested as received

Test Specification:

1. Heavy metal content (Pb, Cd, Hg, Cr(VI))
2. Brominated Flame Retardant (PBBs, PBDEs, Deca-BDE, HBCD)
3. Perfluorooctane Sulfonate (PFOS)
4. Asbestos, Polarization microscope method
5. Dimethyl fumarate (DMF)

Test result:

Refer to following page.
Refer to following page.
Refer to following page.
Refer to following page.
Refer to following page.

Other information:

Buyer: Toyota

For and on behalf of
TÜV Rheinland Thailand Ltd.

 

2016-03-16

Wilawan Sriprom / Manager

Date

Name/Position

Test result is drawn according to the kind and extent of tests performed.

This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

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Material List:

Item: LDPE

Material No.	Material	Color	Location
M001	Plastic	Clear	Refer to photo

1. Heavy metal content (Pb, Cd, Hg, Cr(VI))

Test Method: Total Lead, Cadmium, Mercury - Ref. to IEC 62321 Ed.,1, 2013, determine by ICP-MS
Chromium VI - Ref. to IEC 62321 Ed.,1, 2008, Analysis was performed by UV-Vis Spectrometer.

Test Result:

Test No.			T001
Material No.			M001
Test Parameter	Unit	RL	Result
Lead	mg/kg	2	n.d.
Cadmium	mg/kg	2	n.d.
Mercury	mg/kg	2	n.d.
Chromium (VI)	mg/kg	2	n.d.

Abbreviation: n.d. = Not Detected (<RL)
RL = Reporting Limit
mg/kg = Milligram per kilogram

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2. Brominated Flame retardant: PBBs, PBDEs, Deca-BDE and HBCD

Test Method: PBBs, PBDEs - Ref. to IEC 62321 Ed., 1, 2008, determine by GC-MS
HBCD - Organic solvent extraction based on IEC 62321 Ed., 1, 2008 determine by GC-MS

Test Result:

Test No.			T001
Material No.			M001
Test Parameter	Unit	RL	Result
Sum Polybrominated biphenyls (PBBs)	mg/kg	50	n.d.
Decabromodiphenyl ether (DecaBDE)	mg/kg	5	n.d.
Sum Polybrominated diphenyl ethers (PBDEs), except Deca-BDE	mg/kg	50	n.d.
Hexabromocyclododecane	mg/kg	5	n.d.

Abbreviation: n.d. = Not Detected (<RL)
RL = Reporting Limit
mg/kg = Milligram per kilogram
PBBs = Polybrominated Biphenyl
PBDEs = Polybrominated Diphenyl Ethers
Deca-BDE = Decabromodiphenyl ether
HBCD = Hexabromocyclododecane

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3.Perfluorooctane Sulfonate (PFOS)

Test Method: In house method, determination by LC-MS.

Test Result:

Test No.	Material No.	Test Parameter	Unit	RL	Test Result
T001	M001	PFOS	µg/m ²	0.1	n.d.

Abbreviation: n.d. = not detected (< Reporting Limit)
RL = Reporting Limit
µg/m² = microgram per square metre

Note: According to REACH regulation (EC) No.1907/2006 and amendment no. 552/2009 Annex XVII Item 53, Perfluorooctane sulfonates

1. Shall not be placed on the market, or used, as substances or in mixtures in concentrations equal to or greater than 50 mg/kg (0.005%).
2. Shall not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or greater than 0.1% by weight calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal or greater than 1 µg/m² of the coated material.

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4.Asbestos

Test Method: Polarization Microscope Method based on EPA 600/R-93/116: 1993

Test No.			T001
Material No.			M001
Test Parameter	CAS NO	Unit	Result
Actinolite	77536-66-4	--	Negative
Amosite	12172-73-5	--	Negative
Anthophyllite	77536-67-5	--	Negative
Chrysotile	12001-29-5	--	Negative
Crocidolite	12001-28-4	--	Negative
Tremolite	77536-68-6	--	Negative

Note: Negative denotes Absent of asbestos fibre in sample
Positive denotes Present of asbestos fibre in sample

5.Dimethyl fumarate (DMF)

Test Method: Organic solvent extraction, GCMS analysis

Test Result:

Test No.	Material No.	Test Parameter	Unit	RL	Test Result
T001	M001	Dimethyl fumarate	mg/kg	0.05	n.d.

Abbreviation: n.d. = not detected (< Reporting Limit)
RL = Reporting Limit
mg/kg = milligram per kilogram

Remark:

- * According to REACH Regulation (EC) No. 1907/2006 Annex XVII Item 61 and amendment Commission Regulation (EU) No. 412/2012 (formerly known as 2012/48/EU), dimethylfumarate (DMF) shall not be used in articles or any parts thereof in concentrations greater than 0.1 mg/kg. Articles or any parts thereof containing DMF in concentrations greater than 0.1 mg/kg shall not be placed on the market.

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Sample Photo



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