

Test Report

Report No. : AGC05443231234-001

SAMPLE NAME : Double sided MDF game set

MODEL NAME : MO6427

APPLICANT: MID OCEAN BRANDS B.V

STANDARD(S) : Please refer to the following page(s).

DATE OF ISSUE : Jan. 17, 2024

Attestation of Global Compliance (Shenzhen) Std & Tech Co., Ltd.





Applicant : MID OCEAN BRANDS B.V

Address : 7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong. Test Site : 5,6/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community, Hangcheng

Street, Bao'an District, Shenzhen, Guangdong, China

Report on the submitted sample(s) said to be:

Sample Name : Double sided MDF game set

Model : MO6427
Vendor code : 112585
Country of Origin : CHINA
Country of Destination : EUROPE
Labeled Age Grading : Not stated

Requested Age Grading : 3+ Age Group Applied in : 3+

Testing

Sample receiving state : Normal : Dec. 29, 2023

Testing Period : Dec. 29, 2023 to Jan. 17, 2024

Test Requested : Selected test(s) as requested by client.

Approved by : Jessie liang

Liangdan, Jessie.Liang

Report No.: AGC05443231234-001

Technical Director



- Benzene Content

European Standard on Safety of Toys

- Polycyclic-aromatic Hydrocarbons (PAHs) Content

- Aromatic Amines Azodyes (AZO) Content

- Pentachlorophenol (PCP) Content

- Formaldehyde Release

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 5

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 43

Regulation (EU) 2019/1021 on persistent organic pollutants (POPs)

Report No.: AGC05443231234-001

Conclusion

Pass

Pass

Pass

Pass

Pass

Pass - EN 71-1:2014+A1:2018: Mechanical and Physical Properties European Standard on Safety of Toys Pass - EN 71-2:2020: Flammability The Directive 2009/48/EC-Safety of Toys - Labeling requirement (Washing/Cleaning Label, CE mark, importer / manufacturer mark (name, Pass address), product identification) European Standard on Safety of Toys - EN 71-3:2019+A1:2021: Migration of Certain Elements (Al, Sb, As, Ba, B, Cd, Cr(III), Cr(VI), Pass Co, Cu, Pb, Mn, Hg, Ni, Se, Sr, Sn, Zn) European Standard on Safety of Toys **Pass** - EN 71-3:2019+A1:2021: Migration of Certain Elements (Organic Tin) Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 23 **Pass** -Cadmium(Cd) Content Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 51&52 Pass - Phthalates Content Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 50

- Color fastness to rubbing Pass

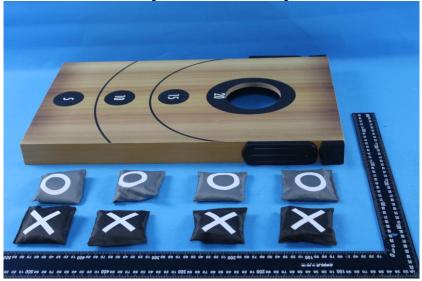


Report Revise Record

Report Version	Issued Date	Valid Version	Notes
/	Jan. 17, 2024	Valid	Initial release



The photo of the sample



The photo of AGC05443231234-001 is for use only with the original report.

Test Point Description

Test point	Test point description
1-1	Black plastic
1-2	Black plastic mesh
1-3	Black coating
1-4	White coating
1-5	Paper film
1-6	MDF board
1-7	Black cloth
1-8	Grey cloth
1-9	Metal screws
1-10	Black plastic+Black plastic mesh
1-11	Black coating+White coating
1-12	Black cloth+Grey cloth



Note: N.D.=Not Detected (less than method detection limit), MDL = Method Detection Limit, 1mg/kg=0.0001%

European Standard on Safety of Toys

- EN 71-1:2014+A1:2018: Mechanical and Physical Properties

Clause	Description	Result
4	GENERAL REQUIREMENTS	Pass
4.1	Material cleanliness	Pass
4.2	Assembly	N/A
4.3	Flexible plastics sheeting	N/A
4.4	Toy bags	N/A
4.5	Glass	N/A
4.6	Expanding materials	N/A
4.7	Edges	Pass
4.8	Points and metallic wires	Pass
4.9	Protruding parts	N/A
4.10	Parts moving against each other	N/A
4.10.1	Folding and sliding mechanisms	N/A
4.10.2	Driving mechanisms	N/A
4.10.3	Hinges	N/A
4.10.4	Springs	N/A
4.11	Mouth-actuated toys and other toys intended to be put in the mouth	N/A
4.12	Balloons	N/A
4.13	Cords of toy kites and other flying toys	N/A
4.14	Enclosures	N/A
4.14.1	Toys which a child can enter	N/A
4.14.2	Masks and helmets	N/A
4.15	Toys intended to bear the mass of a child	N/A
4.15.1	Toys propelled by a child or by other means	N/A
4.15.1.1	General	N/A
4.15.1.2	Warnings and instructions for use	N/A
4.15.1.3	Strength	N/A
4.15.1.4	Stability	N/A
4.15.1.5	Braking	N/A
4.15.1.6	Transmission and wheel arrangement	N/A
4.15.1.7	Adjustable seat pillar and handlebar stem minimum insertion marks	N/A
4.15.1.8	Electrically-driven ride-on toys	N/A
4.15.2	Toy bicycles	N/A
4.15.2.1	General	N/A
4.15.2.2	Warnings and instructions for use	N/A
4.15.2.3	Braking requirements	N/A
4.15.3	Rocking horses and similar toys	N/A
4.15.4	Toys not propelled by a child	N/A
4.15.5	Toy scooters	N/A
4.15.5.1	General	
4.15.5.2	Warnings and instructions for use	N/A
4.15.5.3	Strength	N/A
4.15.5.4	Adjustable and folding steering tubes	N/A
4.15.5.5	Braking	N/A



4.15.5.6	Wheel size	N/A
4.15.5.7	Protruding parts	N/A
4.16	Heavy immobile toys	N/A
4.17	Projectiles	N/A
4.17.1	General	
4.17.2	All projectiles	N/A
4.17.2.1	Leading parts	N/A
4.17.2.2	Foam shaft projectiles with a suction cup as a leading part	N/A
4.17.2.3	Other types of projectile with a suction cup as a leading part	N/A
4.17.3	Projectile toys with stored energy	N/A
4.17.3.1	Energy limitation	N/A
4.17.3.2	Edges	N/A
4.17.3.3	Projectiles with a protective cap, cover or tip	N/A
4.17.3.4	Impact resistance	N/A
4.17.3.5	Improvised projectiles	N/A
4.17.4	Certain projectile toys without stored energy	N/A
4.17.4.1	Darts	N/A
4.17.4.2	Bows and arrows	N/A
4.17.4.3	Toy catapults and projectiles propelled by an elastic band	N/A
	Projectile toys without stored energy where the discharge mechanism can store energy,	
4.17.4.4	only when held in place by the user	N/A
4.18	Aquatic toys and inflatable toys	N/A
4.19	Percussion caps specifically designed for use in toys and toys using percussion caps	N/A
4.20	Acoustics	N/A
4.21	Toys containing a non-electrical heat source	N/A
4.22	Small balls	N/A
4.23	Magnets	N/A
4.23.1	General	
4.23.2	Toys other than magnetic/electrical experimental sets intended for children over 8 years	N/A
4.23.3	Magnetic/electrical experimental sets intended for children over 8 years	N/A
4.24	Yo-yo balls	N/A
4.25	Toys attached to food	N/A
4.26	Toy Disguise Costumes	N/A
4.27	Flying toys	N/A
4.27.1	General	N/A
4.27.2	Rotors and propellers on flying toys	N/A
4.27.3	Rotors and propellers on remote controlled flying toys	N/A
5	TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS	N/A
5.1	General requirements	N/A
5.2	Filling materials	N/A
5.3	Plastic sheeting	N/A
5.4	Cords, chains and electrical cables in toys	N/A
5.4.1	General	
5.4.2	Cords and chains in toys intended for children under 18 months	N/A
5.4.2.1	Cords and chains with the potential to tangle	N/A
5.4.2.2	Two cords or chains with the potential to tangle	N/A
5.4.2.3	Separated cords and chains	N/A
5.4.2.4	Free length of cords and chains	N/A
5.4.3	Cords and chains in toys intended for children of 18 months or over but under 36 months	N/A
5.4.3.1	Cords and chains with the potential to tangle	N/A
5.4.3.2	Two cords or chains with the potential to tangle	N/A
5.4.3.3	Separated cords and chains	N/A



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5.4.3.4	Free length of cords and chains	N/A
5.4.3.5	Cords and chains not suitable for children under 18 months	N/A
5.4.4	Fixed loops, tangled loops and nooses	N/A
5.4.5	Cords and chains on pull along toys	N/A
5.4.6	Electrical cables	N/A
5.4.7	Cross-sectional dimension of certain cords	N/A
5.4.8	Self-retracting cords	N/A
5.4.9	Toys attached to or intended to be strung across a cradle, cot or perambulator	N/A
5.4.9.1	Toys intended to be strung across a cradle, cot or perambulator	N/A
5.4.9.2	Toys otherwise intended to be attached to a cradle, cot or perambulator	N/A
5.5	Liquid-filled toys	N/A
5.6	Speed limitation of electrically driven toys	N/A
5.7	Glass and porcelain	N/A
5.8	Shape and size of certain toys	N/A
5.9	Toys comprising monofilament fibres	N/A
5.10	Small balls	N/A
5.11	Play figures	N/A
5.12	Hemispheric-shaped toys	N/A
5.13	Suction cups	N/A
5.14	Straps intended to be worn fully or partially around the neck	N/A
5.15	Sledges with cords for pulling	N/A
6	PACKAGING	N/A
7	Warnings, markings and instructions for use	Pass
7.1	General	Pass
7.2	Toys not intended for children under 36 months	Pass
7.3	Latex balloons	N/A
7.4	Aquatic toys	N/A
7.5	Functional toys	N/A
7.6	Hazardous sharp functional edges and points	N/A
7.7	Projectile toys	N/A
7.8	Imitation protective masks and helmets	N/A
7.9	Toy kites	N/A
7.10	Roller skates, inline skates, skateboards and certain other ride-on toys	N/A
7.10.1	Roller skates, inline skates and skateboards	N/A
7.10.2	Ride-on toys without a braking device	N/A
7.10.3	Electrically-driven ride-on toys	N/A
7.10.4	Instructions for use	N/A
7.11	Toys intended to be strung across a cradle, cot, or perambulator	N/A
7.12	Liquid-filled teethers	N/A
7.13	Percussion caps specifically designed for use in toys	N/A
7.14	Acoustics	N/A
7.15	Toy bicycles	N/A
7.16	Toys intended to bear the mass of a child	N/A
7.17	Toys comprising monofilament fibres	N/A
7.18	Toy scooters	N/A
7.19	Rocking horses and similar toys	N/A
7.20	Magnetic/electrical experimental sets	N/A
7.21	Toys with electrical cables exceeding 300 mm in length	N/A
7.22	Toys with cords or chains intended for children of 18 months and over but under 36 months	N/A
7.23	Toys intended to be attached to a cradle, cot or perambulator	N/A
7.24	Sledges with cords for pulling	N/A
1.41	Dieages with cores for paring	1 1/ / 1



 7.25
 Flying toys
 N/A

 7.25.1
 Flying toys
 N/A

 7.25.2
 Remote controlled flying toys
 N/A

 7.26
 Improvised projectiles
 N/A

European Standard on Safety of Toys

- EN 71-2:2020: Flammability

Clause	Requirements	Result
4	Requirements	Pass
4.1	General	Pass
4.2	Toys to be worn on the head	N/A
4.2.1	General	
4.2.2	Beards, moustaches, wigs, etc, made from hair, pile or material with similar features (e.g. freehanging ribbons, paper or cloth strands), which protrude more than or equal to 50 mm from the surface of the toy	N/A
4.2.3	Beards, moustaches, wigs etc. made from hair, pile or material with similar features (e.g. freehanging ribbons, paper or cloth strands etc.), which protrude less than 50 mm from the surface of the toy	N/A
4.2.4	Full or partial moulded head masks	N/A
4.2.5	Flowing elements of toys to be worn on the head (except those covered by 4.2.2 and 4.2.3), hoods, head-dresses etc. and fabric masks which partially or fully cover the head, but excluding those items covered by 4.3	N/A
4.3	Toys disguise costumes and other toys intended to be worn by a child in play	N/A
4.4	Toys intended to be entered by a child	N/A
4.5	Soft Filled Toys (animals and dolls, etc) with a piled or textile surface	N/A

The Directive 2009/48/EC-Safety of Toys

- <u>Labeling requirement (Washing/Cleaning Label, CE mark, importer / manufacturer mark (name, address), product identification)</u>

	On product	On packaging
Washing/Cleaning instruction	N/A	N/A
CE marking	Absent	Present
Manufacturer's name	Absent	Absent
Manufacturer's address	Absent	Absent
Importer's name	Absent	Present
Importer's address	Absent	Present
Sample ID	Absent	Present

Remark 1:

Washing/Cleaning label: According to Directive 2009/48/EC the following safety requirements apply regarding cleaning and washing: A toy intended for use by children under 36 months must be designed and manufactured in such a way that it can be cleaned. A textile toy must, to this end, be washable, except if it contains a mechanism that may be damaged if soak washed. The toy must fulfill the safety requirements also after having been cleaned in accordance with this point and the manufacturer's instructions. The manufacturer should, if applicable, provide instructions on how the toy has to be cleaned.

Remark 2:

Toys made available on the market must bear the CE marking. The CE marking must be subject to the general principles set out in Article 30 of Regulation (EC) No 765/2008. The CE marking must be affixed visibly, legibly and indelibly to the toy, to an affixed label or to the packaging. In the case of small toys and toys consisting of small parts, the CE marking may alternatively be affixed to a label or an accompanying leaflet. Where, in the case of toys sold in counter displays, that is not technically possible, and on condition that the counter display was originally used as packaging for the toy, the CE marking may be affixed to the counter display. Where the CE marking is not visible from



outside the packaging, if any, it shall as a minimum be affixed to the packaging. Where specific legislation does not impose specific dimensions, the CE marking must be at least 5 mm high.

Remark 3:

The manufacturer's name, registered trade name or registered trade mark and the address at which the manufacturer can be contacted must be indicated on the toy or, where that is not possible, on its packaging or in a document accompanying the toy. This requirement applies also to the name and address etc. of any importer

Remark 4

Manufacturers must ensure that their toys bear a type, batch, serial or model number or other element allowing their identification, or where the size or nature of the toy does not allow it, that the required information is provided on the packaging or in a document accompanying the toy.

Note

Per the client's requirement, the testing age grading is over 3 years of age

Evaluation only performed on the artwork, no practical packaging evaluated

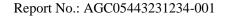
N/A=Not Applicable; N/T=Not Tested; DNI = Did Not Ignite; IBSE = Ignite But Self-Extinguished; --=No judgement required

European Standard on Safety of Toys

- EN 71-3:2019+A1:2021: Migration of Certain Elements (Al, Sb, As, Ba, B, Cd, Cr(III), Cr(VI), Co, Cu, Pb, Mn, Hg, Ni, Se, Sr, Sn, Zn)

Test Methods and Equipment: EN 71-3:2019+A1:2021; ICP-OES

T4 I4(-)	T I!4	Limit MDL		Test Result(s)			
Test Item(s)	Unit	Limit	MDL	1-1	1-2	1-3	
Aluminium(Al)	mg/kg	28130	50	N.D.	N.D.	-	
Antimony(Sb)	mg/kg	560	2.0	N.D.	N.D.	-	
Arsenic(As)	mg/kg	47	0.5	N.D.	N.D.	-	
Barium(Ba)	mg/kg	18750	50	N.D.	N.D.	-	
Boron(B)	mg/kg	15000	50	N.D.	N.D.	-	
Cadmium(Cd)	mg/kg	17	0.3	N.D.	N.D.	-	
Chromium (III) (Cr(III))	mg/kg	460	0.2	N.D.	N.D.	-	
Chromium (VI) (Cr(VI))	mg/kg	0.053	0.005	N.D.	N.D.	-	
Cobalt(Co)	mg/kg	130	2.5	N.D.	N.D.	-	
Copper(Cu)	mg/kg	7700	50	N.D.	N.D.	-	
Lead(Pb)	mg/kg	23	0.25	N.D.	N.D.	-	
Manganese(Mn)	mg/kg	15000	50	N.D.	N.D.	-	
Mercury(Hg)	mg/kg	94	1.0	N.D.	N.D.	-	
Nickel(Ni)	mg/kg	930	10	N.D.	N.D.	-	
Selenium(Se)	mg/kg	460	5	N.D.	N.D.	-	
Strontium(Sr)	mg/kg	56000	50	N.D.	N.D.	-	
Tin(Sn)	mg/kg	180000	50	N.D.	N.D.	_	
Zinc(Zn)	mg/kg	46000	50	N.D.	N.D.	-	
Con	Conclusion					Conformity	





Test Itaus(s)	I Lait	Limit MDL		Test Result(s)			
Test Item(s)	Unit	Limit	MDL	1-4	1-5	1-6	
Aluminium(Al)	mg/kg	28130	50	-	N.D.	N.D.	
Antimony(Sb)	mg/kg	560	2.0	-	N.D.	N.D.	
Arsenic(As)	mg/kg	47	0.5	-	N.D.	N.D.	
Barium(Ba)	mg/kg	18750	50	-	N.D.	N.D.	
Boron(B)	mg/kg	15000	50	-	N.D.	N.D.	
Cadmium(Cd)	mg/kg	17	0.3	-	N.D.	N.D.	
Chromium (III) (Cr(III))	mg/kg	460	0.2	-	N.D.	N.D.	
Chromium (VI) (Cr(VI))	mg/kg	0.053	0.005	-	N.D.	N.D.	
Cobalt(Co)	mg/kg	130	2.5	-	N.D.	N.D.	
Copper(Cu)	mg/kg	7700	50	-	N.D.	N.D.	
Lead(Pb)	mg/kg	23	0.25	-	N.D.	N.D.	
Manganese(Mn)	mg/kg	15000	50	-	N.D.	N.D.	
Mercury(Hg)	mg/kg	94	1.0	-	N.D.	N.D.	
Nickel(Ni)	mg/kg	930	10	-	N.D.	N.D.	
Selenium(Se)	mg/kg	460	5	-	N.D.	N.D.	
Strontium(Sr)	mg/kg	56000	50	-	N.D.	N.D.	
Tin(Sn)	mg/kg	180000	50	-	N.D.	N.D.	
Zinc(Zn)	mg/kg	46000	50	-	N.D.	N.D.	
Con	nclusion			Conformity	Conformity	Conformity	

Tost Itam(s)	Unit	Limit	MDL	Test Result(s)			
Test Item(s)	Ullit	Lilliit	MDL	1-7	1-8	1-9	
Aluminium(Al)	mg/kg	28130	50	N.D.	N.D.	N.D.	
Antimony(Sb)	mg/kg	560	2.0	N.D.	N.D.	N.D.	
Arsenic(As)	mg/kg	47	0.5	N.D.	N.D.	N.D.	
Barium(Ba)	mg/kg	18750	50	N.D.	N.D.	N.D.	
Boron(B)	mg/kg	15000	50	N.D.	N.D.	N.D.	
Cadmium(Cd)	mg/kg	17	0.3	N.D.	N.D.	N.D.	
Chromium (III) (Cr(III))	mg/kg	460	0.2	N.D.	N.D.	N.D.	
Chromium (VI) (Cr(VI))	mg/kg	0.053	0.005	N.D.	N.D.	N.D.	
Cobalt(Co)	mg/kg	130	2.5	N.D.	N.D.	N.D.	
Copper(Cu)	mg/kg	7700	50	N.D.	N.D.	N.D.	
Lead(Pb)	mg/kg	23	0.25	N.D.	N.D.	N.D.	
Manganese(Mn)	mg/kg	15000	50	N.D.	N.D.	N.D.	
Mercury(Hg)	mg/kg	94	1.0	N.D.	N.D.	N.D.	
Nickel(Ni)	mg/kg	930	10	N.D.	N.D.	N.D.	
Selenium(Se)	mg/kg	460	5	N.D.	N.D.	N.D.	
Strontium(Sr)	mg/kg	56000	50	N.D.	N.D.	N.D.	
Tin(Sn)	mg/kg	180000	50	N.D.	N.D.	N.D.	
Zinc(Zn)	mg/kg	46000	50	N.D.	N.D.	8237	
Cor	nclusion			Conformity	Conformity	Conformity	



Migration of Certain Elements: Permissible Limit for Different Materials (Unit: mg/kg)

Item	Category III In scraped-off toy material	Category II In liquid or sticky toy material	Category I In dry, brittle, powder-like or pliable toy material
Aluminium (Al)	28130	560	2250
Antimony (Sb)	560	11.3	45
Arsenic (As)	47	0.9	3.8
Barium (Ba)	18750	375	1500
Boron (B)	15000	300	1200
Cadmium (Cd)	17	0.3	1.3
Chromium III(Cr(III))	460	9.4	37.5
Chromium VI (Cr(VI))	0.053	0.005	0.02
Cobalt (Co)	130	2.6	10.5
Copper (Cu)	7700	156	622.5
Lead (Pb)	23	0.5	2.0
Manganese (Mn)	15000	300	1200
Mercury (Hg)	94	1.9	7.5
Nickel (Ni)	930	18.8	75
Selenium (Se)	460	9.4	37.5
Strontium (Sr)	56000	1125	4500
Tin (Sn)	180000	3750	15000
Zinc (Zn)	46000	938	3750

Note:

- 1. "-" = If less than 0,010 g of toy material can be obtained, it is not required to analyse.
- 2. "*" = For accessible glass, metal and ceramic toys or toy parts, if they are not small parts, the soluble test is not required.

European Standard on Safety of Toys

- EN 71-3:2019+A1:2021: Migration of Certain Elements (Organic Tin)

Test Methods and Equipment: EN 71-3:2019+A1:2021; GC-MS

Tost Itam(s)	Test Item(s) Unit Limit MDL		Test Result(s)			
Test Item(s)	Unit	Limit	MDL	1-1	1-2	1-3
Organic Tin	mg/kg	12	0.15	N.D.	N.D.	-
Conclusion				Conformity	Conformity	Conformity



Tost Itam(s)	Unit Limit		MDI	Test Result(s)		
Test Item(s)	Unit Limit	LIIIII	MDL	1-4	1-5	1-6
Organic Tin	mg/kg	12	0.15	-	N.D.	N.D.
Conclusion			Conformity	Conformity	Conformity	

Tost Itam(s)	Test Item(s) Unit Limit MDL		Test Result(s)			
Test Item(s)	Onit	Limit	MDL	1-7	1-8	1-9
Organic Tin	mg/kg	12	0.15	N.D.	N.D.	N.D.
Conclusion			Conformity	Conformity	Conformity	

Migration of Certain Elements: Permissible Limit for Different Materials (Unit: mg/kg)

Item	Category III In scraped-off toy material	Category II In liquid or sticky toy material	Category I In dry, brittle, powder-like or pliable toy material
Organic Tin	12	0.2	0.9

Note:

- 1. "-" = If less than 0.010 g of toy material can be obtained, it is not required to analyse.
- 2. "*" = For accessible glass, metal and ceramic toys or toy parts, if they are not small parts, the soluble test is not required.
- 3. Migration of organic tin is expressed as tributyl tin cation content in mg/kg.

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 23

-Cadmium(Cd) Content

Test Methods and Equipment: IEC 62321-5:2013; ICP-OES

Tost Itam(s)	Unit Limit		MDL	Test Result(s)	
Test Item(s)	Oilit	Limit	MDL	1-10	1-11
Cadmium(Cd)	mg/kg	100	10	N.D.	N.D.
Conclusion				Conformity	Conformity

Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-10,1-11



Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 51&52

- Phthalates Content

Test Methods and Equipment: IEC 62321-8:2017; GC-MS

Test Item(s)	T T	Limit	MDI	Test Result(s)		
Test Item(s)	Unit	Limit	MDL	1-10	1-11	
Diisobutyl phthalate (DIBP) CAS:84-69-5	%	0.1	0.005	N.D.	N.D.	
Dibutyl phthalate (DBP) CAS:84-74-2	%	0.1	0.005	N.D.	N.D.	
Butylbenzyl phthalate (BBP) CAS:85-68-7	%	0.1	0.005	N.D.	N.D.	
Di-(2-ethylhexyl) Phthalate (DEHP) CAS:117-81-7	%	0.1	0.005	N.D.	N.D.	
Di-n-octyl phthalate (DNOP) CAS:117-84-0	%	/	0.005	N.D.	N.D.	
Di-isononyl phthalate (DINP) CAS:28553-12-0, 68515-48-0	%	/	0.005	N.D.	N.D.	
Di-isodecyl phthalate(DIDP) CAS:26761-40-0, 68515-49-1	%	/	0.005	N.D.	N.D.	
Sum of DIBP +DBP+BBP+DEHP	%	0.1	/	N.D.	N.D.	
Sum of DNOP+DINP+DIDP	%	0.1	/	N.D.	N.D.	
Con	Conformity	Conformity				

Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-10,1-11

Limit requirements of Phthalates

Toys and childcare articles	Each of DEHP, DBP, BBP, DIBP is less than 0.1% or the sum of DEHP+DBP+BBP+DIBP is less than 0.1%
Toys and childcare articles which can be placed in the mouth by children	The sum of DINP+DIDP+DNOP is less than 0.1%

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Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 50

- Polycyclic-aromatic Hydrocarbons (PAHs) Content

Test Methods and Equipment: Afps GS 2019:01 PAK; GC-MS

Test Item(s)	Test Item(s) Unit Limit MDL		Test Result(s)		
Test Item(s)	Omi	Lillit	MIDL	1-10	1-11
Benzo[a]pyrene(BaP)	mg/kg	0.5	0.1	N.D.	N.D.
Benzo[e]pyrene(BeP)	mg/kg	0.5	0.1	N.D.	N.D.
Benzo[a]anthracene(BaA)	mg/kg	0.5	0.1	N.D.	N.D.
Benzo[b]fluoranthene(BbF)	mg/kg	0.5	0.1	N.D.	N.D.
Benzo[j]fluoranthene(BjFA)	mg/kg	0.5	0.1	N.D.	N.D.
Benzo[k]fluoranthene(BkF)	mg/kg	0.5	0.1	N.D.	N.D.
Chrysene(CHR)	mg/kg	0.5	0.1	N.D.	N.D.
Dibenzo[a,h]anthracene(DBA)	mg/kg	0.5	0.1	N.D.	N.D.
Co	Conformity	Conformity			

Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-10,1-11

Limit requirements of Polycyclic-aromatic Hydrocarbons (PAHs) (Unit: mg/kg)

Items	CAS No.	Extender oils or used for the production of tyres or parts of tyres	Any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity	Toys, including activity toys, and childcare articles, any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity
Benzo[a]pyrene(BaP)	50-32-8	≤ 1	≤ 1	≤ 0.5
Benzo[e]pyrene(BeP)	192-97-2	/	≤1	≤ 0.5
Benzo[a]anthracene(BaA)	56-55-3	/	≤ 1	≤ 0.5
Benzo[b]fluoranthene(BbF)	205-99-2	/	≤1	≤ 0.5
Benzo[j]fluoranthene(BjFA)	205-82-3	/	≤1	≤ 0.5
Benzo[k]fluoranthene(BkF)	207-08-9	/	≤ 1	≤ 0.5
Chrysene(CHR)	218-01-9	/	≤ 1	≤ 0.5
Dibenzo[a,h]anthracene(DBA)	53-70-3	/	≤ 1	≤ 0.5
Sum of BaP+ BeP+ BaA+ BbF+ BjFA+ BkF+ CHR+ DBA	/	≤ 10	/	/



Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 5

- Benzene Content

Test Methods and Equipment: EPA 3550C:2007 & EPA 8260D:2018; GC-FID

Tost Itam(s)	Unit Limit		MDL	Test Result(s)	
Test Item(s)	Unit	Limit	MDL	1-10	1-11
Benzene	mg/kg	5	5	N.D.	N.D.
Con	Conformity	Conformity			

Report No.: AGC05443231234-001

Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-10,1-11

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 43

- Aromatic Amines Azodyes (AZO) Content

Test Methods and Equipment: EN ISO 14362-1:2017; GC-MS

Test Item(s)	Unit	Limit	MDL	Test Result(s)
· ·	Cilit	Emm	MDE	1-12
4-Aminobiphenyl CAS:92-67-1	mg/kg	30	5	N.D.
Benzidine CAS:92-87-5	mg/kg	30	5	N.D.
4-Chloro-o-toluidine CAS:95-69-2	mg/kg	30	5	N.D.
2-Naphthylamine CAS:91-59-8	mg/kg	30	5	N.D.
o-Aminoazotoluene CAS:97-56-3	mg/kg	30	5	N.D.
5-Nitro-o-toluidine CAS:99-55-8	mg/kg	30	5	N.D.
p-Chloroaniline CAS:106-47-8	mg/kg	30	5	N.D.
4-Methoxy-m-phenylenediamine CAS:615-05-4	mg/kg	30	5	N.D.
4,4'-Diaminodiphenylmethane CAS:101-77-9	mg/kg	30	5	N.D.
3,3'-Dichlorobenzidine CAS:91-94-1	mg/kg	30	5	N.D.
3,3'-Dimethoxybenzidine CAS:119-90-4	mg/kg	30	5	N.D.
3,3'-Dimethybenzidine CAS:119-93-7	mg/kg	30	5	N.D.
4,4'-Methylenedi-o-toluidine CAS:838-88-0	mg/kg	30	5	N.D.
p-Cresidine CAS:120-71-8	mg/kg	30	5	N.D.
4,4'-Methylenebis[2-chloroaniline] CAS:101-14-4	mg/kg	30	5	N.D.



Test Item(s)	Unit	Limit	MDL	Test Result(s) 1-12
4,4'-Oxydianiline CAS:101-80-4	mg/kg	30	5	N.D.
4,4'-Thiodianiline CAS:139-65-1	mg/kg	30	5	N.D.
2-Aminotoluene CAS:95-53-4	mg/kg	30	5	N.D.
2,4-Toluylendiamine CAS:95-80-7	mg/kg	30	5	N.D.
2,4,5-Trimethylaniline CAS:137-17-7	mg/kg	30	5	N.D.
o-Anisidine CAS:90-04-0	mg/kg	30	5	N.D.
4-Aminoazobenzene CAS:60-09-3	mg/kg	30	5	N.D.
	Conformity			

Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-12

Note: 4-aminoazobenzene: The EN ISO 14362-1:2017 or ISO 17234-1:2020 methods will enable further cleavage of 4-aminoazobenzene to aniline and / or 1,4-phenylenediamine. If aniline and / or 1,4-phenylenediamine are detected, 4-aminoazobenzene shall be further determined by EN ISO 14362-3:2017 or ISO 17234-2:2011.

Regulation (EU) 2019/1021 on persistent organic pollutants (POPs)

- Pentachlorophenol (PCP) Content

Test Methods and Equipment: EPA 3550C:2007 & EPA 8270E:2018; GC-MS

Test Item(s)	Unit	Limit	MDL	Test Result(s)
Test Item(s)				1-6
Pentachlorophenol (PCP)	mg/kg	5	5	N.D.
Co	Conformity			

- Formaldehyde Release

Test Methods and Equipment: EN 717-3:1996; UV-Vis

Test Item(s)	Unit	Client's	MDL	Test Result(s)
		limit	MDL	1-6
Formaldehyde Release	mg/kg	80	1	9
Co	Conformity			



- Color fastness to rubbing

Test Method: ISO 105-X12:2016

Rubbing finger: Cylinder

The time of conditioning as well as the atmospheric conditions during testing: 21.0°C, 65 %R.H., 4 hrs

The long direction of the specimen Endwise/ Crossrange The percentage of soak of wet rubbing cloth: 95%~100%

	Test 1	Conclusion	
Test point	Colour fastness to		
	Dry rubbing	Wet rubbing	
1-7	4-5	4-5	Conformity
1-8	4-5	4-5	Conformity
Limit (Client's Requirement)	≥2-3	≥2-3	/

Note:

Colour Fastness Grade:

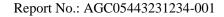
Grade 5 = No Colour Change (Best Grade)

Grade 1 = Colour Change Seriously (Bad Grade)

9 grades in gray sample card: 5, 4-5, 4, 3-4, 3, 2-3, 2, 1-2, 1.

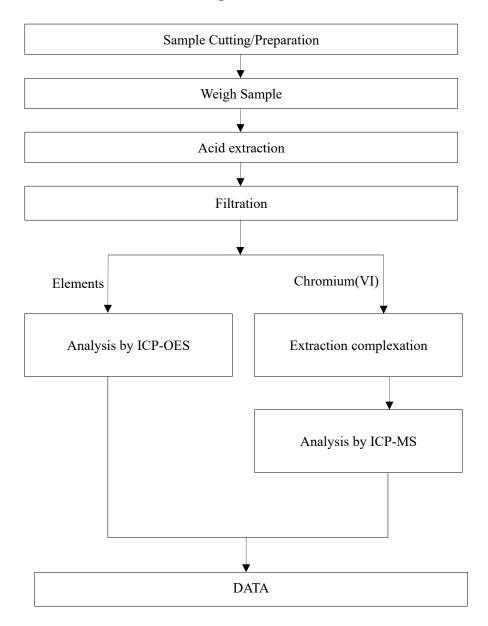
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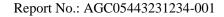
Report No.: AGC05443231234-001





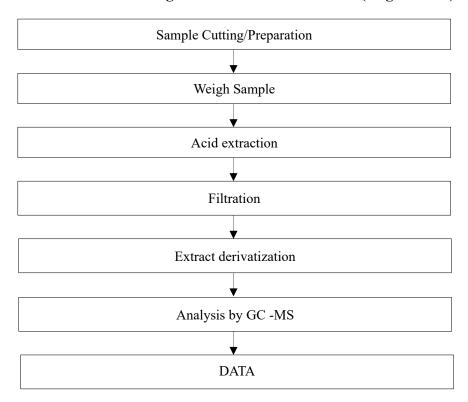
Test Flow Chart of Migration of Certain Elements



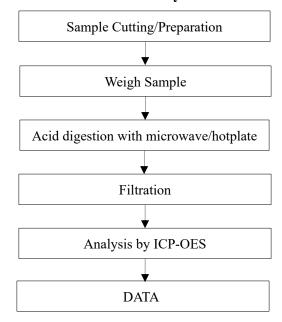


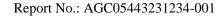


Test Flow Chart of Migration of Certain Elements (Organic Tin)



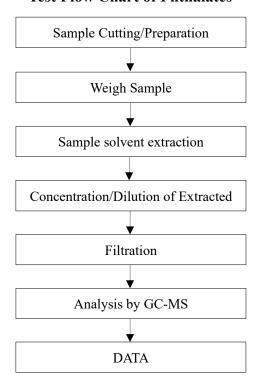
Test Flow Chart of Heavy Metal Content

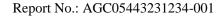






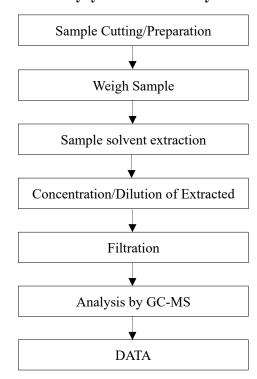
Test Flow Chart of Phthalates

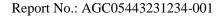






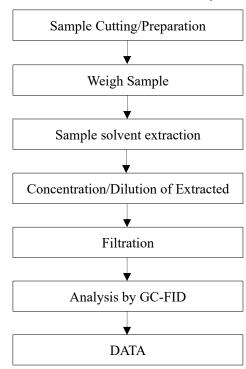
Test Flow Chart of Polycyclic-aromatic Hydrocarbons (PAHs)

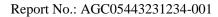






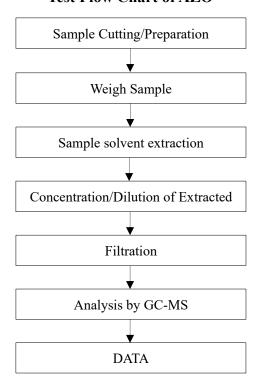
Test Flow Chart of Monoaromatic Hydrocarbons

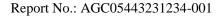






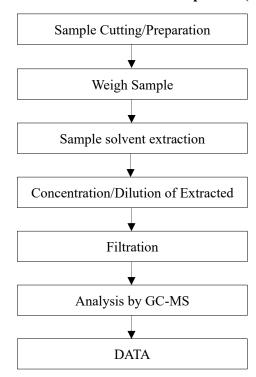
Test Flow Chart of AZO

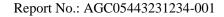






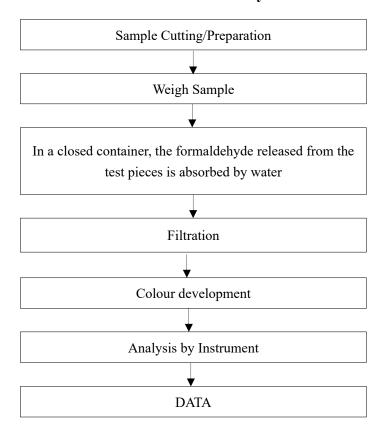
Test Flow Chart of Pentachlorophenol (PCP)







Test Flow Chart of Formaldehyde Release





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*** End of Report ***