

Sample Received Date: Apr

Apr. 14, 2020

**Completed Date:** 

Apr. 20, 2020

The following merchandise was (were) submitted and identified on behalf of the applicant as:

Sample Name:

HDPE Glove

Sample Color:

Transparent

Exported to:

European Union

**Country of Origin:** 

**PRC** 

Test Result(s): Please refer to next page(s).

Signed for and on Behalf of Contract

Frank / Lab manager

Consumer Testing Technology Co., Ltd.





### Test Requested and Conclusion(s):

No.	Test Sample	Standard and Requirement	Conclusion(s)
1	Tested materials of submitted samples	Annex XVII items 23 of the REACH Regulation (EC) No 1907/2006 & COMMISSION REGULATION (EU) No 494/2011 - Total Cadmium (Cd)	PASS
2	Tested materials of submitted samples	Annex XVII items 51 of the REACH Regulation (EC) No 1907/2006 & amendment(EC) 2018/2005 - Phthalates	PASS
3	Tested materials of submitted samples	Phthalates content	DATA
4	Tested materials of submitted samples	Annex XVII items 50 of the REACH Regulation (EC) No 1907/2006 Class II - Polycyclic Aromatic Hydrocarbons (PAHs) content	PASS
5	Tested materials of submitted samples	Annex XVII items 20 of the REACH Regulation (EC) No 1907/2006 & COMMISSION DECISION 2009/425/EC - Organic tin compounds	PASS
6	Tested materials of submitted samples	(EU) 2019/1021 of POPs - Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	PASS
7	Tested materials of submitted samples	COMMISSION REGULATION  (EU)No.10/2011 on plastic materials and articles intended to come into contact with food.  - Overall migration  - Soluble heavy metal  - Specific migration of Bisphenol A (BPA)  - Total Phthalate content  - Specific migration of Phthalate	PASS



Test Result(s):

Total Cadmium (Cd)

Method:

Metal – With reference to CPSC-CH-E1001-08.3- Method No.1

Nonmetal – With reference to CPSC-CH-E1002-08.3- Method No.2

Surface coating – With reference to CPSC-CH-E1003-09.1- Method No.3, analyzed by Atomic Absorption

Spectroscopy (AAS) or Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES).

Material No.	Limit (mg/kg)	Result (mg/kg)	Conclusion
1	100	N.D.	PASS

**Note:** 1. mg/kg = milligram per kilogram (ppm).

2. N.D. = Not Detected (<RL).

3. RL (Reporting Limit) = 2 mg/kg.

#### **Phthalates**

Method: CPSC-CH-C1001-09.4, analyzed by Gas Chromatograph-Mass Spectrometry (GC-MS).

Test Substances	CAS No.	Report Limit (mg/kg)	Limit (mg/kg)	Result (mg/kg)
Dibutyl phthalate(DBP)	84-74-2	50	_	N.D.
Butyl benzyl phthalate(BBP)	85-68-7	50		N.D.
Bis(2-ethylhexyl) phthalate(DEHP)	117-81-7	50	-	N.D.
Diisobutyl phthalate(DIBP)	84-69-5	50	-	N.D.
SUM (DBP+BBP+DEHP+DIBP)	N.D.			
Co	PASS			

Note:

- 1. mg/kg = milligram per kilogram (ppm).
- 2. N.D. = Not Detected (< RL).
- 3. RL = Report Limit.



Test Result(s):

**Phthalates** 

Method: CPSC-CH-C1001-09.4, analyzed by Gas Chromatograph-Mass Spectrometry (GC-MS).

Test Substances	CAS No.	Report Limit (mg/kg)	Limit (mg/kg)	Result (mg/kg)	
Di-n-octyl phthalate(DNOP)	117-84-0	50		N.D.	
Diicodooyl phtholoto(DIDD)	26761-40-0	100		N.D.	
Diisodecyl phthalate(DIDP)	68515-49-1	100		IN.D.	
Dijoononyl phtholoto(DINID)	28553-12-0	100		NID	
Diisononyl phthalate(DINP)	68515-48-0	100	<b></b>	N.D.	
SUM (DNOP+DIDP+DINP)			1000	N.D.	

Note: 4. mg/kg = milligram per kilogram (ppm).

5. N.D. = Not Detected (< RL).

6. RL = Report Limit.

Polycyclic Aromatic Hydrocarbons (PAHs)

Method: AfPS GS 2014:01 PAK, analyzed by Gas Chromatograph-Mass Spectrometry (GC-MS).

T4 Cb-4	CACNI	Limit (mg/kg)			Result (mg/kg)
Test Substance	CAS No.	I	II	III	1
Benzo[a]anthracene(BaA)	56-55-3		1	0.5	N.D.
Chrysene (CHR)	218-01-9		1	0.5	N.D.
Benzo[b]fluoranthene(BbFA)	205-99-2		1	0.5	0.63
Benzo[k]fluoranthene(BkFA)	207-08-9		1	0.5	N.D.
Benzo[a]pyrene(BaP)	50-32-8	1	1	0.5	0.35
Dibenzo[a,h]anthracene(DBAhA)	53-70-3		1	0.5	N.D.
Benzo[e]pyrene(BeP)	192-97-2		1	0.5	N.D.
Benzo[j]fluoranthene(BjFA) 205-82-3			1	0.5	N.D.
SUM		10			0.98
Conc	PASS				



Note:

- 1. mg/kg = milligram per kilogram (ppm).
- 2. N.D. = Not Detected (<RL).
- 3. RL (Reporting Limit) = 0.20 mg/kg.
- 4. "--" = Not Regulated.
- 5. Product Class:
  - I = Extender oils.
  - II = 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, under normal or reasonably foreseeable conditions of use.

III = Toys, including activity toys, and childcare articles, if 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, under normal or reasonably foreseeable conditions of use.

Organic tin compounds <sup>s</sup>

Method: With reference to acid digestion method or ISO 17353:2004, analyzed by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES) or Gas Chromatograph-Mass Spectrometry (GC-MS).

Compounds Name	RL <sup>#</sup> Limit <sup>#</sup>		Result (mg/kg) #
Compounds Name	(mg/kg)	(mg/kg)	1
Tributyltin (TBT)	100		N.D.
Triphenyltin (TPhT)	100	s. <b>——</b> s	N.D.
Tricyclohexyltin (TCyT)	100	( <b></b> ()	N.D.
Trioctyltin (TOT)	100		N.D.
Tripropyltin (TPT)	100	· —— ·	N.D.
Trimethyltin (TMT)	100		N.D.
Sum of (TBT, TPhT, TCyT, TOT, TPT, TMT)		1000	N.D.
Dibutyltin (DBT)	100	1000	N.D.
Dioctyltin (DOT)	100	1000	N.D.
Conclus	sion		PASS

Note 1

- 1. mg/kg = milligram per kilogram (ppm).
- 2. N.D. = Not Detected (< RL).
- 3. RL = Reporting Limit.
- 4. "#" = This limit is by weight of tin.
- 5. The organotin content were reported as total tin, whenever the result of total tin exceed 100mg/kg and organotin confirm action test were performed.



### Test Result(s):

Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) – POPs s

Method: With reference to ISO 18219:2015, analyzed by Gas Chromatograph-Mass Spectrometry (GC-MS).

Material No.	Limit (%)	Result (%)	Conclusion
1	0.15	N.D.	PASS

Note: 1. N.D. = Not Detected (< RL).

2. RL (Reporting Limit) = 0.01%.

### Overall migration

Method: With reference to BS EN1186-3:2002(Total immersion) & BS EN1186-14:2003(Substitute tests)

Material No.	Description	Location			
1	Transparent plastic	Glove			

Material No.	Test Condition	Limit (mg/dm²)	Result(mg/dm²)	Conclusion
	3% Acetic acid(w/v), 70℃, 2 hours	10	<3	PASS
_	10% Ethanol(v/v), 70℃, 2 hours	10	<3	PASS
<b>1</b>	95% Ethanol(v/v), 60℃, 2 hours	10	<3	PASS
	Isooctane, 40℃, 0.5 hours	10	<3	PASS

**Note:** 1. mg/dm<sup>2</sup> = milligram per square <u>decimetre</u> of surface area of material or article.

### Soluble heavy metal

Method: With reference to BS EN13130-1:2004,was analyzed by Inductively Coupled Plasma Mass Spectrometer (ICP-MS).

Material No.	Description	Location
1	Transparent plastic	Glove

Elements	Ва	Со	Cu	Fe	Li	Mn	Zn	Al	Ni	
Limit (mg/kg)	1	0.05	5	48	0.6	0.6	5	1	0.02	Conclusion
Material No.		Result (mg/kg)								
1	< 0.1	< 0.05	< 0.5	<1	< 0.1	< 0.05	<1	< 0.1	< 0.01	PASS



**Note:** 1. mg/kg = milligrams of the constituents released per kilogram of foodstuff.

2. Test condition: 3% Acetic acid(w/v) at 70°C for 2 hours.

Specific migration of Bisphenol A (BPA) s

Method: With reference to CEN/TS 13130-13:2005, analyzed by Liquid Chromatography- Mass Spectrometry (LC-MS/MS).

Material No.	Description	Location
1	Transparent plastic	Glove

Material No.	Test Condition	Limit(mg/kg)	Result(mg/kg)	Conclusion
1	3% Acetic acid(w/v),70°C for 2 hours	0.05	N.D.	PASS

**Note:** 1. mg/kg = milligrams of the constituents released per kilogram of foodstuff.

2. N.D. = Not Detected (< RL).

3. RL (Reporting Limit) = 0.05 mg/kg.

#### **Total Phthalate content**

Method: Solvent extraction, analyzed by Gas Chromatograph-Mass Spectrometry (GC-MS).

Material No.	Description	Location
1	Transparent plastic	Glove

Material No.	Test Item	Limit(%)	Result(%)	Conclusion
	Dibutyl Phthalate (DBP)	0.05	<0.005	PASS
	Benzyl butyl Phthalate (BBP)	0.1	<0.005	PASS
1	Bis (2-ethylhexyl) Phthalate (DEHP)	0.1	<0.005	PASS
	Di-isononyl Phthalate (DINP)	0.1	<0.01	PASS
	Di-isodecyl Phthalate (DIDP)	0.1	<0.01	PASS

**Note:** 1. mg/kg = milligrams per kilogram(ppm).



Test Result(s):

Specific migration of Phthalate s

Method: With reference to BS EN 13130-1:2004, analyzed by Gas Chromatograph-Mass Spectrometry (GC-MS).

Material No.	Description	Location
1	Transparent plastic	Glove

Material No.	Test Item	Limit(mg/kg)	Result(mg/kg)	Conclusion
	Dibutyl Phthalate (DBP)	0.3	<0.2	PASS
	Benzyl butyl Phthalate (BBP)	30	<1	PASS
	Bis (2-ethylhexyl) Phthalate (DEHP)	1.5	<1	PASS
1	Di-isononyl Phthalate (DINP)	9	<1	PASS
	Di-isodecyl Phthalate (DIDP)	9	<1	PASS
	Di-isononyl Phthalate (DINP)+ Di-isodecyl Phthalate (DIDP)	9	<2	PASS
	Phthalic acid, diallyl ester(DAP)	0.01	<0.01	PASS

**Note:** 1. mg/kg = milligrams of the constituents released per kilogram of foodstuff.

2. Test Condition: 95% Ethanol(v/v), 70°C, 2 hours.

Specific migration of Phthalate s

Method: With reference to BS EN 13130-1:2004, analyzed by Gas Chromatograph-Mass Spectrometry (GC-MS).

Material No.	Test Item	Limit(mg/kg)	Result(mg/kg)	Conclusion
	Dibutyl Phthalate (DBP)	0.3	<0.2	PASS
	Benzyl butyl Phthalate (BBP)	30	<1	PASS
	Bis (2-ethylhexyl) Phthalate (DEHP)	1.5	<1	PASS
1	Di-isononyl Phthalate (DINP)	9	<1	PASS
•	Di-isodecyl Phthalate (DIDP)	9	<1	PASS
	Di-isononyl Phthalate (DINP)+  Di-isodecyl Phthalate (DIDP)	<2	PASS	
	Phthalic acid, diallyl ester(DAP)	0.01	<0.01	PASS

Note: 1. mg/kg = milligrams of the constituents released per kilogram of foodstuff.

2. Test Condition: Isooctane, 40°C, 0.5 hour.



#### **Test Material List:**

Material No.	Description	Location
1	Transparent plastic	Glove

#### Photo of Sample:



\*\*\*End of Report\*\*\*