

Kambukka bvba
Torenplein 7.16.1, 3500 Hasselt, BELGIUM

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Date: 2015-12-28

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TEST REPORT

Test Report No. : 3034160.51
Project No. : 3034160.00

Applicant : Kambukka bvba
Torenplein 7.16.1, 3500 Hasselt, BELGIUM

Product Name : Courtney

Test Requested : German Food, Articles of Daily Use and Feed Code of September 1, 2005(LFGB), Section 30 & 31 and BfR recommendation and applicant's requirement.

Test Method : Please refer to next pages

Sample Received : 2015-12-14

Testing Period : 2015-12-14 to 2015-12-22

Reference No : CTT151215460EN

Test Results
- following pages -

Resume:

No.	Parameter	Product Name: Courtney
1	Sensorial examination - odour and taste test	PASS
2	Overall migration	PASS
3	Specific migration of heavy metals	PASS
4	Specific migration of Primary Aromatic Amine (PAA)	PASS
5	Peroxide value	PASS
6	Specific migration of Bisphenol A (BPA)	PASS
7	Volatile Organic Matter (VOM)	PASS
8	Specific migration of Acrylonitrile	PASS
9	Chromium, zirconium, vanadium, Hafnium contents	PASS
10	Specific migration of Formaldehyde	PASS
11	Specific migration of hexamethylenediamine	PASS
12	Extractable components	PASS
13	Total Platinum	PASS
14	Extractable heavy metals(23 elements)	PASS

Remark: As per applicant's requirement, tested items (1-6) were based on total filling of finished product.


Guangzhou, December 28, 2015

Signed for and on behalf of

DEKRA Testing and Certification (Shanghai) Ltd., Guangzhou branch

Chemical, Hardgoods & Toys




Raymond Yu
Manager

Attention: Please note that every statement made in this report is only valid for the samples tested and reported herein. This report shall not be reproduced except in full, without the written approval of the testing laboratory.

Sample Descriptions:

No.	Description(s)	Materials (claimed by applicant)
(1)	Complete Product	--
(2)	Lid-upper/Vent Cover	ABS (white)
(3)	Lid-Base	ABS (red)
(4)	Spout Cover	Co-PP (red)
(5)	Swing Arm	POM (red)
(6)	Seal Arm	PA66 (dark red)
(7)	Main Seal/Wiper Seal/Vent Seal	Silicone (black)
(8)	Spout-Seal	Silicone (red)
(9)	Hinge Spring/Seal arm Spring/Part Name	SUS 304
(10)	Button	TRITAN TX1001
(11)	BODY 20oz	PCTG Tx1001

TEST RESULTS

1) Sensorial examination - odour and taste test

With reference to DIN 10955:2004.

Test Item	Result	Recommended Limit
	(1)	
Sensorial examination odour (point scale)	0	2.5
Sensorial examination taste (point scale)	0	2.5

Remark:

1. Test condition : 23°C at 0.5 hours for odour test, 70°C 2 hours for taste test.
2. Test media: Distilled water
3. Number of panelist: Six
4. Scale evaluation:
 - 0 = No perceptible odour/taste
 - 1 = Odour/taste just perceptible (still difficult to define)
 - 2 = Moderate odour/taste
 - 3 = Moderately strong odour/taste
 - 4 = Strong odour/taste

2) Overall migration

With reference to EN1186-1:2002& EN1186-9:2002.

Test Item	Result (mg/dm ²)	Limit (mg/dm ²)
	(1)	
3%(w/v) Acetic acid, 70°C 2 hours	<3	10
50%(v/v) Ethanol, 70°C 2 hours	<3	10

Remark:

1. mg/dm² = milligram per square decimeter
2. < = Less than

3) Specific migration of heavy metals

With reference to (EU) No. 10/2011 for selection of conditions and test method for specific migration. Analysis was performed by inductively coupled plasma optical emission spectrometer & flame atomic absorption spectrophotometer.

Test Item	Test Condition	Result (mg/kg)	MDL (mg/kg)	Limit (mg/kg)
		(1)		
Barium (Ba)	3%(w/v) Acetic acid, 70°C 2 hours	N.D.	0.1	1
Cobalt (Co)		N.D.	0.05	0.05
Copper (Cu)		N.D.	0.5	5
Iron (Fe)		N.D.	1.0	48
Lithium (Li)		N.D.	0.1	0.6
Manganese (Mn)		N.D.	0.1	0.6
Zinc (Zn)		N.D.	1.0	25

Remark:

1. mg/kg = milligram per kilogram
2. N.D. = Not Detected (below MDL)
3. MDL = Method Detection Limit

4) Specific migration of Primary Aromatic Amine (PAA)

With reference to DIN 55610-1986. Analysis was performed by UV-visible spectrophotometer.

Test Item	Test Condition	Result (mg/kg)	MDL (mg/kg)	Limit (mg/kg)
		(1)		
PAA	3%(w/v) Acetic acid, 70°C 2 hours	N.D.	0.01	0.01

Remark:

1. mg/kg = milligram per kilogram
2. N.D. = Not Detected (below MDL)
3. MDL = Method Detection Limit

5) Peroxide value

European Pharmacopoeia. 2005 Appendix X F. Peroxide Value method A

Test Item	Result	Limit
	(1)	
Peroxide value	Absent	Absent

6) Specific migration of Bisphenol A (BPA)

With reference to (EU) No. 10/2011 & CEN/TS 13130-13:2005. Analysis was performed by High Performance Liquid Chromatography (HPLC).

Test Item	Test Condition	Result (mg/kg)		MDL (mg/kg)	Limit (mg/kg)
		(1)			
BPA	3%(w/v) Acetic acid, 70°C, 2 hours	N.D.		0.1	0.6

Remark:

1. N.D. = Not Detected (below MDL)
2. MDL = Method Detection Limit
3. mg/kg = milligram per kilogram

7) Volatile organic matter

LFGB BfR Part II Section X V, May 2003 and LFGB section 35 B80.30 1(EG)

Test Item	Test Condition	Result (%)		Limit (%)
		(7)	(8)	
Volatile organic matter	70°C for 2 hours	<0.1	<0.1	0.5

Remark:

1. % = Percent of weight
2. < = Less than

With reference to 48th Communication on the testing of plastics, Bundesgesundheitsblatt 25 (1982) 334.

Test Item	Test Condition	Result (mg/dm ²)		Limit (mg/dm ²)
		(2)	(3)	
Volatile organic matter	90°C for 24 hours	<5	11.9	15

Remark:

1. mg/dm² = milligram per square decimeter
2. < = Less than

8) Specific migration of Acrylonitrile

With reference to (EU) No.10/2011 & EN 13130-3:2004. Analysis was performed by gas chromatographic-hydrogen flameionization detector.

Test Item	Test Condition	Result(mg/kg)		MDL (mg/kg)	Limit (mg/kg)
		(2)	(3)		
Specific migration of Acrylonitrile	3%(w/v) Acetic acid, 70°C, 2 hours	N.D.	N.D.	0.01	0.01

Remark:

1. mg/kg = milligram per kilogram
2. N.D. = Not Detected (below MDL)
3. MDL = Method Detection Limit

9) Chromium, zirconium, vanadium, Hafnium contents

Acid digestion. Analysis was performed by inductively coupled plasma optical emission spectrometer.

Test Item	Result (mg/kg)	MDL (mg/kg)	Limit (mg/kg)
	(4)		
Total Chromium (Cr)	N.D.	1	10
Total Zirconium (Zr)	N.D.	5	100
Total Vanadium (V)	N.D.	2	20
Total Hafnium (Hf)	N.D.	10	100

Remark:

1. mg/kg = milligram per kilogram
2. N.D. = Not Detected (below MDL)
3. MDL = Method Detection Limit

10) Specific migration of formaldehyde

With reference to (EU) No. 10/2011 & CEN/TS13130-23:2005. Analysis was performed by UV-visible spectrophotometer.

Test Item	Test Condition	Result (µg/mL)		MDL (µg/mL)	Limit (µg/mL)
		(7)	(8)		
Formaldehyde	3%(w/v) Acetic acid 70°C 2 hours	N.D.	N.D.	1	3

With reference to (EU)No.284/2011. Analysis was performed by UV-visible spectrophotometer.

Test Item	Test Condition	Result (mg/kg)	MDL (mg/kg)	Limit (mg/kg)
		(5)		
Formaldehyde	3%(w/v) Acetic acid 70°C 2 hours	N.D.	1	15

Remark:

1. mg/kg = milligram per kilogram
2. µg/mL = microgram per milliliter
3. N.D. = Not Detected (below MDL)
4. MDL = Method Detection Limit

11) Specific migration of hexamethylenediamine

The sample preparation is performed according to EN13130-1: 2004. Test conditions are chosen according to COMMISSION REGULATION (EU) No. 10/2011. The samples were tested with below conditions and followed by GC-MS analysis.

Test Item	Test Condition	Result (mg/kg)		Maximum Permissible Limit (mg/kg)
		(6)		
hexamethylenediamine	3% acetic acid 70 °C for 2 hours	< 0.2		2.4

Remark:

- 1 < = Less than
- 2 mg/kg = Milligram per kilogram based on dry weight of sample

12) Extractable components

With reference to 61st Communication on testing of plastics in Bundesgesundheitsbl 46(2003) 362.

Test Item	Test Condition	Result (%)		Limit (%)
		(7)	(8)	
Extractives – Distilled water	Refluxing for 5 hours	<0.1	<0.1	0.5
Extractives - 10% Ethanol(v/v)		<0.1	<0.1	0.5
Extractives - 3% acetic acid(w/v)		<0.1	<0.1	0.5

Remark:

1. % = Percent of weight
2. < = Less than

13) Total Platinum (Pt)

With reference to EPA 3052:1996. Analysis was performed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES).

Test Item	Result (mg/kg)		MDL (mg/kg)	Limit (mg/kg)
	(7)	(8)		
Platinum (Pt)	N.D.	N.D.	10	50

Remark:

1. mg/kg = milligram per kilogram
2. N.D. = Not Detected (below MDL)

3. MDL = Method Detection Limit

14) Extractable heavy metals (23 elements)

Sample preparation in 0.5% citric acid at 70°C for 2 hour and followed by ICP-OES and ICP-MS analysis.

Test Item	Result(s) of 3 rd Migration	MDL (mg/kg)	Limit (mg/kg)
	[mg/kg] (9)		
Tin (Sn)	N.D.	0.5	100
Copper (Cu)	N.D.	0.1	4
Iron (Fe)	N.D.	0.1	40
Manganese (Mn)	N.D.	0.1	1.8
Zinc (Zn)	N.D.	0.1	5
Aluminum (Al)	N.D.	0.1	5
Nickel (Ni)	N.D.	0.05	0.14
Chromium (Cr)	N.D.	0.05	0.250
Barium (Ba)	N.D.	0.1	1.2
Lithium (Li)	N.D.	0.005	0.048
Titanium (Ti)	N.D.	0.05	Not requested
Magnesium (Mg)	N.D.	0.05	Not requested
Beryllium (Be)	N.D.	0.002	0.01
Vanadium (V)	N.D.	0.002	0.01
Cobalt (Co)	N.D.	0.002	0.02
Arsenic (As)	N.D.	0.0004	0.002
Molybdenum (Mo)	N.D.	0.002	0.12
Silver (Ag)	N.D.	0.002	0.08
Cadmium (Cd)	N.D.	0.0004	0.005
Antimony (Sb)	N.D.	0.005	0.04
Mercury (Hg)	N.D.	0.0005	0.003
Thallium (Tl)	N.D.	0.0001	0.0001
Lead (Pb)	N.D.	0.01	0.010

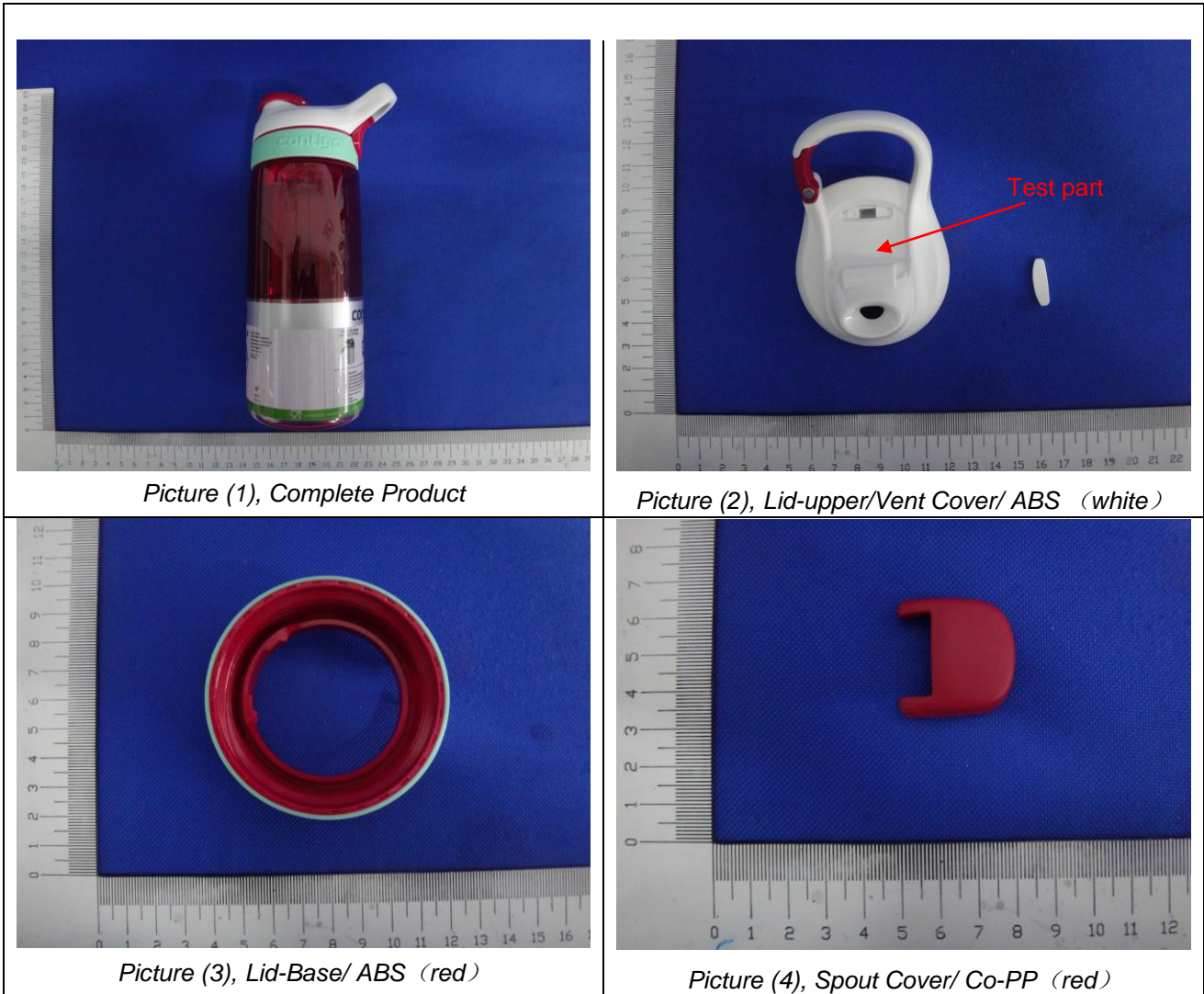
Test Item	Result(s) of 1 st + 2 nd Migration	MDL (mg/kg)	Limit (mg/kg)
	[mg/kg] (9)		
Tin (Sn)	N.D.	1.0	700
Copper (Cu)	N.D.	0.2	28
Iron (Fe)	N.D.	0.2	280
Manganese (Mn)	N.D.	0.2	12.6
Zinc (Zn)	N.D.	0.2	35
Aluminum (Al)	N.D.	0.2	35

Nickel (Ni)	N.D.	0.1	0.98
Chromium (Cr)	N.D.	0.1	1.75
Barium (Ba)	N.D.	0.2	8.4
Lithium (Li)	N.D.	0.01	0.336
Titanium (Ti)	N.D.	0.1	Not requested
Magnesium (Mg)	N.D.	0.2	Not requested
Beryllium (Be)	N.D.	0.004	0.07
Vanadium (V)	N.D.	0.004	0.07
Cobalt (Co)	N.D.	0.004	0.14
Arsenic (As)	N.D.	0.0008	0.014
Molybdenum (Mo)	N.D.	0.004	0.84
Silver (Ag)	N.D.	0.004	0.56
Cadmium (Cd)	N.D.	0.0008	0.035
Antimony (Sb)	N.D.	0.01	0.28
Mercury (Hg)	N.D.	0.001	0.021
Thallium (Tl)	N.D.	0.0002	0.0007
Lead (Pb)	N.D.	0.02	0.07

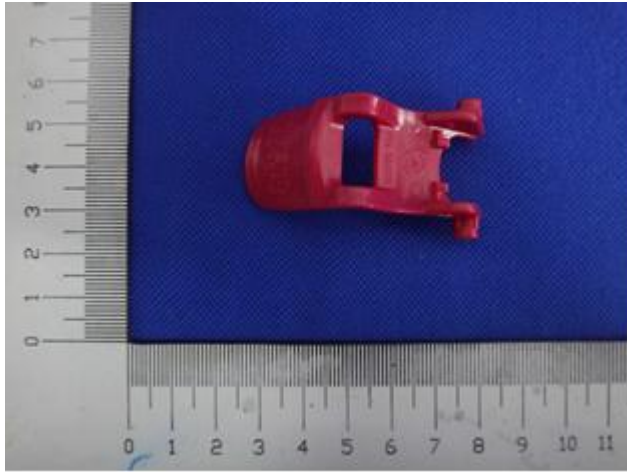
Remark:

1. mg/kg = milligram per kilogram
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3. MDL = Method Detection Limit

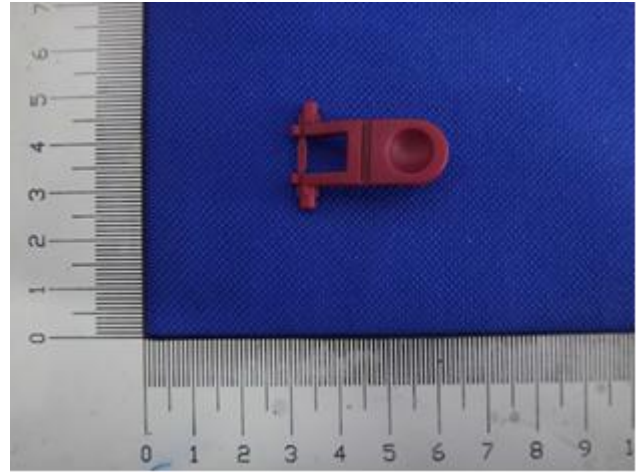
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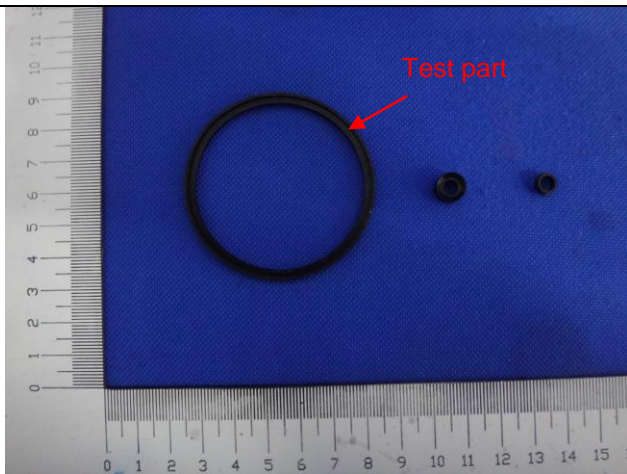
Sample Photos



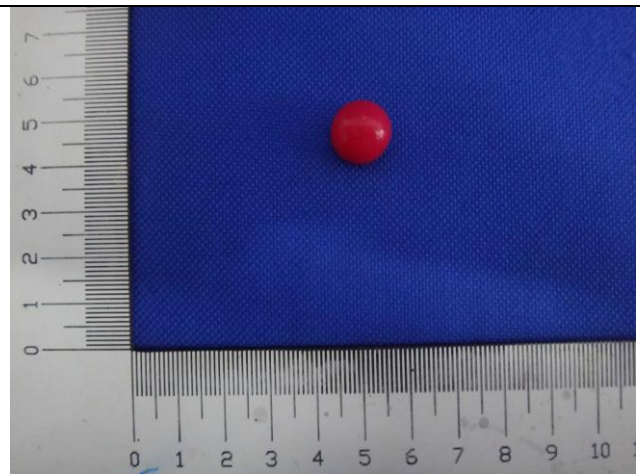
Picture (5), Swing Arm



Picture (6), Seal Arm

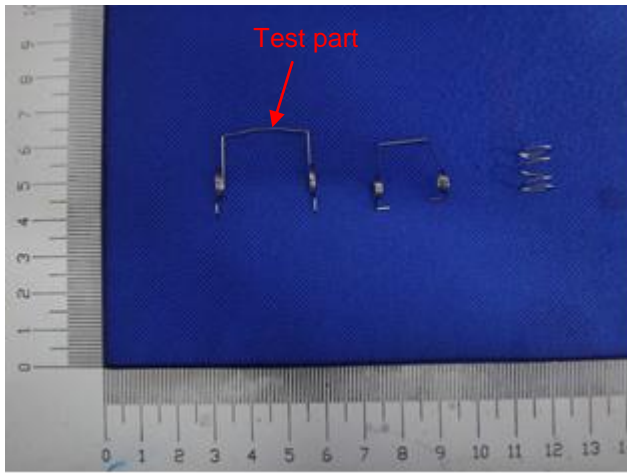


Picture (7), Main Seal/Wiper Seal/Vent Seal

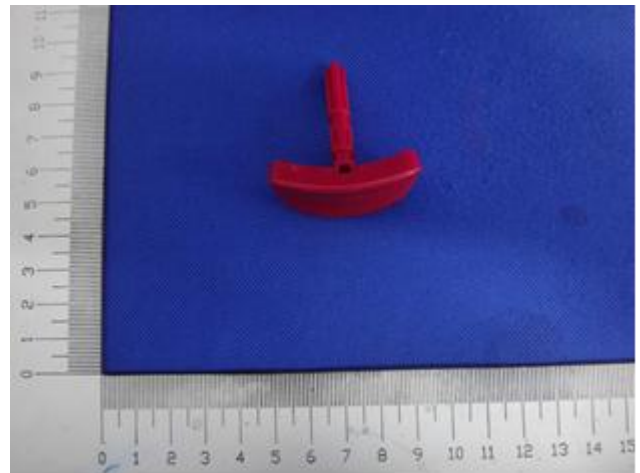


Picture (8), Spout-Seal

Sample Photos



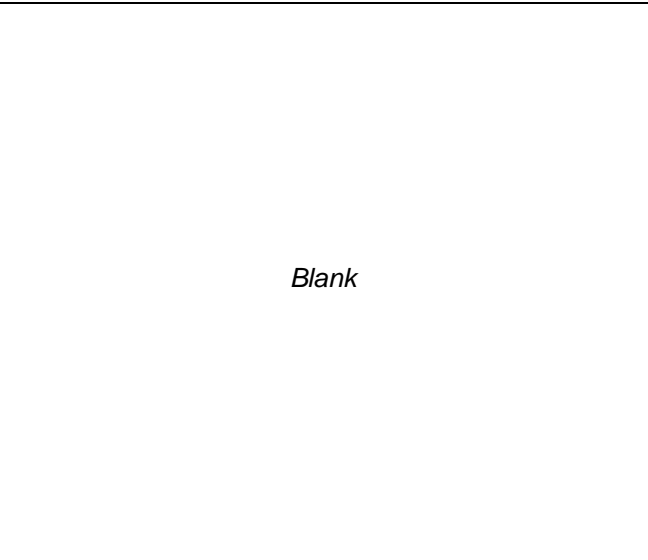
Picture (9), Hinge Spring/Seal arm Spring/Part Name



Picture (10), Button



Picture (11), BODY 20oz



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