



Technical Report No. 64.165.19.03300.01E
Rev.00
Dated 2019-08-05

Client: Guang Dong Xinbao Electrical Appliances Holdings Co.,Ltd.

Address: Zhenghe South Road,Leliu Town,Shunde district, Foshan City, Guangdong, China.

Sample Description: Mini chopper

Model No.: MC365KA-GS

Sample Received Date: 2019-07-05

Test Period: From 2019-07-17 to 2019-07-29

Purpose of examination: As specified by client, to test as regulated by the German Food & Feed Acts LFGB (§ 30 & 31) and Regulation (EC) No.1935/2004

Test Result: Refer to following page(s)

Conclusion: When tested as specified, the submitted sample **010** was found to comply with the respective requirement(s) for the tested item(s) as stated in German Food & Feed Acts LFGB Section 30 & 31 and the General Requirement in EU Regulation No. 1935/2004 Article 3(1) on materials and articles intended to come into contact with food.

Remark: (1)The result relates only to the items tested.
(2)The data and photo of samples 002-004/006/007 were transferred from that of sample 002-004/006/007 in technical report no. 64.165.18.03735.01A issued on 2018-08-14.
(3)The data and photo of samples 005/009 were transferred from that of sample 005/006 in technical report no. 64.165.19.00198.01B issued on 2019-02-26.

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
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SUMMARY OF TEST RESULTS

No.	Test Requested	Conclusion	Remarks
1.	For material: Plastics or coating – Overall migration test for compliance with regulation (EU) No. 10/2011 and it's amendment (EU) No. 2016-1416, (EU) No. 2017-752 and (EU) No. 2018-79.	PASS	
2.	For material: Plastics or coating – Specific Migration of Heavy Metals (Ba, Co, Cu, Fe, Li, Mn, Zn, Al, Ni, W) for compliance with regulation (EU) No. 10/2011 and it's amendment (EU) No. 2016-1416, (EU) No. 2017-752 and (EU) No. 2018-79.	PASS	
3.	For material: Plastics or coating – Specific Migration of Primary Aromatic Amine for compliance with regulation (EU) No. 10/2011.	PASS	
4.	For material: Silicone – Overall migration test for compliance with Resolution AP (2004)5.	PASS	
5.	For material: Silicone – Extractable components	PASS	
6.	For material: Silicone / Rubber / Plastic – Remaining Peroxide	PASS	
7.	For material: Silicone / Rubber – Volatile Organic Matters	PASS	
8.	For material: Silicone – Total Platinum content	PASS	
9.	For material: Polystyrene and styrene copolymers / Acrylic – Volatile Organic Components	PASS	
10.	For material: Acetal resins (POM) – Total Zinc and Boron content	PASS	
11.	For material: Plastics or Melamine – Specific Migration of Formaldehyde for compliance with regulation (EU) No. 10/2011.	PASS	
12.	For material: Acrylonitrile copolymers – Specific Migration of Acrylonitrile for compliance with regulation (EU) No. 10/2011.	PASS	

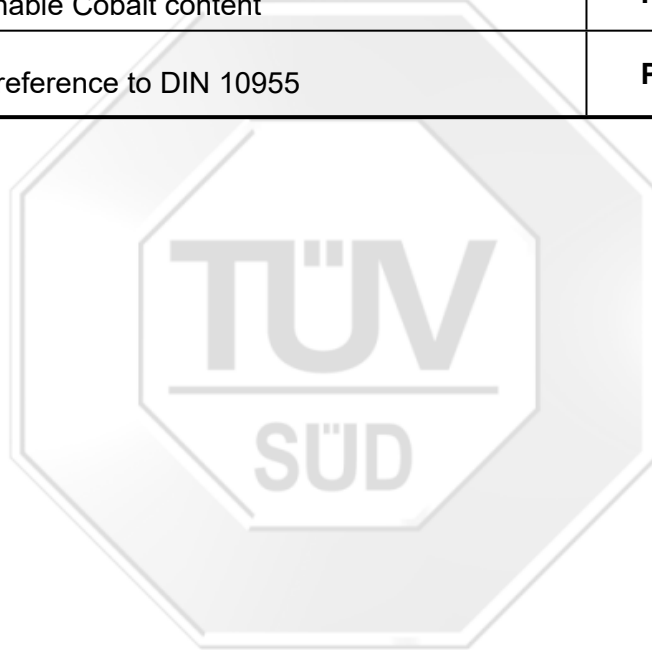


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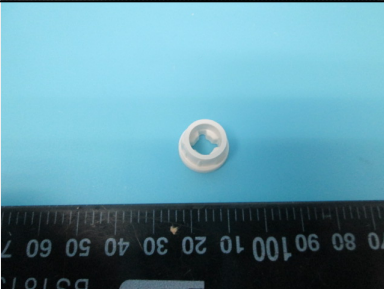
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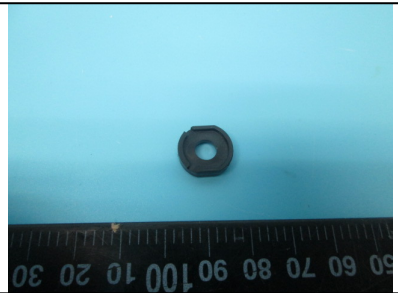
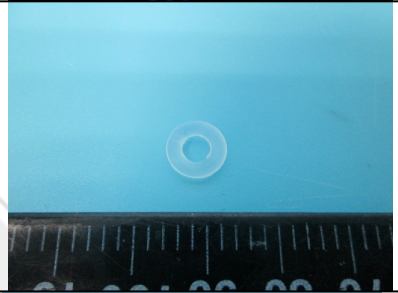
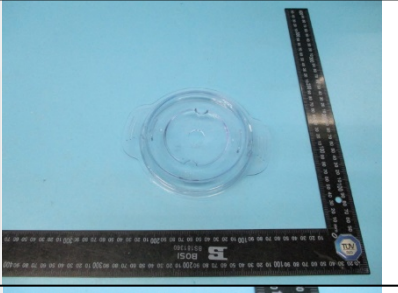


Dated 2019-08-05

13.	For material: Plastics or coating – Specific Migration of Hexamethylenediamine for compliance with Regulation (EU) No. 10/2011	PASS	
14.	For material: Metal and Metal alloy – Specific Migration of 21 Heavy Metals according to European Directorate for the Quality of Medicines & Healthcare Technical guide PA/PH/EMB (13) 9 and Resolution CM/Res(2013)9	PASS	
15.	For material: Glass and ceramics – Leachable Lead and Cadmium content test for compliance with DIN 51032, 84/500/EEC and 2005/31/EC.	PASS	
16.	For material: Glass and ceramics – Leachable Cobalt content	PASS	
17.	Sensory test – With reference to DIN 10955	PASS	



1. TESTED SUBJECT DESCRIPTION

Sample Number	Tested Material Description	Photo
001	Black plastic connector (PA66 A45L-1)	
002	Silvery metal blade (SUS420J2)	
003	White plastic bushing (PA66 A3EG6)	
004	Transparent glass bowl	
005	White plastic bushing (POM F20-03)	

Sample Number	Tested Material Description	Photo
006	Black plastic washer (POM F20-03)	
007	Transparent silicone ring	
008	Transparent plastic cover (AS 330EF)	
009	Silvery metal chopper bowl insert (SUS304)	
010	End product	

2. TEST RESULT

2.1. OVERALL MIGRATION TEST FOR PLASTIC

Test method: As specified in Regulation (EU) No. 10/2011; with reference to EN 1186: part 2, part 3, part 14 :2002.

Simulant Used	Test Condition	Result [mg/dm ²]		Maximum Permissible Limit [mg/dm ²]
		Sample 001	Sample 005	
3% Acetic Acid	70 °C for 2 hours	< 3.0	< 3.0	10
10% Ethanol	70 °C for 2 hours	< 3.0	< 3.0	10
Rectified Olive Oil	70 °C for 2 hours	< 3.0	< 3.0	10

Simulant Used	Test Condition	Result [mg/dm ²]		Maximum Permissible Limit [mg/dm ²]
		Sample 003	Sample 006	
3% Acetic Acid	70 °C for 2 hours	3.6	< 3.0	10
10% Ethanol	70 °C for 2 hours	3.4	< 3.0	10
95% Ethanol	60°C for 2 hours	3.3	< 3.0	10
Isooctane	40°C for 0.5hour	< 3	< 3	10

Simulant Used	Test Condition	Result [mg/dm ²]	Maximum Permissible Limit [mg/dm ²]
		Sample 008	
3% Acetic Acid	70 °C for 2 hours	< 3.0	10
10% Ethanol	70 °C for 2 hours	< 3.0	10
Rectified Olive Oil	70 °C for 2 hours	< 3.0	10

Note:

- “°C” denotes degree Celsius
- “mg/dm²” denotes milligram per square decimeter
- “<” denotes less than
- The specification was quoted from regulation (EU) No. 10/2011.

2.2. SPECIFIC MIGRATION OF HEAVY METALS (Ba, Co, Cu, Fe, Li, Mn, Zn, Al, Ni, W) TEST

Test method: As specified in Regulation (EU) No. 10/2011, the sample(s) were migrated with food simulant, followed by Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) analysis.

Testing condition and simulant: 3% acetic acid at 70 °C for 2 hour(s).

Test Item		Result [mg/kg]			Maximum Permissible Limit [mg/kg]
		Sample 001	Sample 003	Sample 005	
Barium	(Ba)	<0.10	<0.10	<0.10	1
Cobalt	(Co)	<0.05	<0.05	<0.05	0.05
Copper	(Cu)	<0.50	<0.50	<0.50	5
Iron	(Fe)	<1.00	<1.00	<1.00	48
Lithium	(Li)	<0.10	<0.10	<0.10	0.6
Manganese	(Mn)	<0.05	<0.05	<0.05	0.6
Zinc	(Zn)	<1.00	<1.00	<1.00	5
Aluminium	(Al)	<0.05	<0.05	<0.05	1
Nickel	(Ni)	<0.02	<0.02	<0.02	0.02
Tungsten	(W)	<0.02	<0.02	<0.02	0.05

Test Item		Result [mg/kg]		Maximum Permissible Limit [mg/kg]
		Sample 006	Sample 008	
Barium	(Ba)	<0.10	<0.10	1
Cobalt	(Co)	<0.05	<0.05	0.05
Copper	(Cu)	<0.50	<0.50	5
Iron	(Fe)	<1.00	<1.00	48
Lithium	(Li)	<0.10	<0.10	0.6
Manganese	(Mn)	<0.05	<0.05	0.6
Zinc	(Zn)	<1.00	<1.00	5
Aluminium	(Al)	<0.05	<0.05	1
Nickel	(Ni)	<0.02	<0.02	0.02
Tungsten	(W)	<0.02	<0.02	0.05

Note:

- “°C” denotes degree Celsius
- “mg/kg” denotes milligram per kilogram foodstuff
- “<” denotes less than
- The specification was quoted from regulation (EU) No. 10/2011 and it's amendments regulation (EU) No. 2016-1416, (EU) No. 2017-752, (EU) No. 2018-79.

2.3. SPECIFIC MIGRATION OF PRIMARY AROMATIC AMINE TEST

Test method: With reference to EN 1186-1: 2002, followed by Kunststoffe im Lebensmittelverkehr, Book 2, Teil B II, XXI. [Detection limit: 0.01 mg/kg]

Testing condition and simulant: 3% acetic acid at 70 °C for 2 hour(s).

Test Item	Result [mg/kg]		Maximum Permissible Limit [mg/kg]
	Sample 001	Sample 003	
Migration of Primary Aromatic Amine	< 0.01	< 0.01	Not Detected (< 0.01 mg/kg)

Note:

- “°C” denotes degree Celsius
- “mg/kg” denotes milligram per kilogram foodstuff
- “<” denotes less than
- The specification was quoted from regulation (EU) No. 10/2011.

2.4. OVERALL MIGRATION TEST FOR SILICONE

Test method: As specified in Resolution AP (2004)5; with reference to EN 1186:part 1, part 2, part 3:2002.

Simulant Used	Test Condition	Result [mg/kg]	Maximum Permissible Limit [mg/kg]
		Sample 007	
3% Acetic Acid	70°C for 2 hours	< 10	60
10% Ethanol	70°C for 2 hours	< 10	60
Rectified Olive Oil	70°C for 2 hours	< 10	60

Note:

- “°C” denotes degree Celsius
- “mg/kg” denotes milligram per kilogram foodstuff
- “<” denotes less than
- The specification was quoted from Resolution AP (2004)5.

2.5. EXTRACTABLE COMPONENTS TEST

Test method: With reference to Kunststoffe im Lebensmittelverkehr, Book 2, Teil B II, XV.

Simulant Used	Test Condition	Result [%]	Maximum Permissible Limit [%]
		Sample 007	
3% Acetic Acid	Reflux for 5 hours	< 0.10	0.5
10% Ethanol	Reflux for 5 hours	< 0.10	0.5

Note :

- “%” denotes percentage by weight
- “<” denotes less than
- The specification was quoted from Recommendation of the BfR “Kunststoffe im Lebensmittelverkehr” Part XV “Silicone”

2.6. REMAINING PEROXIDE TEST

Test method : With reference to 58th Communication on the testing of plastics, Bundesgesundheitsbl. 40 (1997) 412.

Test Item	Result	Maximum Permissible Limit
	Sample 007	
Remaining Peroxide	Absent	Absent

Note:

- The specification was quoted from Recommendation of the BfR “Kunststoffe im Lebensmittelverkehr Part XV and Part VI.

2.7. VOLATILE ORGANIC MATTER TEST

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

Test Item	Test Condition	Result [%]	Maximum Permissible Limit [%]
		Sample 007	
Volatile Organic Matter	70 °C for 2 hours	< 0.10	0.5

Note:

- “°C” denotes degree Celsius
- “%” denotes percentage by weight
- “<” denotes less than
- The specification was quoted from Recommendation of the BfR “Kunststoffe im Lebensmittelverkehr Part XV “Silicones”

2.8. TOTAL PLATINUM CONTENT TEST

Test method: Microwave digestion, followed by Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) analysis.

Test Item	Result [mg/kg]	Maximum Permissible Limit [mg/kg]
	Sample 007	
Total Platinum (Pt)	< 15.0	50

Note:

- “mg/kg” denotes milligram per kilogram
- “<” denotes less than
- The specification was quoted from Recommendation of the BfR “Kunststoffe im Lebensmittelverkehr Part XV “Silicone”.

2.9. VOLATILE ORGANIC COMPONENTS TEST

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

Test Item	Test Condition	Result [mg/dm ²]	Maximum Permissible Limit [mg/dm ²]
		Sample 008	
Volatile Organic Components	90 °C for 24 hours	4.2	15

Note:

- “°C” denotes degree Celsius
- “mg/dm²” denotes milligram per square decimeter
- “<” denotes less than
- The specification was quoted from Recommendation of the BfR “Kunststoffe im Lebensmittelverkehr Part VI “Styrene Copolymers and Graft Polymers, and Mixtures of Polystyrene with other Polymers”

2.10. TOTAL ZINC AND BORON CONTENT TEST

Test method: Microwave digestion, followed by Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) analysis.

Test Item	Result [%]		Maximum Permissible Limit [%]
	Sample 005	Sample 006	
Total Zinc (Zn)	< 0.01	< 0.01	1
Total Boron (B)	< 0.005	< 0.005	0.008

Note:

- “%” denotes percentage by weight
- “<” denotes less than
- The specification was quoted from Recommendation of the BfR “Kunststoffe im Lebensmittelverkehr Part XXXIII”

2.11. SPECIFIC MIGRATION OF FORMALDEHYDE TEST

Test method: As specified in Regulation (EU) No. 10/2011, the sample(s) were migrated with food simulant, followed by Ultraviolet–visible spectroscopy (UV-Vis) analysis.

Testing condition and simulant: 3% acetic acid at 70 °C for 2 hour(s).

Test Item	Result [mg/kg]		Maximum Permissible Limit [mg/kg]
	Sample 005	Sample 006	
Migration of Formaldehyde	3.5	1.7	15

Note:

- “°C” denotes degree Celsius
- “mg/kg” denotes milligram per kilogram foodstuff
- “<” denotes less than
- The specification was quoted from regulation (EU) No. 10/2011.

2.12. SPECIFIC MIGRATION OF ACRYLONITRILE TEST

Test method: As specified in Regulation (EU) No. 10/2011, the sample(s) were migrated with food simulant, followed by Gas Chromatography/Mass Spectrometry (GC-MS) analysis.

Testing condition and simulant: 3% acetic acid at 70 °C for 2 hour(s).

Test Item	Result [mg/kg]	Maximum Permissible Limit [mg/kg]
	Sample 008	
Migration of Acrylonitrile	< 0.01	Not Detected (< 0.01mg/kg)

Note:

- “°C” denotes degree Celsius
- “mg/kg” denotes milligram per kilogram foodstuff
- “<” denotes less than
- The specification was quoted from Regulation (EU) No. 10/2011

2.13. SPECIFIC MIGRATION OF HEXAMETHYLENEDIAMINE TEST

Test method: As specified in Regulation (EU) No. 10/2011, the sample(s) were migrated with food simulant, followed by Gas Chromatography/Mass Spectrometry (GC-MS) analysis.

Testing condition and simulant: 3% acetic acid at 70 °C for 2 hour(s).

Test Item	Result [mg/kg]	Maximum Permissible Limit [mg/kg]
	Sample 001	
Migration of Hexamethylenediamine	< 0.2	2.4

Note:

- “°C” denotes degree Celsius
- “mg/kg” denotes milligram per kilogram foodstuff
- “<” denotes less than
- The specification was quoted from Regulation (EU) No. 10/2011

2.14. SPECIFIC MIGRATION OF HEAVY METAL CONTENT TEST

Test method: The sample(s) were extracted with food simulant , followed by analysis using Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) and Inductively Coupled Plasma Mass Spectrometry(ICP-MS).

Testing condition and simulant: 0.5% citric acid at 70 °C for 2 hour(s).

No.	Test Item		Result [mg/kg]		Maximum Permissible Limit [mg/kg]	
			Sample 002		1 st +2 nd migration	3 rd migration
			1 st +2 nd migration	3 rd migration		
1.	Barium	(Ba)	<0.2	<0.1	8.4	1.2
2.	Copper	(Cu)	<0.2	<0.1	28	4
3.	Iron	(Fe)	0.2	<0.1	280	40
4.	Tin	(Sn)	<1.0	<0.5	700	100
5.	Chromium	(Cr)	<0.1	<0.05	1.75	0.250
6.	Manganese	(Mn)	<0.2	<0.1	12.6	1.8
7.	Zinc	(Zn)	< 0.2	< 0.1	35	5
8.	Aluminum	(Al)	<0.2	<0.1	35	5
9.	Lithium	(Li)	<0.01	<0.005	0.336	0.048
10.	Beryllium	(Be)	< 0.004	<0.002	0.07	0.01
11.	Vanadium	(V)	< 0.004	< 0.002	0.07	0.01
12.	Nickel	(Ni)	<0.1	<0.05	0.98	0.14
13.	Cobalt	(Co)	<0.004	<0.002	0.14	0.02
14.	Arsenic	(As)	<0.0008	<0.0004	0.014	0.002
15.	Molybdenum	(Mo)	<0.004	<0.002	0.84	0.12
16.	Silver	(Ag)	<0.004	<0.002	0.56	0.08
17.	Cadmium	(Cd)	<0.0008	<0.0004	0.035	0.005
18.	Antimony	(Sb)	<0.01	<0.005	0.28	0.04
19.	Mercury	(Hg)	< 0.001	< 0.0005	0.021	0.003
20.	Thallium	(Tl)	< 0.0002	< 0.0001	0.0007	0.0001
21.	Lead	(Pb)	< 0.02	< 0.01	0.07	0.010

Note:

- “°C” denotes degree Celsius
- “mg/kg” denotes milligram per kilogram foodstuff
- “<” denotes less than

(Continued)

Testing condition and simulant: 0.5% citric acid at 70 °C for 2 hour(s).

No.	Test Item		Result [mg/kg]		Maximum Permissible Limit [mg/kg]	
			Sample 009		1 st +2 nd migration	3 rd migration
			1 st +2 nd migration	3 rd migration		
1.	Barium	(Ba)	<0.2	<0.1	8.4	1.2
2.	Copper	(Cu)	<0.2	<0.1	28	4
3.	Iron	(Fe)	0.5	<0.1	280	40
4.	Tin	(Sn)	<1.0	<0.5	700	100
5.	Chromium	(Cr)	<0.1	<0.05	1.75	0.250
6.	Manganese	(Mn)	<0.2	<0.1	12.6	1.8
7.	Zinc	(Zn)	< 0.2	< 0.1	35	5
8.	Aluminum	(Al)	<0.2	<0.1	35	5
9.	Lithium	(Li)	<0.01	<0.005	0.336	0.048
10.	Beryllium	(Be)	< 0.004	<0.002	0.07	0.01
11.	Vanadium	(V)	< 0.004	< 0.002	0.07	0.01
12.	Nickel	(Ni)	<0.1	<0.05	0.98	0.14
13.	Cobalt	(Co)	<0.004	<0.002	0.14	0.02
14.	Arsenic	(As)	<0.0008	<0.0004	0.014	0.002
15.	Molybdenum	(Mo)	<0.004	<0.002	0.84	0.12
16.	Silver	(Ag)	<0.004	<0.002	0.56	0.08
17.	Cadmium	(Cd)	<0.0008	<0.0004	0.035	0.005
18.	Antimony	(Sb)	<0.01	<0.005	0.28	0.04
19.	Mercury	(Hg)	< 0.001	< 0.0005	0.021	0.003
20.	Thallium	(Tl)	< 0.0002	< 0.0001	0.0007	0.0001
21.	Lead	(Pb)	< 0.02	< 0.01	0.07	0.010

Note:

- “°C” denotes degree Celsius
- “mg/kg” denotes milligram per kilogram foodstuff
- “<” denotes less than

2.15. LEACHABLE LEAD AND CADMIUM CONTENT TEST

Test method: With reference to BS EN 1388: Part 1: 1996 and BS EN 1388: Part 2: 1996.

Test Item	Unit	Result	Maximum Permissible Limit
		Sample 004	
Leachable Lead (Pb)	mg/L	< 0.10	4.0
Leachable Cadmium (Cd)	mg/L	< 0.05	0.3

Note:

- “mg/L” denotes milligram per Litre
- “<” denotes less than
- The specification was quoted from directive 84/500/EEC for article as hollowware (category 2).

2.16. LEACHABLE COBALT CONTENT TEST

Test method: With reference to BS EN 1388: Part 1: 1996 and BS EN 1388: Part 2: 1996.

Test Item	Unit	Result	Maximum Permissible Limit
		Sample 004	
Leachable Cobalt (Co)	mg/L	<0.05	0.1

Note:

- “mg/L” denotes milligram per Litre
- “<” denotes less than
- The specification was quoted from Germany Bavarian State Ministry of Justice and Consumer Protection.

2.17. SENSORY TEST

Test method: With reference to DIN 10955: 2004. The submitted sample was treated with food stimulant. After this treatment, treated water was examined by panels with regard to any divergence in smell and taste.

Testing condition and simulant: Distilled water at 70 °C for 2 hour(s)

Test Item	Grading Result	Recommended Level
	Sample 010	
Transfer of Smell	1	< 2.5
Transfer of Taste	1	< 2.5

Note:

- “<” denotes less than
- Explanation for grading are listed as below:
 - Grading 0: No perceptible taste/smell deviation
 - Grading 1: Just perceptible taste/smell deviation
 - Grading 2: Weak taste/smell deviation
 - Grading 3: Clear taste/smell deviation
 - Grading 4: Strong taste/smell deviation

3. REMARK

The chemical testing was performed in TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch Chemical lab and the test results were reviewed at TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch.

APPENDIX:

Material list

Part name	Material	Color
Connector	PA66 A45L-1	Black
S Blade Bracket		
S Blade	SUS420J2	Silvery
Bushing 1	PA66 A3EG6	White
Bushing 2	POM F20-03	White
Jar cover	AS 330EF	Transparent
Glass bowl	Glass	Transparent
Chopper bowl insert	SUS304	Silvery
Washer	POM F20-03	Black
Seal	Silicone	Natural