

SHENZHEN UNION INSULATED MATERIALS CO.,LTD
1-3 FLOORS 2ND BUILDING GUANGUANG ROAD, DASHUIKENG AREA GUANLAN
BAOAN SHENZHEN

The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Description : SILICONE TUBE AND SILICONE RING
SGS Ref No. : CANHG1318875201
Test Performed : Selected test(s) as requested by applicant
Sample Receiving Date : Dec 03, 2013
Test Performing Date : Dec 03, 2013 to Dec 10, 2013
Test Result(s) : For further details, please refer to the following page(s)

Result Summary :

Test Requested	Conclusion
German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments and BfR recommendation -Extractable components	PASS
German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments—Colour Release	PASS
German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments—Sensorial examination odour and taste test	PASS
German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments, European Commission Regulation (EU) No 10/2011 with amendments and BfR recommendation—Lead and Cadmium	PASS
Verification for label claim validity - Bisphenol A free by Total Content of Bisphenol A	PASS
German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments and BfR recommendation—Volatile organic matter (VOM)	PASS
German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments and BfR recommendation—Polynuclear Aromatic Hydrocarbons (PAHs)	PASS

Conclusion : The tested parameters comply with the requirements stating under German Food, Articles of Daily Use and Feed Code of September 1, 2005(LFGB) with amendments, Section 30 & 31, and Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004.



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Signed for and on behalf of
SGS-CSTC Ltd.



Johnny Lee
Approved Signatory



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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description	Material (claimed by the client)
SN1	CAN13-188752.001	Translucent silicone rubber tube	silicone rubber

German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments and BfR recommendation -Extractable components

Test Requested : As specified by client, to determine Extractable components from Silicone rubber used in contact with food for compliance with German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments and BfR recommendation.

Test Method : With reference to 61. Mitteilung über die Untersuchung von Kunststoffen, Bundesgesundheitsbl 46 (2003) 362.

<u>Simulant Used</u>	<u>Time</u>	<u>Temperature</u>	<u>Max. Permissible Limit</u>	<u>Result of 001</u>	<u>Comment</u>
Distilled water	1.0hr(s)	100°C	0.5% (w/w)	<0.1% (w/w)	PASS
3% Acetic Acid (W/V) Aqueous Solution	1.0hr(s)	100°C	0.5% (w/w)	<0.1% (w/w)	PASS
10% Ethanol	1.0hr(s)	100°C	0.5% (w/w)	<0.1% (w/w)	PASS

Notes :

%w/w = percentage of weight by weight

German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments–Colour Release

Test Requested : As specified by client, to determine Colour Release from the submitted sample used in contact with food for compliance with German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments.

Test Method : With reference to Kunststoffe im Lebensmittelverkehr, Part B II IX.

<u>Test Item(s)</u>	<u>Limit</u>	<u>001</u>
Visible Color Migration in 3% Acetic Acid as acidic foodstuff	Absent	Absent
Comment		PASS



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German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments–Sensorial examination odour and taste test

Test Requested : As specified by client, to determine Sensorial examination odour and taste from the submitted sample used in contact with food for compliance with German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments.

Test Method : With reference to DIN10955:2004.

Test condition: 100°C 1 hr(s);

Test media: Distilled water;

No.of panelist: 6

<u>Test Item(s)</u>	<u>Limit</u>	<u>001</u>
Sensorial examination odour (Point scale)	2.5	0.5
Sensorial examination taste (Point scale)	2.5	0.5
Comment		PASS

Notes :

Scale evaluation:

0: No perceptible odour

1: Odour just perceptible (still difficult to define)

2: Moderate odour

3: Moderately strong odour

4: Strong odour

German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments, European Commission Regulation (EU) No 10/2011 with amendments and BfR recommendation–Lead and Cadmium

Test Requested : As specified by client, to determine Lead and Cadmium from the submitted sample used in contact with food for compliance with German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments, European Commission Regulation (EU) No 10/2011 with amendments and BfR recommendation.

Test Method : With reference to US EPA Method 3052:1996(GZTC CHEM-TOP-004-01), analysis was performed by ICP-OES.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Cadmium (Cd)	Absent	mg/kg	2	ND
Comment				PASS



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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Lead (Pb)	Absent	mg/kg	2	ND
Comment				PASS

Notes :

1. mg/kg = milligram per kilogram of sample
2. MDL=Method Detection Limit
3. ND= Not Detected(less than MDL)
4. Permissible Limit is according to Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments and German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 and 31. Lead, Cadmium and their compounds are not listed for the production of plastic materials in contact with food.

Verification for label claim validity - Bisphenol A free by Total Content of Bisphenol A

Test Requested : As specified by client, to determine Total Content of Bisphenol A from submitted sample(s) used in contact with food for Verification for label claim validity.

Test Method : With reference to Part II Section D2 of Testing Methods for Foodstuffs, Implements, Containers and Packaging, Toys, Detergents, JETRO, Japan External Trade Organization, 2009, analysis was performed by LC-MS-MS.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Bisphenol-A	mg/kg	0.1	ND
Comment			PASS

Notes :

1. mg/kg = milligram per kilogram
2. MDL=Method Detection Limit
3. ND= Not Detected(less than MDL)

German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments and BfR recommendation–Volatile organic matter (VOM)

Test Requested : As specified by client, to determine Volatile organic matter (VOM) content from Silicone rubber used in contact with food for compliance with German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments and BfR recommendation.



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Test Method : With reference to 60. Mitteilung über die Untersuchung von Kunststoffen, Bundesgesundheitsbl 45 (2002) 462 and LFGB § 64 BVL B 80.30.1(EG).

Test condition: 100°C, 1 hr(s)

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Volatile organic matter (VOM)	0.5	% (w/w)	0.1	ND
Comment				PASS

Notes :

1. %w/w = percentage of weight by weight
2. MDL=Method Detection Limit
3. ND= Not Detected(less than MDL)

German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments and BfR recommendation–Polynuclear Aromatic Hydrocarbons (PAHs)

Test Requested : As specified by client, to determine Polynuclear Aromatic Hydrocarbons (PAHs) from Silicone rubber used in contact with food for compliance with German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments and BfR recommendation.

Test Method : With reference to ZEK 01.4-08 of German ZLS and its amendments, analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Naphthalene(NAP)	mg/kg	0.2	ND
Acenaphthylene(ANY)	mg/kg	0.2	ND
Acenaphthene(ANA)	mg/kg	0.2	ND
Fluorene(FLU)	mg/kg	0.2	ND
Phenanthrene(PHE)	mg/kg	0.2	ND
Anthracene(ANT)	mg/kg	0.2	ND
Fluoranthene(FLT)	mg/kg	0.2	ND
Pyrene(PYR)	mg/kg	0.2	ND



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Test Item(s)	Unit	MDL	001
Benzo(a)anthracene(BaA)	mg/kg	0.2	ND
Chrysene(CHR)	mg/kg	0.2	ND
Benzo(b)fluoranthene(BbF) + Benzo(j)fluoranthene(BjF)	mg/kg	0.2	ND
Benzo(k)fluoranthene(BkF)	mg/kg	0.2	ND
Benzo(e)pyrene(BeP)	mg/kg	0.2	ND
Benzo(a)pyrene(BaP)	mg/kg	0.2	ND
Indeno(1,2,3-c,d)pyrene(IPY)	mg/kg	0.2	ND
Dibenzo(a,h)anthracene(DBA)	mg/kg	0.2	ND
Benzo(g,h,i)perylene(BPE)	mg/kg	0.2	ND
Sum of 18 PAHs	mg/kg	-	ND

Conclusion

PASS

ZEK 01.4-08: Restraining maximum values for products

Parameter	Category 1	Category 2	Category 3
	Material indented to be put in the mouth or material for toys with normal skin contact for children aged < 36 months	Materials those are not included in Category 1, with predictable contact with the skin longer than 30 s. (long-term skin contact).	Materials those are not included in Category 1 or 2, with predictable skin contact up to 30 s (short-term skin contact).
Benzo(a)pyrene (mg/kg)	<0.2**	1	20
Sum of 18 PAH (mg/kg)*	<0.2**	10	200

Notes:

- * = Only PAH substances >0.2 mg/kg are taken into account while calculating the sum of PAHs
- ** = In case that the maximum values exceed the limits of category 1, but are within the limits of category 2, one may confirm the suitability of the tested material which is indented to be put in the mouth by additional specific migration tests of PAH components based on DIN EN 1186ff and §64 LFGB 80.30-1. The conclusion of the migration test results must be made based on food law criteria.



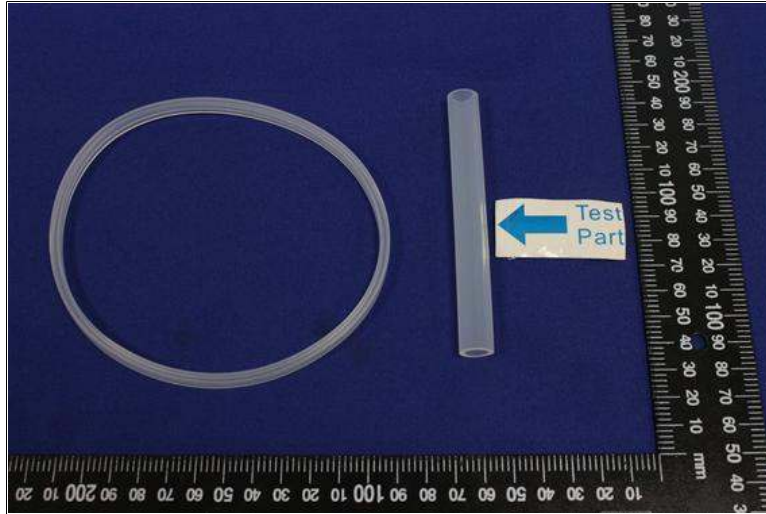
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