



PRODUCT SPECIFICATION - PS

Doc. No: SP-11-03 / Published Date: 21.12.2017 / Rev. No: 03 /Rev. Date: 23.03.2021

Product Code	MM.LBT80SSW
Product Description	SIP LID (FOR 8oz), Ø80mm., PS, WHITE
Origin	Turkey
Ingredients	Polystyrene, Masterbatch (2-3%; if coloured product)

Physical Properties

Parameters	Unit	Value	Tolerance
Unit Weight	g	2.4	+/- 5%
Width	mm	80	-
Height	mm	19.7	-
Closing Diameter	mm	79.2	+/- 0.2%
Wall Thickness	micron	330	+/- 5%

Chemical Properties

Parameters	Unit	Time-Temp.	Max Limit	Method
Total Migration				
FCM - Overall Migration of Total Non-volatile Substance in Plastic Materials - Simulant B (Acetic acid 3%)	N.D. mg/kg	2h 70°C	60 mg/kg	EN 1186-9:2002 Materials and articles in contact with foodstuffs - Plastics - Part 9: Test methods for overall migration into aqueous food simulants by article filling
FCM - Overall Migration of Total Non-volatile Substance in Plastic Materials - Simulant A (Ethanol 10%)	N.D. mg/kg	2h 70°C	60 mg/kg	EN 1186-9:2002 Materials and articles in contact with foodstuffs - Plastics - Part 9: Test methods for overall migration into aqueous food simulants by article filling
FCM - Overall Migration of Total Non-volatile Substance in Plastic Materials - Simulant D1 (Ethanol 50%)	N.D. mg/kg	2h 70°C	60 mg/kg	EN 1186-9:2002 Materials and articles in contact with foodstuffs - Plastics - Part 9: Test methods for overall migration into aqueous food simulants by article filling
FCM - Overall Migration of Total Non-volatile Substance in Plastic Materials - Fatty Food Simulant (Ethanol 95%)	N.D. mg/kg	2h 60°C	60 mg/kg	EN 1186-14:2002 Materials and articles in contact with foodstuffs - Plastics - Part 14: Test methods for 'substitute tests' for overall migration from plastics intended to come into contact with fatty foodstuffs using test media iso-octane and 95 % ethanol
FCM - Overall Migration of Total Non-volatile Substance in Plastic Materials - Fatty Food Substituted Simulation (Isooctane)	N.D. mg/kg	30 min. 40°C	60 mg/kg	EN 1186-14:2002 Materials and articles in contact with foodstuffs - Plastics - Part 14: Test methods for 'substitute tests' for overall migration from plastics intended to come into contact with fatty foodstuffs using test media iso-octane and 95 % ethanol

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DETERMINATION of SPECIFIC MIGRATION					
Parameters	Cas Number	Unit	Time-Temp.	Max Limit (mg/kg)	Method
Manganese (Mn)	7439-96-5	N.D. mg/kg	2h 70°C	0.6 (max.)	EN 13130-1 ISO 17294-1&2
Copper (Cu)	7440-50-8	N.D. mg/kg	2h 70°C	5 (max.)	EN 13130-1 ISO 17294-1&2
Cobalt (Co)	7440-48-4	N.D. mg/kg	2h 70°C	0.05 (max.)	EN 13130-1 ISO 17294-1&2
Lithium (Li)	7439-93-2	N.D. mg/kg	2h 70°C	0.6 (max.)	EN 13130-1 ISO 17294-1&2
Zinc (Zn)	7440-66-6	N.D. mg/kg	2h 70°C	5 (max.)	EN 13130-1 ISO 17294-1&2
Barium (Ba)	7440-39-3	N.D. mg/kg	2h 70°C	1 (max.)	EN 13130-1 ISO 17294-1&2
Iron (Fe)	7439-89-6	N.D. mg/kg	2h 70°C	48 (max.)	EN 13130-1 ISO 17294-1&2
Aluminum (Al)	7429-90-5	N.D. mg/kg	2h 70°C	1 (max.)	EN 13130-1 ISO 17294-1&2
Nickel (Ni)	7440-02-0	N.D. mg/kg	2h 70°C	0.02 (max.)	EN 13130-1 ISO 17294-1&2
Antimony (Sb)	7440-36-0	N.D. mg/kg	2h 70°C	0.04 (max.)	EN 13130-1 ISO 17294-1&2
Arsenic (As)	7440-38-2	N.D. mg/kg	2h 70°C	0.002 (ND)	EN 13130-1 ISO 17294-1&2
Cadmium (Cd)	7440-43-9	N.D. mg/kg	2h 70°C	0.002 (ND)	EN 13130-1 ISO 17294-1&2
Lead (Pb)	7439-92-1	N.D. mg/kg	2h 70°C	0.003 (ND)	EN 13130-1 ISO 17294-1&2
Mercury (Hg)	7439-97-6	N.D. mg/kg	2h 70°C	0.007 (ND)	EN 13130-1 ISO 17294-1&2
Europium (Eu)	7440-53-1	N.D. mg/kg	2h 70°C	0.05 sum (max.)	EN 13130-1 ISO 17294-1&2
Gadolinium (Gd)	7440-54-2	N.D. mg/kg	2h 70°C		EN 13130-1 ISO 17294-1&2
Lanthanum (La)	7439-91-0	N.D. mg/kg	2h 70°C		EN 13130-1 ISO 17294-1&2
Terbium (Tb)	7440-27-9	N.D. mg/kg	2h 70°C		EN 13130-1 ISO 17294-1&2
Chromium (Cr)#	7440-47-3	N.D. mg/kg	2h 70°C	0.01 (ND)	EN 13130-1 ISO 17294-1&2
Magnesium (Mg)	7439-95-4	N.D. mg/kg	2h 70°C	-	EN 13130-1 ISO 17294-1&2
Sodium (Na)	7440-23-5	N.D. mg/kg	2h 70°C	-	EN 13130-1 ISO 17294-1&2

• The ratio of surface area to volume ratio is 6 dm² per 1 kg of foodstuff in contact with According to Regulation (EC) No 10/2011 materials and articles shall not transfer their constituents to foodstuffs in quantities exceeding 10 mg per 1 dm² of surface area of the packaging or 60 mg per 1 kg of foodstuff or food simulant (limiting value of the overall migration). The ratio of food contact surface area to volume used to establish the compliance of the article/s were 1,5 dm²/150ml

• Recommended max. limit specified by As per Commission Regulation (EU) No. 10/2011 and its amendment (EU) 2020/1245, by ICP/MS analysis

• Test Conditions: 3% Acedic Acid / 2h 70°C / Ratio of Food contact surface area to volume 1 dm²/150ml

• N.D. : Not Detected

• # = When migration of total chromium is between 0.01 mg/kg and 3.6 mg/kg, chromium (VI) content in plastic shall be not dete

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PAH CONTENT

ANALYSIS NAME	CAS Number	METHOD	LOQ* (mg/kg)	REQUIREMENT
Sum of 18 PAH's	-	ZEK.01.4.08	0.2	<=1 mg/kg
Chrysene	218-01-9	ZEK.01.4.08	0.2	<=0.2 mg/kg
Dibenzo(a,h)anthracene	53-70-3	ZEK.01.4.08	0.2	<=0.2 mg/kg
Benzo(g,h,i) perylene	191-24-2	ZEK.01.4.08	0.2	<=0.2 mg/kg
Indeno (1,2,3-cd) pyrene	193-39-5	ZEK.01.4.08	0.2	<=0.2 mg/kg
Sum of Acenaphylene+Acenaphthene+ Fluorene+Phenanthrene+Pyrene+ Anhracene+Fluoranthene	-	ZEK.01.4.08	0.2	<=1 mg/kg
Napthalene	91-20-3	ZEK.01.4.08	0.2	<=1 mg/kg
Benzo(a) pyrene	50-32-8	ZEK.01.4.08	0.2	<=0.2 mg/kg
Benzo(e) pyrene	192-97-2	ZEK.01.4.08	0.2	<=0.2 mg/kg
Benzo(a) anthracene	56-55-3	ZEK.01.4.08	0.2	<=0.2 mg/kg
Benzo(b) fluoranthene	205-99-2	ZEK.01.4.08	0.2	<=0.2 mg/kg
Benzo(j) fluoranthene	205-82-3	ZEK.01.4.08	0.2	<=0.2 mg/kg
Benzo(k)fluoranthene	207-08-9	ZEK.01.4.08	0.2	<=0.2 mg/kg

* LOQ: Limit of Quantification

Lead, Cadmium, Mercury, Chromium +6 CONTENT

ANALYSIS NAME	CAS Number	METHOD	LOQ* (mg/kg)	REQUIREMENT
Lead Content	7439-92-1	NMKL 186	0.009	-
Cadmium Content	7440-43-9	NMKL 186	0.009	-
Mercury Content	7439-97-6	NMKL 186	0.01	-
Determination of Chromium +6	18540-29-9	ICP-MS	1	-
Sum of Lead, Cadmium, Mercury, Chromium (+6)	-	Calculation	1.03	100 mg/kg

* LOQ: Limit of Quantification

ANALYSIS NAME	CAS Number	TIME (h)	TEMP. (°C)	METHOD	LOQ*	REQUIREMENT
Determination of Bisphenol A Migration, Aqueous Food Simulant	80-05-7 FCM No: 151	2h	70	CEN/TS 13130-13 BS EN 14372 EN 14350-2	0.01 mg/kg	<=0,05 mg/kg
Butyl Benzyl Phthalate (BBP) Phthalatec Acid Benzyl butyl ester	85-68-7 FCM No: 159	-	-	BS EN 14372	0.002 %	<=0,1 %
Di-n-Butyl Phthalate (DBP)	84-74-2 FCM No: 157	-	-	BS EN 14372	0.002 %	<=0,05 %

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ANALYSIS NAME	CAS Number	TIME (h)	TEMP. (°C)	METHOD	LOQ*	REQUIREMENT
Di(Ethylhexyl) Phthalate (DEHP)	117-81-7 FCM No: 283	-	-	BS EN 14372	0.001 %	<=0,1 %
Di-Iso-Nonyl Phthalate(DINP)	28553-12-0 FCM No: 728	-	-	BS EN 14372	0.022 %	<=0,1 %
Di-Isodecyl Phthalate (DIDP)	26761-40-0 FCM No: 729	-	-	BS EN 14372	0.015 %	<=0,1 %

* LOQ: Limit of Quantification

SPECIFIC MIGRATION of PRIMARY AROMATIC AMINES (PAA)							
COMPOUND	CAS Number	SIMULANT	TIME (h)	TEMP. (°C)	METHOD	DETECTION LIMIT(mg/kg)	REQUIREMENT
4-Aminodiphenyl	92-67-1	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
Benzidine	92-87-5	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
4-Chloro-o-toluidine	95-69-2	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
2-Naphthylamine	91-59-8	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
o-Aminoazotoluene	97-56-3	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
2-Amino-4-nitrotoluene	99-55-8	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
p-Chloroaniline	106-47-8	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
2,4-Diaminoanisole	615-05-4	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
4,4'-Diaminodiphenylmethane	101-77-9	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
3,3'-Dichlorobenzidine	91-94-1	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
3,3'-Dimethoxybenzidine	119-90-4	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
3,3'-Dimethylbenzidine	119-93-7	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
3,3'-Dimethyl-4,4'-diamino diphenylmethane	838-88-0	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
p-Cresidine	120-71-8	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
4,4'-Methylene-bis (2-chloroaniline)	101-14-4	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
4,4'-Oxydianiline	101-80-4	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
4,4'-Thiodianiline	139-65-1	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
o-Toluidine	95-53-4	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND

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COMPOUND	CAS Number	SIMULANT	TIME (h)	TEMP. (°C)	METHOD	DETECTION LIMIT(mg/kg)	REQUIREMENT
2,4-Toluylenediamine	95-80-7	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
2,4,5-Trimethylaniline	137-17-7	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
o-Anisidine	90-04-0	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
4-Aminoazobenzene	60-09-3	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
m-Phenylendiamine	108-45-2	Acetic acid 3%	2h	70	EN24815 EN2011	0.002	ND
Benzoguanamin	91-76-9	Acetic acid 3%	2h	70	EN24815 EN2011	0.05	5
4,4'-Methylenebis(3-chloro-2,6-diethylaniline	106246-33-7	Acetic acid 3%	2h	70	EN24815 EN2011	0.05	0.05
Total of other primary aromatic amines	-	Acetic acid 3%	2h	70	EN24815 EN2011	0.010	0.010

Analysis Name: Specific migration of Primary Aromatic Amines (**PAA**)

Requirement: European Commission Regulation No. 10/2011 Annex II, Regulation No. 2016/1416, Regulation No. 2020/1245 and Regulation No. 1935/2004 –Specific Migration of Primary Aromatic Amines

Remark: **ND** = Not detected

No substances with a specific migration limit are used.

The calculations are based on the assumption that 1 kg of food comes into contact with 6 dm² of the packaging material.

Heavy metals: lead, cadmium, mercury and chromium is below the legal limit.

The limit value of 100 mg/kg is not exceeded.

SENSORY ANALYSIS

ANALYSIS NAME	METHOD	REQUIREMENT
Sensory Analysis	DIN 10955	<= 2

Test for F.D.A. Regulation on Polystyrene

ANALYSIS NAME	TEST STANDART	REQUIREMENT
Total Residual Styrene Monomer, %(w/w)	U.S. Food and Drug Administration 21 CFR Part 177.1640 Clauses (c) and (d)	0.5

Requirement: U.S. F.D.A. Regulation 21 CFR Part 177.1640 Clauses (c) and (d) – Total Residual Styrene Monomer for Polystyrene

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Packaging Properties

Parameters	Unit	Value
Pcs/sleeve		100
pcs/box		1000
Sleeve width	mm	120
Sleeve lenght	mm	585
Sleeve Unit Weight	g	1.76
Box width	mm	175
Box lenght	mm	460
Box height	mm	425
Box unit weight	g	233.6
Net Weight	g	2400
Gross Weight	g	2651
Cases Per Layer		11
Number of Layers		5
Total Cases Per Pallet		55
Pallet Height	mm	2265

General Information

Transport	<ul style="list-style-type: none">* Products must be referred without any pest, pest remains, glass, wood, wire etc. contamination.* Vehicles must be cleaned before installation* During transport, over the vehicle must be closed by polyethylene and sealed canvas, rain water infiltration must be avoided and must not be opened before
Storage	<ul style="list-style-type: none">* It should be stored in original packaging in dry conditions away from sunlight. Temperature 10 - 30 °C Relative Humidity Max 60%.* Expiraiton Date: 2 years from the date of production.
Labelling Information	Product code and description, parcel number, order number, date, shift, barcode number 
Traceability	Date and Shift



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Legal Requirements

EUROPEAN UNION

1. Regulation (EC) No 1935/2004 on materials and articles intended to come into contact with food and its amendments up to date of this document
2. Regulation (EC) No 2023/2006 on good manufacturing practice for materials and articles intended to come into contact with food and its amendments up to date of this statement
3. Regulation (EC) No 10/2011 on plastic materials and articles intended to come into contact with food and its amendments up to date of this document
4. Regulation (EU) 2016/1416 of 24 August 2016 amending and correcting Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with Food
5. Regulation (EU) 2020/1245 of 2 September 2020 amending and correcting Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food
6. Commission Regulation (EU) 2017/752 of 28 April 2017 amending and correcting Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with Food
7. Directive 94/62/EC on packaging and packaging waste and its amendments up to date regarding the threshold limit of 100 ppm by weight of heavy metals

TURKISH FOOD CODEX

8. Veterinary Services, Plant Health, Food and Feed Law (O.N. 27610/13.06.2010)- (O.N : 30616/5.12.2018)
9. Regulation on Food Hygiene (O.N. 28145/17.12.2011)
10. Turkish Food Codex Food Labeling and Consumer Information Regulation (O.N. 29960/26.01.2017)
11. Property of Materials and Food Contact Regulation on Good Manufacturing Practice and Registration Procedures (O.N. 28373/03.08.2012)- (O.N : 28547/02.02.2013)
12. Regulation on plastic materials and articles intended to come into contact with food (2019/44) (O.N. 30989/25.12.2019)
13. Regulation on the list of simulants used in migration test of plastic materials and articles intended to come into contact with food (2019/43) (O.N. 30989/25.12.2019)
14. Turkish Food Codex Regulation on Substances and Materials in contact with food (R.G. 30680 / 8.2.2019)
15. Regulation on Registration and Approval Procedures of Food Businesses (R.G. 30825 / 08.07.2019)
16. The Regulation of Waste Control of Food Contact Materials

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