

TEST REPORT N. 24/000322411

date of issue 05/06/2024

Customer ID 0068079/001

Messrs
SWIFT SILLIKER (PTY) LTD
16 WARRINGTON RD
CLAREMONT
7708
ZA

Sample information

Acceptance number 24.517186.0001
Delivered by DHL International on 26/04/2024
Receiving Date 26/04/2024
Place of origin SWIFT SILLIKER (PTY) LTD 16 WARRINGTON RD CLAREMONT 7708 ZA
Sample Description OMS-24-01893. CARTON 10X A4 SHEET (633595) (CORRUSEAL)

Sampling information

Sampled by Customer

ANALYTICAL RESULTS

	Value/ Uncertainty	Unit of measure	Reference values	References	LoQ	LoD	R	Start/end date of analysis	Op. units	Row
ON SAMPLE AS IT IS										1
POLYFLUORINATED ALKYL SUBSTANCES (PFAS)								03/05/2024- 14/05/2024	02	2
Met.: MP 2218 rev 1 2023										
Perfluoro-n-butanoic acid (PFBA) (375-22-4)	n.d.	µg/kg			1,0	0,33				3 *
Perfluorooctane sulfoni acid (L-PFOS) (1763-23-1)	n.d.	µg/kg			1,0	0,33				4 *
Perfluoro-n-undecanoic acid (PFUnA) (2058-94-8)	n.d.	µg/kg			1,0	0,33				5 *
Perfluoro-n-dodecanoic acid (PFDoA) (307-55-1)	n.d.	µg/kg			1,0	0,33				6 *
Sum of PFOA (branched isomers)	n.d.	µg/kg			1,0	0,33				7 *
Sum of PFOS (branched isomers)	n.d.	µg/kg			1,0	0,33				8 *
Sum of PFAS	<1,0	µg/kg								9 *
Undecafluoro-2-methyl-3-oxahesanoic acid (HFPO dimer acid) (13252-13-6)	n.d.	µg/kg			1,0	0,33				10 *
Perfluorodecane sulfonic acid (L-PFDS) (335-77-3)	n.d.	µg/kg			1,0	0,10				11 *
Perfluoropentane sulfonic acid (L-PFPeS) (2706-91-4)	n.d.	µg/kg			1,0	0,12				12 *
Perfluoroheptane sulfonic acid (L-PFHpS) (375-92-8)	n.d.	µg/kg			1,0	0,14				13 *
Perfluorononane sulfonic acid (L-PFNS) (68259-12-1)	n.d.	µg/kg			1,0	0,12				14 *
Perfluoro-n-pentanoic acid (PFPeA) (2706-90-3)	n.d.	µg/kg			1,0	0,33				15 *
4:2 fluorotelomer sulfonic acid (4:2 FTS) (757124-72-4)	n.d.	µg/kg			1,0	0,11				16 *
6:2 fluorotelomer sulfonic acid (6:2 FTS) (27619-97-2)	n.d.	µg/kg			1,0	0,10				17 *
8:2 fluorotelomer sulfonic acid (8:2 FTS) (39108-34-4)	n.d.	µg/kg			1,0	0,25				18 *
10:2 fluorotelomer sulfonic acid (10:2 FTS) (120226-60-0)	n.d.	µg/kg			1,0	0,25				19 *
Dodecafluoro-3h-4,8-dioxanonanoic acid (ADONA) (919005-14-4)	n.d.	µg/kg			1,0	0,10				20 *
Perfluoroundecanesulfonic acid (L-PFUnDS) (749786-16-1)	n.d.	µg/kg			1,0	0,20				21 *
Perfluorododecane sulfonic acid (L- PFDoDS) (79780-39-5)	n.d.	µg/kg			1,0	0,20				22 *
Perfluorotridecanesulfonic acid (L-PFTrS) (791563-89-8)	n.d.	µg/kg			1,0	0,20				23 *
Perfluoro-n-tridecanoic acid (PFTrDA) (72629-94-8)	n.d.	µg/kg			1,0	0,28				24 *
Perfluoro-n-tetradecanoic acid (PFTeDA) (376-06-7)	n.d.	µg/kg			1,0	0,28				25 *
Perfluoro-n-hexanoic acid (PFHxA) (307-24-4)	n.d.	µg/kg			1,0	0,33				26 *
Perfluoro(2-((6-chlorohexyl)oxy)ethanesulfonic acid) (9CL- PF3ONS) (756426-58-1)	n.d.	µg/kg			1,0	0,22	99.34#			27 *
11-chloroeicosafluoro-3-oxaundecane-1- sulfonic acid (11CL-PF3OUDS) (763051-92-9)	n.d.	µg/kg			1,0	0,17	97.75#			28 *
Perfluorooctane sulfonamide (PFOSA) (754-91-6)	n.d.	µg/kg			1,0	0,23	108.84 #			29 *
Bis[2-(perfluorohexyl)ethyl] phosphate (6:2 DIPAP) (57677-95-9)	n.d.	µg/kg			1,0	0,17				30 *
Bis[2-(perfluorooctyl)ethyl] Phosphate (8:2	n.d.	µg/kg			1,0	0,17				31 *

ANALYTICAL RESULTS

	Value/ Uncertainty	Unit of measure	Reference values	References	LoQ	LoD	R	Start/end date of analysis	Op. units	Ro w
DIPAP) (678-41-1)										
Perfluoroheptanoic acid (PFHpA) (375-85-9)	n.d.	µg/kg			1,0	0,33				32 *
Perfluoro-n-octanoic acid (PFOA) (335-67-1)	n.d.	µg/kg			1,0	0,33				33 *
Perfluoro-n-nonanoic acid (PFNA) (375-95-1)	n.d.	µg/kg			1,0	0,33				34 *
Perfluoro-n-decanoic acid (PFDA) (335-76-2)	n.d.	µg/kg			1,0	0,33				35 *
Perfluorobutane sulfonic acid (L-PFBS) (375-73-5)	n.d.	µg/kg			1,0	0,33				36 *
Perfluorohexane sulfonic acid (L-PFHxS) (355-46-4)	n.d.	µg/kg			1,0	0,33				37 *
PHOTOINIZIATORS								02/05/2024- 14/05/2024	01	38
Met.: MP 1706 rev 2 2016										
4-methyl benzophenone	n.d.	mg/kg			0,050	0,020	96			39 *
Benzophenone	traces	mg/kg	<=0,6	BFR_XXXVI	0,10	0,030	96			40 *
Isopropylthioxantone	n.d.	mg/kg			0,020	0,010	83			41 *
2-ethylhexyl 4-(dimethylamino)benzoate	n.d.	mg/kg			0,010	0,0030	96			42 *
1-hydroxycyclohexylphenylketone	n.d.	mg/kg			0,10	0,030	96			43 *
2,2-dimethoxy-2-phenylacetophenone	0,113±0,068	mg/kg			0,10	0,030	96			44 *
2-methyl-4'-(methylthio)-2-morpholinopropiophenone	traces	mg/kg			0,010	0,0030	96			45 *
2,4-diethylthioxanthone	n.d.	mg/kg			0,020	0,010	83			46 *
4-hydroxybenzophenone	n.d.	mg/kg			0,10	0,050	83			47 *
n-Ethyl-toluenesulfonamide	n.d.	mg/kg			0,020	0,010	96			48 *
2-hydroxy-2-methylpropiophenone	n.d.	mg/kg			0,10	0,030	96			49 *
4,4'-bis(dimethylamino)benzophenone	0,030±0,015	mg/kg	<=0,01	BFR_XXXVI	0,020	0,010	96			50 *
4,4'-bis(diethylamino)benzophenone	traces	mg/kg			0,020	0,010	96			51 *

ON SAMPLE AS IT IS

PHTHALATES								03/05/2024- 13/05/2024	02	53
Met.: MP 2081 rev 1 2021										
Di-2-ethylhexylphthalate (DEHP)	0,273±0,094	mg/kg	<=1,5	BFR_XXXVI	0,10	0,030	102.8#			54 *
Benzyl butylphthalate (BBP)	n.d.	mg/kg			0,10	0,030	102.8#			55 *
Di-butylphthalate (DBP)	n.d.	mg/kg	<=0,3	BFR_XXXVI	0,10	0,030	102.8#			56 *
Di-n-octylphthalate (DNOP)	n.d.	mg/kg			0,10	0,030	102.8#			57 *
Di-ethylphthalate (DEP)	n.d.	mg/kg			0,10	0,030	102.8#			58 *
Di-methylphthalate (DMP)	n.d.	mg/kg			0,10	0,030	102.8#			59 *
Di-isooctylphthalate (DIOP)	n.d.	mg/kg			1,0	0,30	102.8#			60 *
Di-isononylphthalate (DINP)	n.d.	mg/kg			1,0	0,30	102.8#			61 *
Di-isobutylphthalate (DIBP)	n.d.	mg/kg	<=0,3	BFR_XXXVI	0,10	0,030	102.8#			62 *
Di-isodecylphthalate (DIDP)	n.d.	mg/kg			1,0	0,30	102.8#			63 *
Di-cyclohexylphthalate (DCHP)	n.d.	mg/kg			0,10	0,030	102.8#			64 *
Di-isoheptylphthalate (DIHP)	n.d.	mg/kg			1,0	0,30	102.8#			65 *
Diheptyl phthalate	n.d.	mg/kg			0,10	0,030	102.8#			66 *
Di-isopentylphthalate (DIPP)	n.d.	mg/kg			0,10	0,030	102.8#			67 *
Diisopropylphthalate	n.d.	mg/kg			0,10	0,030	102.8#			68 *
Bis(2-ethoxyethyl)phthalate (DEEP)	n.d.	mg/kg			0,10	0,030	102.8#			69 *
Diisohexylphthalate (DIHP)	n.d.	mg/kg			0,10	0,030	102.8#			70 *
Butyl octyl phthalate	n.d.	mg/kg			0,10	0,030	102.8#			71 *
Didecyl phthalate	n.d.	mg/kg			0,10	0,030	102.8#			72 *
Didodecyl phthalate	n.d.	mg/kg			0,10	0,030	102.8#			73 *
Di-pentylphthalate (DPP)	n.d.	mg/kg			0,10	0,030	102.8#			74 *
Di-n-hexylphthalate (DHP)	n.d.	mg/kg			0,10	0,030	102.8#			75 *
Bis 2-methoxyethyl phthalate	n.d.	mg/kg			0,10	0,030	102.8#			76 *
Di(heptyl, nonyl, undecyl) phthalate	<1	mg/kg								77 *
Di-nonylphthalate (DNP)	n.d.	mg/kg			0,10	0,030	102.8#			78 *
Di-n-undecyl phthalate	n.d.	mg/kg			1,0	0,30	102.8#			79 *
n-pentyl-isopentylphthalate	n.d.	mg/kg			0,10	0,030	102.8#			80 *
Di-octyl-terephthalate (DEHT)	traces	mg/kg			0,10	0,030	102.8#			81 *
Ethyl isobutylphthalate	n.d.	mg/kg			0,10	0,030	102.8#			82 *
Bis(2-propylheptyl)phthalate	n.d.	mg/kg			0,10	0,030	102.8#			83 *

ANALYTICAL RESULTS

	Value/ Uncertainty	Unit of measure	Reference values	References	LoQ	LoD	R	Start/end date of analysis	Op. units	Row
Diallyl phthalate	n.d.	mg/kg			0,10	0,030	102.8#			84 *
Diphenylphthalate	n.d.	mg/kg			0,10	0,030	102.8#			85 *
Di-n-propylphthalate (DPRP)	n.d.	mg/kg			0,10	0,030	102.8#			86 *
HYDROCARBONS										
Met.: MP 2519 rev 2 2023 (UNI EN 16995:2017)										
Total MOSH >=n-C10 to <=n-C50 (integrated)	130±20	mg/kg			10		95#	30/04/2024- 22/05/2024	11	87
MOSH >=C10 to <=C16	< LoQ	mg/kg			10		95#			89
MOSH >C16 to <=C20	< LoQ	mg/kg			10		95#			90
MOSH >C20 to <=C25	22,0±6,6	mg/kg			10		95#			91
MOSH >C25 to <=C35	64,0±9,6	mg/kg			10		95#			92
MOSH >C35 to <=C40	19,0±5,7	mg/kg			10		95#			93
MOSH >C40 to <=C50	15,0±4,5	mg/kg			10		95#			94
Total MOSH >=n-C10 to <=n-C50 (calculated)	120,0±13,7	mg/kg					95#			95
Total MOAH >=n-C10 to <=n-C50 (integrated)	25,0±6,0	mg/kg			3,0		97#			96
MOAH >=C10 to <=C16	< LoQ	mg/kg			3,0		97#			97
MOAH >C16 to <=C25	7,8±1,9	mg/kg			3,0		97#			98
MOAH >C25 to <=C35	7,3±1,8	mg/kg			3,0		97#			99
MOAH >C35 to <=C50	9,4±2,3	mg/kg			3,0		97#			100
Total MOAH >=n-C10 to <=n-C50 (calculated)	24,5±3,5	mg/kg					97#			101

Operative units

Unit 02 : Via Castellana Resana (TV)
Unit 01 : Via Fratta Resana (TV)
Unit 11 : Via Marradi 41 Prato PO

Information on test methods and/or requirements/specifications

Row (40), (50), (54), (56), (62), (50) - Reference: BFR_XXXVI = BFR RECOMMENDATION XXXVI and and further modifications- Paper and board for food contact.
Date of issue: 01/04/2021.

Row (87) - Method: MP 2519 rev 2 2023 (UNI EN 16995:2017) = The analytic technique applied is LC-GC/FID, after sample preparation according to scientific literature by K. Grob, M. Biedermann et al. in the period 2008 - 2013 (quantification by internal standard method). In particular the paper and cardboard samples are extracted with ethanol/hexane at room temperature for 2 hours; the extract is therefore washed with water, and the organic fraction analyzed by LC-GC/FID. A further purification step (epoxidation) is performed in case of presence of MOAH interferents, e.g. squalene. Plastic samples are extracted with hexane at room temperature. Concentration results are calculated by subtraction of sharp peaks overlying mineral oil humps.

The analysis is performed on paper parts for paper and cardboard samples and on plastic parts for plastic samples.

If present, this MOSH fraction can include POSH (Polyolefins Oligomeric Saturated Hydrocarbons) and PAO (Poly Alpha Olefins), chemically included and indistinguishable from MOSH: if POSH and PAO can be subtracted from MOSH pattern, their contribution is not included in the MOSH content and POSH and/or PAO presence is indicated as additional comment. Otherwise, in case POSH and PAO are present and cannot be excluded from MOSH content, their contribution is included in MOSH content and the MOSH result is accompanied by a comment that POSH and/or PAO are present and included in MOSH.

For plastic samples the presence of POSH is due to the nature itself of the sample material and therefore their content is not subtracted from MOSH content."

Aromatic MOAH, if present in the sample, are always associated with saturated MOSH at higher concentrations.

Additional information

There are currently no law limits for specific migration of MOSH and MOAH.

The reference indications of the Guidelines Food Chain 21st of April - 2022, at the moment, are the following:

1) limit of MOAH (Mineral Oil Aromatic Hydrocarbons) content in food:

- 0.5 mg/kg for dry foods with low fat/oil content (< 4% fat/oils)

- 1 mg/kg for foods with a higher fat/oil content (> 4% fat/oils)

- 2 mg/kg for fat/oils

2) Limit of MOSH (Mineral Oil Saturated Hydrocarbons) content in food: no limit proposed

If MOAH is detected on the packaging sample, it is suggested to perform a specific migration analysis in the food or in a specific simulant.

Compliance / non-compliance with the requirements and specifications

Results are NOT IN ACCORDANCE with limits set by the BfR XXXVI and further modifications- Paper and board for food contact.
This Recommendation is valid for single and multi-layered commodities (articles, materials) made of paper or paperboard which are intended to come into contact with or affect foodstuffs. It includes paper or paperboard which is intended to be used at temperatures up to 90 °C. For the other special applications, the respective special Recommendation has to be noted.
LISTA DEI LIMITI: lista dei parametri per cui creare i limiti, con il rispettivo nome, codice Ax, operando (< o <=), valore del limite, unità di misura.

Results are IN ACCORDANCE with limits set by the BfR XXXVI and further modifications- Paper and board for food contact.
This Recommendation is valid for single and multi-layered commodities (articles, materials) made of paper or paperboard which are intended to come into contact with or affect foodstuffs. It includes paper or paperboard which is intended to be used at temperatures up to 90 °C. For the other special applications, the respective special Recommendation has to be noted.

Line	Parameter	Conformity	Reference
50	4,4'-BIS-(DIMETHYLAMINO)BENZOPHENONE	NOT PASSED	BFR XXXVI

Information provided by the client

Sampled by: Customer
Place of origin: SWIFT SILLIKER (PTY) LTD 16 WARRINGTON RD CLAREMONT 7708 ZA
Description: OMS-24-01893. CARTON 10X A4 SHEET (633595) (CORRUSEAL)

Chemical responsible Operative units 02
Dott.ssa Barbara Scantamburlo Chimico Ordine dei Chimici e dei Fisici - Provincia di Treviso Iscrizione n. A351
Num. certificato WSREF-80753129228975 emesso dall'ente certificatore ArubaPEC S.p.A. NG CA 3, ArubaPEC S.p.A., IT

Chemical responsible Operative units 01,11
Dott. Emiliano Castellano Chimico Ordine dei Chimici e dei Fisici della Toscana. N. 1631 - Sez. A
Num. certificato WSREF-84576807156345 emesso dall'ente certificatore ArubaPEC S.p.A. NG CA 3, ArubaPEC S.p.A., IT

- The line marked by a star (*) is not accredited by Accredia, member of MLA. - If not otherwise specified, the uncertainty is extended and has been calculated with a coverage factor k=2 corresponding to a probability interval of about 95%. For parameters whose extended uncertainty is greater than the result, since it is not possible to express a negative concentration, the final result is expressed in square brackets, which mean that the true value is between zero, which is excluded, and the sum of the result with its extended uncertainty. - LoD is the detection limit and identifies a confidence interval of zero with a probability interval of about 99%. - LoQ is the limit of quantification. "n.d" is not detected and indicates a value inferior to the LoD. "traces (X)" means a value between LoD and LoQ, this value is indicative. "<x" or ">x" indicate inferior or superior to the measurement field of the test. - Unless otherwise specified, sums of parameters are established based on the Lower Bound (L.B.) principle in which only parameters above LOQ are considered. In case all components of a sum are below their respective LOQ, the sum is reported as "<x". - Analysis Starting date: date at which the sample is processed by the laboratory. Can include aliquoting and homogenization steps. Analysis End date: date at which the results are approved in LIMS by the laboratory. - In case of alteration of the sample the laboratory declines any responsibility on the results that can be influenced by the deviation in case the customer asks for the execution of the test anyway. - If the sampling is not carried out by the laboratory staff, the results obtained are considered referring to the sample as received and the laboratory declines its responsibility for the results calculated considering the sampling data provided by the Customer. The name and contact information of the Customer are always provided by the Customer. - R is the recovery, recoveries marked by an hashtag (#) have not been used in the calculations. - If there is a specification (customer specifications, law limits) which has been compared to the analytical results, the values shown in bold indicate a result which is out of the specification. - If not differently specified the judgments of compliance /non-compliance eventually reported are referred to analysed parameters and are based on the comparison of the value with the reference values without considering the confidence interval of measure.