

INKCUPS CORPORATION  
310 ANDOVER STREET, Danvers, MA 01923, United States

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

Sample Description : (A) ONE SAMPLE OF ICN SB ECO SERIES INK IN COOL GRAY 9.

Buyer : PUMA  
SGS Job No. : SL12200251710201TX  
Application No. : /  
Division : Apparel  
Product Type : Others  
Product Stage : /  
Business Unit : /  
Sample Type : Material  
Puma Supplier No. : /  
Material Reference Code : /  
Colours code/ Prints : /  
Season : AH2022  
Article no. : /  
Style No. : /  
Fiber Composition : /  
Oeko Tex certified product : /  
Country of Origin : Italy  
Country Of Destination : /  
Supplier : /  
Performance Code : /  
Reference No : /  
TRF# : 56309  
Test Specification : V-4.2021  
Test Package/ Material Type : Prints, Inks  
Sourcing Office : Puma Global Sourcing – South Africa  
Sample Status : Production  
T2 Supplier : Ink Cups – Hong Kong  
Supplier Material Name : ICN SB ECO SERIES INK – COOL GRAY 9

Test Performed : Selected test(s) as requested by applicant

Sample Receiving Date : Mar 22, 2022

Testing Period : Mar 22, 2022 - Mar 30, 2022

Test Result(s) : Unless otherwise stated the results shown in this test report refer only to the sample(s) tested, for further details, please refer to the following page(s).

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Conclusion	A
Alkylphenol Ethoxylates (APEO) and Alkylphenols (AP)	Pass
Disperse Dyes	Pass
O-phenylphenol (OPP)	Pass
pH Value	Pass
Azo Dyes	Pass
Vinyl Chloride Monomer (VCM)	Pass
Formaldehyde	Pass
Extractable Heavy Metal	Pass
Monomers - Styrene	Pass
Phthalates	Pass
Polyaromatic hydrocarbons Content (PAH)	Pass
Volatile Organic Compounds (VOC)	Pass
Total Arsenic Content	Pass
Total Cadmium Content	Pass
Total Mercury Content	Pass
Total Lead Content	Pass
N, N-dimethylformamide (DMFa)	Pass
Solvent Residue	Pass
Organotins	Pass
Perfluorinated Compounds (PFCs)	Pass

Remark(s) : Pass = Meet Puma's Requirement

Signed for and on behalf of  
SGS (Hong Kong) Limited



Chan Kai Kong, Alfred, Assistant Technical Manager

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### Sample Photo



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**COMPONENT LIST / List of Materials**

Sample No.	Component No.	Description	Material	Color	Remark
A	1	dried ink	Coatings & Prints	grey	/

Test Result

**Alkylphenols (AP) & Alkylphenol Ethoxylates (APEO)**

Test Method : AP: With reference to AFIRM RSL 2022 method by solvent extraction. Analysis was conducted by HPLC-MS.

APEO: With reference to EN ISO 18254-1:2016. Analysis was conducted by HPLC-MS.

<u>Test Item(s)</u>	<b>1</b>
Nonylphenol(NP)	ND
Octylphenol(OP)	ND
Nonylphenol ethoxylates (NPEOs)	ND
Octylphenol ethoxylates (OPEOs)	ND
Sum of AP	ND
Sum of AP & APEO	ND
<b>Conclusion</b>	<b>PASS</b>

Notes :

Note: n.d. = Not Detected

mg/kg = ppm

\* = Exceed the limit

# = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement.

Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement

Reporting limit = AP: 3 mg/kg; APEO: 20 mg/kg

Requirement:

Sum of AP 10 mg/kg

Sum of AP & APEO 100 mg/kg

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**Forbidden and Disperse Dyes**

Test Method : With reference to DIN 54231:2005. Analysis was conducted with HPLC-DAD-MSD.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>1</u>
Disperse Blue 1	2475-45-8	ND
Disperse Blue 3	2475-46-9	ND
Disperse Blue 7	3179-90-6	ND
Disperse Blue 26	3860-63-7	ND
Disperse Blue 35A	56524-77-7	ND
Disperse Blue 35B	56524-76-6	ND
Disperse Blue 102	69766-79-6/12222 -97-8	ND
Disperse Blue 106	68516-81-4/12223 -01-7	ND
Disperse Blue 124	61951-51-7	ND
Disperse Brown 1	23355-64-8	ND
Disperse Orange 1	2581-69-3	ND
Disperse Orange 3	730-40-5	ND
Disperse Orange 11	82-28-0	ND
Disperse Orange 37/59/76	n.a.	ND
Disperse Orange 149	85136-74-9	ND
Disperse Red 1	2872-52-8	ND
Disperse Red 11	2872-48-2	ND
Disperse Red 17	3179-89-3	ND
Disperse Red 151	61968-47-6	ND
Disperse Yellow 1	119-15-3	ND
Disperse Yellow 3	2832-40-8	ND
Disperse Yellow 7	6300-37-4	ND
Disperse Yellow 9	6373-73-5	ND
Disperse Yellow 23	6250-23-3	ND
Disperse Yellow 39	12236-29-2	ND
Disperse Yellow 49	54824-37-2	ND
Disperse Yellow 56	54077-16-6	ND
Acid Red 26	3761-53-3	ND
Basic Red 9	569-61-9	ND
Basic Green 4	569-64-2 / 2437-29-8 / 10309-95-2	ND
Basic Violet 3	548-62-9	ND
Basic Violet 14	632-99-5	ND

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Test Method : With reference to DIN 54231:2005. Analysis was conducted with HPLC-DAD-MSD.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<b>1</b>
Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5	ND
Direct Black 38	1937-37-7	ND
Direct Blue 6	2602-46-2	ND
Direct Red 28	573-58-0	ND
Direct Brown 95	16071-86-6	ND
4-Dimethylaminoazobenzene (Solvent Yellow 2)	60-11-7	ND
Solvent Blue 4	6786-83-0	ND
4, 4'-bis (dimethylamino)-4-(methyl amino)trityl alcohol	561-41-1	ND
<b>Conclusion</b>		<b>PASS</b>

**Notes :**

Note: n.d. = not detected

mg/kg = ppm

\* = Exceed the limit

+ = result was back calculated based on the worst-case scenario of Basic Green 4 cation (CAS 10309-95-2)

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Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement

Reporting limit = 10 mg/kg (each)

Requirement 30 mg/kg (each)

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**Ortho-Phenyl Phenol Content**

Test Method : With reference to DIN 50009:2021. Analysis was conducted by GC-MS.

Test Item(s)

Ortho-phenylphenol (OPP)

1

ND

**Conclusion****PASS**

## Notes :

Note: n.d.= Not detected

mg/k = ppm

\* = Exceed the limit

# = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement

Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement

Reporting limit = 100 mg/kg

Requirement 1000 mg/kg

**pH Value in Textile and Artificial Leather**

Test Method : According to EN ISO 3071:2020.

Test Item(s)

pH value

1

5.6

**Conclusion****PASS**

## Notes :

Note: Extraction medium KCl solution

pH value of extraction medium 5.0 - 7.5

Temperature of the extraction solution 22 +/- 2 °C

Requirement: 4.0 - 7.5

Test Method : Textile: With reference to EN ISO 14362-1:2017. Analysis was conducted by GC-MS/HPLC-DAD.  
 Determination of 4-aminoazobenzene (CAS No.:60-09-3)-EN ISO 14362-3:2017; Analysis was conducted by GC-MS/ HPLC-DAD.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>1</u>
4-Aminobiphenyl	92-67-1	ND
Benzidine	92-87-5	ND
4-chloro-o-toluidine	95-69-2	ND
2-naphtylamine	91-59-8	ND
o-aminoazotoluene	97-56-3	ND
5-nitro-o-toluidine / 2-Amino-4-nitrotoluene	99-55-8	ND
4-chloroaniline	106-47-8	ND
4-methoxy-m-phenylenediamine / 2,4-Diaminoanisole	615-05-4	ND
4,4'-Diaminodiphenylmethane (MDA)	101-77-9	ND
3,3'-dichlorobenzidine	91-94-1	ND
3,3'-dimethoxybenzidine	119-90-4	ND
3,3'-dimethylbenzidine	119-93-7	ND
3,3'-Dimethyl-4,4'-diaminodiphenylmethane / 4,4'-methylenedi-o-toluidine	838-88-0	ND
p-cresidine / 2-methoxy-5-methylaniline / 6-methoxy-m-toluidine	120-71-8	ND
4,4'-methylene-bis-(2-chloroaniline)	101-14-4	ND
4,4'-oxydianiline	101-80-4	ND
4,4'-thiodianiline	139-65-1	ND
o-toluidine	95-53-4	ND
4-methyl-m-phenylenediamine / 2,4-Toluyldiamine (TDA)	95-80-7	ND
2,4,5-trimethylaniline	137-17-7	ND
4-aminoazobenzene	60-09-3	ND
O-Anisidine	90-04-0	ND
2,4-Xylidine	95-68-1	ND
2,6-Xylidine	87-62-7	ND
4-chloro-o-toluidinium chloride+	3165-93-3	ND
2-Naphthylammoniumacetate+	553-00-4	ND
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate+	39156-41-7	ND
2,4,5-trimethylaniline hydrochloride+	21436-97-5	ND
<b>Conclusion</b>		<b>PASS</b>

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Notes :

Note: n.d. = not detected

mg/kg = ppm

\* = Exceed the limit

# = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement.

Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the

compliance of each component to the requirement

+ = Result was back calculated based on the determination of its amine

@ = The amine was detected according to EN ISO 14362-1:2017 with the reducing agent. A similar result was obtained from the procedure carried out without the reducing agent. According to EN ISO 14362-1:2017 Annex C.2.1.2.2, the amine originated from a source other than azo colorants.

^ = The amine was detected according to EN ISO 14362-1:2017 with the reducing agent. Confirmation procedure was carried out without reducing agent, according to EN ISO 14362-1:2017 Annex C.2.1.2.2, the amine originated from azo colorants.

Reporting limit = 5 mg/kg (each)

Requirement: 20 mg/kg (each)

Remark: + Direct reduction refers to the extraction and reduction according to EN ISO 14362-1:2017 clause 10.2 and relevant clauses.

4-Aminodiphenyl (CAS No. 92-67-1), 2-Naphthylamine (CAS No. 91-59-8) and 2,4-Diaminoanisole (CAS No. 615-05-4) can be indirectly generated from some colorants which do not contain these amines azo bound. The use of banned azo colorants cannot be reliably ascertained without additional information.

In case PU is used, e.g. PU Foams or coatings, it cannot be ruled out that MDA (CAS No. 101-77-9) and TDA (CAS No. 95-80-7) can be released from PU material, not from banned azo colorant. Similarly, for pigment prints, MDA will be released from a chemical fixing agent.

EN ISO 14362-1:2017 will enable further cleavage of 4-AAB (CAS No. 60-09-3) to non-forbidden amines: aniline and p-phenylenediamine. If aniline and/or p-phenylenediamine is not found, 4-AAB is considered as "n.d." (i.e. <5.0 mg/kg). Otherwise, EN ISO 14362-3:2017 will be employed to verify the presence of 4-AAB.

**Monomer - Vinyl Chloride**

Test Method : With reference to EN ISO 6401:2008. Analysis was conducted by headspace GC-MS.

<u>Test Item(s)</u>	<b>1</b>
vinyl chloride monomer(VCM)	ND
<b>Conclusion</b>	<b>PASS</b>

Notes :

- Note: n.d. = not detected
- mg/kg = ppm
- \* = Exceed the limit
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- Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement
- Reporting limit: 0.3 mg/kg
  
- Requirement 1 mg/kg

**Formaldehyde - All materials, except Leather**

Test Method : With reference to EN ISO 14184-1:2011. Analysis was conducted by UV/VIS spectrophotometer.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<b>1</b>
Formaldehyde	50-00-0	ND
<b>Conclusion</b>		<b>PASS</b>

Notes :

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- Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement
- Reporting limit = 5 mg/kg
  
- Requirement
- Babies 16 mg/kg
- Adults and Children 75 mg/kg

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**Extractable Heavy Metal - All other materials**

Test Method : With reference to DIN EN 16711-2:2016. Analysis was performed ICP-OES or ICP-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<b>1</b>
Antimony (Sb)	7440-36-0	ND
Arsenic (As)	7440-38-2	ND
Barium (Ba)	7440-39-3	ND
Cadmium (Cd)	7440-43-9	ND
Cobalt (Co)	7440-48-4	ND
Copper (Cu)	7440-50-8	ND
Lead (Pb)	7439-92-1	ND
Selenium (Se)	7782-49-2	ND
Mercury (Hg)	7439-97-6	ND
Nickel (Ni)	7440-02-0	ND
<b>Conclusion</b>		<b>PASS</b>

Notes :

Note: n.d. = Not detected

mg/kg = ppm

\* = Exceed the limit

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Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement

<b>Requirement</b>	<b><u>Reporting limit (mg/kg)</u></b>	<b><u>Babies (mg/kg)</u></b>	<b><u>Children (mg/kg)</u></b>	<b><u>Adults (mg/kg)</u></b>
<b>Antimony (Sb)</b>	<b>3.0</b>	<b>30</b>	<b>30</b>	<b>30</b>
<b>Arsenic (As)</b>	<b>0.06</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Barium (Ba)</b>	<b>100</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>
<b>Cadmium (Cd)</b>	<b>0.03</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
<b>Cobalt (Co)</b>	<b>0.3</b>	<b>1.0</b>	<b>1.0</b>	<b>4.0</b>
<b>Copper (Cu)</b>	<b>5.0</b>	<b>25</b>	<b>25</b>	<b>50</b>
<b>Lead (Pb)</b>	<b>0.06</b>	<b>0.2</b>	<b>1.0</b>	<b>1.0</b>
<b>Mercury (Hg)</b>	<b>0.006</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>
<b>Nickel (Ni)</b>	<b>0.1</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>
<b>Selenium (Se)</b>	<b>50</b>	<b>500</b>	<b>500</b>	<b>500</b>

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**Monomer - Free Styrene**

Test Method : With reference to AFIRM RSL 2022 method by solvent extraction. Analysis was conducted by GC-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>1</u>
Styrene	100-42-5	ND
<b>Conclusion</b>		<b>PASS</b>

Notes :

Note: n.d. = not detected

mg/kg = ppm

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Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement

Reporting limit: 50 mg/kg

Requirement 500 mg/kg

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**Phthalates**

Test Method : With reference to CPSC-CH-C1001-09.4. Analysis was conducted by GC-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>1</u>
Benzylbutyl Phthalate (BBP)	85-68-7	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	ND
Dibutyl Phthalate (DBP)	84-74-2	ND
Dicyclohexyl phthalate (DCHP)	84-61-7	ND
Diisobutyl phthalate (DIBP)	84-69-5	ND
Diisodecyl Phthalate (DIDP)	26761-40-0	ND
Diisononyl Phthalate (DINP)	28553-12-0	ND
Di-n-Hexylphthalate (DnHP)	84-75-3	ND
Di-n-octyl Phthalate (DNOP)	117-84-0	ND
Diethylphthalate (DEP)	84-66-2	ND
Dimethylphthalate (DMP)	131-11-3	ND
Di-n-pentylphthalate (DnPP)	131-18-0	ND
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (DPP)	84777-06-0	ND
Di-C7-11 branched alkylphthalate (DHNUP)	68515-42-4	ND
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear standard (DHP)	68515-50-4	ND
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	ND
Di-iso-hexyl phthalate (DIHxP)	71850-09-4	ND
Di-isooctyl phthalate (DIOP)	27554-26-3	ND
Diisopentylphthalate (DiPP)	605-50-5	ND
Bis (2-methoxyethyl) phthalate (DMEP)	117-82-8	ND
1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters	68515-51-5 / 68648-93-1	ND
Di-n-propyl phthalate (DPRP)	131-16-8	ND
N-pentyl-isopentyl phthalate (nPiPP)	776297-69-9	ND
Sum		ND
<b>Conclusion</b>		<b>PASS</b>

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Notes :

Note: n.d. = not detected

mg/kg = ppm

\* = Exceed the limit

# = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement

Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement

Reporting limit: 50 mg/kg (each)

Requirement

Each 500 mg/kg

Sum 1000 mg/kg

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**Polyaromatic hydrocarbons Content (PAH)**

Test Method : With reference to AfPS GS 2019:01 PAK. Analysis was conducted by GC-MS.

<u>Test Item(s)</u>	<b>1</b>
Acenaphthene(ANA)	ND
Acenaphthylene(ANY)	ND
Anthracene(ANT)	ND
Benzo(a)anthracene(BaA)	ND
Benzo(a)pyrene(BaP)	ND
Benzo(b)fluoranthene(BbF)	ND
Benzo(e)pyrene(BeP)	ND
Benzo(g,h,i)perylene(BPE)	ND
Benzo(j)fluoranthene(BjF)	ND
Benzo(k)fluoranthene(BkF)	ND
Chrysene(CHR)	ND
Dibenzo(a,h)anthracene(DBA)	ND
Fluoranthene(FLT)	ND
Fluorene(FLU)	ND
Indeno(1,2,3-c,d)pyrene(IPY)	ND
Naphthalene(NAP)	ND
Phenanthrene(PHE)	ND
Pyrene(PYR)	ND
Sum of 18 PAHs	ND
<b>Conclusion</b>	<b>PASS</b>

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Notes :

Note: n.d. = Not detected

mg/kg = ppm

\* = Exceeds the limit

# = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement

Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement

Reporting limit = 0.1 mg/kg (each)

**Requirement**

	<b>Childcare Article</b>	<b>Others</b>
Benzo[a]anthracene	<b>0.5 mg/kg</b>	<b>1 mg/kg</b>
Benzo[a]pyrene	<b>0.5 mg/kg</b>	<b>1 mg/kg</b>
Benzo[b]fluoranthene	<b>0.5 mg/kg</b>	<b>1 mg/kg</b>
Benzo[e]pyrene	<b>0.5 mg/kg</b>	<b>1 mg/kg</b>
Benzo[j]fluoranthene	<b>0.5 mg/kg</b>	<b>1 mg/kg</b>
Benzo[k]fluoranthene	<b>0.5 mg/kg</b>	<b>1 mg/kg</b>
Chrysene	<b>0.5 mg/kg</b>	<b>1 mg/kg</b>
Dibenzo[a,h]anthracene	<b>0.5 mg/kg</b>	<b>1 mg/kg</b>
Sum of 18 PAH	<b>10 mg/kg</b>	<b>10 mg/kg</b>

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**Volatile Organic Compounds (VOCs)**

Test Method : With reference to AFIRM RSL 2022 method. Analysis was conducted by headspace GC-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<b>1</b>
Benzene	71-43-2	ND
CarbonDisulphide (CS2)	75-15-0	ND
Ethylbenzene	100-41-4	ND
Toluene	108-88-3	ND
Xylenes (meta-, ortho-, para-)	1330-20-7	ND
Trichloroethylene	79-01-6	ND
Tetrachloroethylene	127-18-4	ND
Cyclohexanone	108-94-1	ND
1,2-Dichloroethane	107-06-2	ND
1,1-Dichloroethene	75-35-4	ND
Chloroform	67-66-3	ND
Carbon tetrachloride	56-23-5	ND
1,1,1-Trichloroethane	71-55-6	ND
1,1,2-Trichloroethane	79-00-5	ND
1,1,1,2-Tetrachloroethane	630-20-6	ND
1,1,2,2-Tetrachloroethane	79-34-5	ND
Pentachloroethane	76-01-7	ND
Sum of VOCs (Except benzene)		ND
<b>Conclusion</b>		<b>PASS</b>

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Notes :

Note: n.d. = not detected

mg/kg = ppm

\* = Exceed the limit

# = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement

Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement

Reporting limit

Benzene = 1 mg/kg

Others = 20 mg/kg (each)

Requirement

Benzene 5 mg/kg

Sum of VOCs (except Benzene) 1000 mg/kg

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**Total Arsenic Content - All other materials, except Leather**

Test Method : With reference to DIN EN 16711-1:2016. Analysis was conducted by ICP-OES or ICP-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<b>1</b>
Arsenic (As)	7440-38-2	ND
<b>Conclusion</b>		<b>PASS</b>

Notes :

- Note: n.d.= Not detected
- mg/kg = ppm
- \* = Exceeds the limit
- # = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement
- Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement
- Reporting limit = 10 mg/kg

Requirement 100 mg/kg

**Total Cadmium Content - All other materials, except Leather**

Test Method : With reference to DIN EN 16711-1:2016. Analysis was conducted by ICP-OES or ICP-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<b>1</b>
Cadmium (Cd)	7440-43-9	ND
<b>Conclusion</b>		<b>PASS</b>

Notes :

- Note: n.d.= Not detected
- mg/kg = ppm
- \* = Exceeds the limit
- # = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement
- Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement
- Reporting limit = 5 mg/kg

Requirement 40 mg/kg

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**Total Mercury Content - All other materials, except Leather**

Test Method : With reference to DIN EN 16711-1:2016. Analysis was conducted by ICP-OES or ICP-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<b>1</b>
Mercury (Hg)	7439-97-6	ND
<b>Conclusion</b>		<b>PASS</b>

Notes :

- Note: n.d.= Not detected
- mg/kg = ppm
- \* = Exceeds the limit
- # = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement
- Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement
- Reporting limit = 0.1 mg/kg
  
- Requirement 0.5 mg/kg

**Total Lead Content - Paint and Surface Coating**

Test Method : With reference to CPSC-CH-E1003-09.1. Analysis was conducted by ICP-OES or ICP-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<b>1</b>
Lead (Pb)	7439-92-1	ND
<b>Conclusion</b>		<b>PASS</b>

Notes :

- Note: n.d.= Not detected
- mg/kg = ppm
- \* = Exceeds the limit
- # = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement
- Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement
- The result is calculated using the minimum sample weight
- Reporting limit = 10 mg/kg
  
- Requirement 90 mg/kg

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**Solvents Residuals – N,N-Dimethylformamide (DMFa) – All other materials, except Textile**

Test Method : With reference to DIN CEN ISO/TS 16189:2013. Analysis was conducted by GC-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<b>1</b>
N,N-Dimethyl formamide (DMFa)	68-12-2	ND
<b>Conclusion</b>		<b>PASS</b>

Notes :

- Note: n.d. = Not detected
- mg/kg = ppm
- \* = Exceed the limit
- # = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement
- Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement
- Reporting limit = 50 mg/kg

Requirement 500 mg/kg

**Solvents Residuals - Formamide - All other materials, except Textile**

Test Method : With reference to DIN CEN ISO/TS 16189:2013. Analysis was conducted by GC-MS.

<u>Test Item(s)</u>	<b>1</b>
Formamide	ND
<b>Conclusion</b>	<b>PASS</b>

Notes :

- Note: n.d. = Not detected
- mg/kg = ppm
- \* = Exceeds the limit
- # = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement
- Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement
- Reporting limit = 50 mg/kg

Requirement 1000 mg/kg

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Test Method : With reference to DIN CEN ISO/TS 16189:2013. Analysis was conducted by GC-MS.

<u>Test Item(s)</u>	<b>1</b>
N-Methylpyrrolidone (NMP)	ND
N,N-Dimethylacetamide (DMAc)	ND
<b>Conclusion</b>	<b>PASS</b>

Notes :

Note: n.d. = Not detected

mg/kg = ppm

\* = Exceeds the limit

# = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement

Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement

Reporting limit = 50 mg/kg (each)

Requirement

DMAc, NMP 1000 mg/kg (each)

Test Method : With reference to EN ISO 22744-1:2020. Analysis was conducted by GC-MS.

<u>Test Item(s)</u>	<b>1</b>
Trioctyltin(TOT)	ND
Trimethyltin(TMT)	ND
Tricyclohexyl tin (TCyT)	ND
Tributyl tin (TBT)	ND
Tri-n-propyltin(TPT)	ND
Triphenyl tin (TPhT)	ND
Monobutyl tin (MBT)	ND
Diethyl tin (DOT)	ND
Dibutyl tin (DBT)	ND
<b>Conclusion</b>	<b>PASS</b>

**Notes :**

Note: n.d.= not detected

mg/kg = ppm

\* = Exceed the limit

# = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component is recommended to determine the compliance of each component to the requirement

Δ = result over 1/2 or 1/3 of client requirement. There is a possibility of failure on one or more components. Retesting on individual component has been carried out as requested to determine the compliance of each component to the requirement

Reporting limit = 0.1 mg/kg (each)

**Requirement**

DBT, DOT, MBT, TCyT, TMT, TOT, TPT 1.0 mg/kg (each)

TBT, TPhT 0.5 mg/kg (each)

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**Perfluorinated and Polyfluorinated Chemicals (PFCs)**

Test Method : With reference to ISO 23702-1: 2018. Analysis was conducted by HPLC-MS, HPLC-MS/MS and GC-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<b>1</b>
PFOS and related substances		--
Perfluorooctane Sulfonate (PFOS)^	1763-23-1	ND
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	ND
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	ND
2-(N-methylperfluoro-1-octanesulfonamido) - ethanol (MeFOSE)	24448-09-7	ND
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (EtFOSE)	1691-99-2	ND
Perfluorooctane Sulfonamide (PFOSA)	754-91-6	ND
Sum of PFOS and related substances		ND
PFOA and its salts		--
Perfluorooctanoic acid (PFOA)+	335-67-1	ND
PFOA-related substances		--
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4	ND
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7	ND
1H,1H,2H,2H-Perfluorodecylacrylate (8:2 FTA)	27905-45-9	ND
1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)	1996-88-9	ND
Ethyl perfluorooctanoate (Et-PFOA)	3108-24-5	ND
Methyl perfluorooctanoate (Me-PFOA)	376-27-2	ND
Sum of PFOA-related substances		ND
<b>Conclusion</b>		<b>PASS</b>

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## Notes :

Note: n.d. = Not detected

^ PFOS refer to its salts/derivative including PFOS-K (CAS No.: 2795-39-3) , PFOS-Li (CAS No.: 29457-72-5), PFOS-NH<sub>4</sub> (CAS No.: 29081-56-9), PFOS-NH(OH)<sub>2</sub> (CAS No.: 70225-14-8), PFOS-N(C<sub>2</sub>H<sub>5</sub>)<sub>4</sub> (CAS No.: 56773-42-3) and POSF (CAS No.: 307-35-7)

+ PFOA refer to its salts including PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) and APFO (CAS No.: 3825-26-1)

\* = Exceeds the limit

Reporting limit

PFOS and related substances = 1 mg/kg

PFOA and its salts = 0.025 mg/kg

PFOA related substances = 1 mg/kg

Requirement

PFOS and related substances 1 mg/kg (sum)

PFOA and its salts 0.025 mg/kg (sum)

PFOA-related substances 1 mg/kg (sum)

\*\*\*\*\* End of Report \*\*\*\*\*

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