



Test Report: (9323)065-1791

Report Date: March 17, 2023

Factory Company Name: Shaoguan Beijiang Smart Textile Technology Co.,Ltd

Factory Address: D3 Qujiang Economic Development Zone, Qujiang District,Shaoguan, Guangdong

Sampling Method & Description:

I001) Untreated wastewater	Composite	Black liquid
I002) Effluent	Composite	Light yellow liquid
I003) Sludge	Composite	Black solid
I004) Leachate	-	Not tested
I005) Incoming water	-	Not tested

Discharge Type: **Indirect Discharge with Pretreatment**

On-site ETP / Pretreatment: Yes Homgenization Tank & Holding Time: Yes, > 12hours

Discharge Destination: Centralized ETP

Permit Validation Date: Dec 23, 2020 to Dec 22, 2025

Conventional, Anions & Heavy Metals Overall Category: Meet discharge criteria ZDHC MRSL Parameters: Detected

Sludge Parameters: Meet ZDHC Threshold Value

Sample Pick Up Date: March 7, 2023 Sampler Number: C74D106817272
C74D106817263

Test Period: March 8, 2023 to March 17, 2023

Parameter(s) exceeded maximum holding time: Not exceeded

Remark

The results of this report shall not be used for any regulatory compliance purposes.

Type of Process:	Textile	Average total industrial wastewater generated:	Equal or more than 15m3/day
Sludge Disposal Pathway:	Disposal Pathway C		
Type of Sludge:	Dried sludge or ash		

General enquiry and invoicing:
bvcps_pyinfo@bureauveritas.com
 (86)20-22902088

Technical enquiry:
bvcps_pyinfo@bureauveritas.com
 (86)20-22902088

Report reviewed by:

Andy Wang
 Manager

Report approved by:

Nina Ren
 Senior Manager

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Result Summary - ZDHC MRSL Wastewater Parameters

Test Items	Untreated wastewater	Effluent	Incoming water
1A) AP and APEOs	ND	NR	NR
1B) Anti-Microbials & Biocides	ND		NR
1C) Chlorinated Parafins	ND		NR
1D) Chlorobenzenes and Chlorotoluenes	ND		NR
1E) Chlorophenols	ND		NR
1F) DMFa	ND		NR
1G) Dyes - Carcinogenic or Equivalent Concern	ND		NR
1H) Dyes - Disperse (Sensitising)	ND		NR
1I) Dyes - Navy Blue Colourant	ND		NR
1J) Flame Retardants	ND		NR
1K) Glycols / Glycol Ethers	ND		NR
1L) Halogenated Solvents	ND		NR
1M) Organotin Compounds	ND		NR
1N) Other / Miscellaneous Chemicals	D		NR
1O) PFCs	ND		NR
1P) Phthalates	ND		NR
1Q) PAHs	ND		NR
1R) Restricted Aromatic Amines	ND		NR
1S) UV Absorbers	ND		NR
1T) VOC	ND		NR



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Result Summary - ZDHC Heavy Metals, Conventional and Anions Wastewater Parameters

Test Items	Untreated wastewater	Effluent	Incoming water	
Antimony	NR	NR	NR	
Chromium (VI)		Meet	NR	
Barium		NR	NR	
Selenium		NR	NR	
Tin		NR	NR	
Arsenic		Refer to result	NR	
Total Chromium		NR	NR	
Cobalt		NR	NR	
Cadmium		Refer to result	NR	
Copper		NR	NR	
Lead		Refer to result	NR	
Nickel		NR	NR	
Silver		NR	NR	
Zinc		NR	NR	
Mercury		Refer to result	NR	
pH			NR	NR
Temperature difference			NR	
E.coli			NR	
Colour			NR	
Persistent Foam			NR	
Wastewater Flowrate			NR	
Ammonium-Nitrogen			NR	
AOX			NR	
BOD ₅			NR	
COD			NR	
DO			NR	
Oil & Grease			NR	
Total Phenols / Phenol Index			NR	
Total Chlorine			NR	
TDS			NR	
Total Nitrogen			NR	
Total Phosphorus			NR	
TSS			NR	
Chloride		NR		
Cyanide, total		NR		
Sulfate		NR		
Sulfide		NR		
Sulfite		NR		



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Result Summary - ZDHC Sludge Parameters

Test Items	Sludge	Leachate
Antimony	ND	NR
Arsenic	ND	NR
Barium	ND	NR
Cadmium	ND	NR
Coblat	ND	NR
Copper	ND	NR
Lead	ND	NR
Nickel	ND	NR
Selenium	ND	NR
Silver	ND	NR
Total Chromium	ND	NR
Zinc	ND	NR
Chromium (VI)	ND	NR
Mercury	ND	NR
Cyanide	Refer to result	NR
pH	Refer to result	
% Solids	Refer to result	
Paint Filter Test	Refer to result	
Fecal Coliform	Refer to result	
AP and APEOs	Refer to result	
PAHs	Refer to result	
Chlorotoluenes	Refer to result	

Note / Key:

Meet	=	Meet Foundational Limit / Meet Discharge Criteria
Not Meet	=	Exceed Foundational Limit / Exceed Discharge Criteria
NR	=	Not requested / Not required
NA	=	Not applicable
D	=	Detected
ND	=	Not detected
Refer to result	=	Legal parameter(s) and/or parameter(s) requested by factory, please refer to test result



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Test Result - ZDHC MRSL Parameters

Test Parameters	Results of Test Items					Requirements [Textile]		
	I001	I002	I003 [#]	I004 [#]	I005	Wastewater	Sludge [#]	Leachate [#]
	(µg/L)	(µg/L)	(mg/kg)	(mg/L)	(µg/L)	(µg/L)	(mg/kg)	-
1A) AP and APEOs: including all isomers								
NPEO	ND	NR	ND	NR	NR	5	0.4	-
NP, mixed isomers	ND		ND		NR			
OPEO	ND		ND		NR			
OP, mixed isomers	ND		ND		NR			
1B) Anti-Microbials & Biocides								
o-Phenylphenol (+salts)	ND	NR	NR	NR	NR	100	-	-
Triclosan	ND				NR			
Permethrin	ND				NR			
1C) Chlorinated Parafins								
MCCPs (C14-C17)	ND	NR	NR	NR	NR	500	-	-
SCCPs (C10-C13)	ND				NR			
1D) Chlorobenzenes and Chlorotoluenes								
1,2-dichlorobenzene	ND	NR	NR	NR	NR	0.2	-	-
Other isomers of mono-, di-, tri-, tetra-, penta- and hexa- chlorobenzene	ND		NR					
Other isomers of mono-, di-, tri-, tetra- and penta- chlorotoluene	ND		ND					
1E) Chlorophenols								
2-chlorophenol	ND	NR	NR	NR	NR	0.5	-	-
3-chlorophenol	ND							
4-chlorophenol	ND							
2,3-dichlorophenol	ND							
2,4-dichlorophenol	ND							
2,5-dichlorophenol	ND							
2,6-dichlorophenol	ND							
3,4-dichlorophenol	ND							
3,5-dichlorophenol	ND							
2,3,4-trichlorophenol	ND							
2,3,5-trichlorophenol	ND							
2,3,6-trichlorophenol	ND							
2,4,5-trichlorophenol	ND							
2,4,6-trichlorophenol	ND							
3,4,5-trichlorophenol	ND							
2,3,5,6-tetrachlorophenol	ND							
2,3,4,6-tetrachlorophenol	ND							
2,3,4,5-tetrachlorophenol	ND							
Pentachlorophenol (PCP)	ND							
1F) N,N-di-methylformamide (DMFa)								
Dimethyl formamide; N,N-dimethylformamide (DMFa) ^a	ND	NR	NR	NR	NR	1000	-	-

a = Report only for mock leather

#Limit refers to the chosen ZDHC sludge disposal pathway in Table 4 in accordance with the ZDHC Wastewater Guidelines.



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Test Result - ZDHC MRS� Parameters (continued)

Test Parameters	Results of Test Items					Requirements [Textile]		
	I001 (µg/L)	I002 (µg/L)	I003# (mg/kg)	I004# (mg/L)	I005 (µg/L)	Wastewater (µg/L)	Sludge # (mg/kg)	Leachate# -
1G) Dyes - Carcinogenic or Equivalent Concern								
Basic violet 3 with >0.1% of Michler's Ketone	ND	NR	NR	NR	NR	500	-	-
C.I. Acid Red 26	ND				NR			
C.I. Acid Violet 49	ND				NR			
C.I. Basic Blue 26 (with Michler's Ketone >0/1%)	ND				NR			
C.I. Basic Green 4 (Malachite Green Chloride)	ND				NR			
C.I. Basic Green 4 (Malachite Green Oxalate)	ND				NR			
C.I. Basic Green 4 (Malachite Green)	ND				NR			
C.I. Basic Red 9	ND				NR			
C.I. Basic Violet 14	ND				NR			
C.I. Direct Black 38	ND				NR			
C.I. Direct Blue 6	ND				NR			
C.I. Direct Red 28	ND				NR			
C.I. Disperse Blue 1	ND				NR			
C.I. Disperse Blue 3	ND				NR			
Disperse Orange 11	ND				NR			
1H) Dyes - Disperse (Allergenic)								
Disperse Blue 102	ND	NR	NR	NR	NR	50	-	-
Disperse Blue 106	ND				NR			
Disperse Blue 124	ND				NR			
Disperse Blue 26	ND				NR			
Disperse Blue 35 (CAS 12222-75-2)	ND				NR			
Disperse Blue 35 (CAS 56524-77-7)	ND				NR			
Disperse Blue 7	ND				NR			
Disperse Brown 1	ND				NR			
Disperse Orange 1	ND				NR			
Disperse Orange 3	ND				NR			
Disperse Orange 37/59/76	ND				NR			
Disperse Red 1	ND				NR			
Disperse Red 11	ND				NR			
Disperse Red 17	ND				NR			
Disperse Yellow 1	ND				NR			
Disperse Yellow 3	ND				NR			
Disperse Yellow 39	ND				NR			
Disperse Yellow 49	ND				NR			
Disperse Yellow 9	ND				NR			
1I) Dyes - Navy Blue Colourant								
Component 1: C39H23Cl-CrN7O12S 2Na	ND	NR	NR	NR	NR	500	-	-
Component 2: C46H-30CrN10O20S2 3Na	ND				NR			

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Test Result - ZDHC MRSL Parameters (continued)

Test Parameters	Results of Test Items					Requirements [Textile]		
	I001 (µg/L)	I002 (µg/L)	I003 [#] (mg/kg)	I004 [#] (mg/L)	I005 (µg/L)	Wastewater (µg/L)	Sludge # (mg/kg)	Leachate [#] -
1J) Flame Retardants								
2,2-bis(bromomethyl)-1,3-propanediol (BBMP)	ND	NR	NR	NR	NR	25	-	-
Dis(2,3-dibromopropyl) phosphate (BIS)	ND				NR			
Decabromophenyl ether (DecaBDE)	ND				NR			
Hexabromocyclodecane (HBCDD)	ND				NR			
Octabromodiphenyl ether (OctaBDE)	ND				NR			
Pentabromodiphenyl ether (PentaBDE)	ND				NR			
Polybromobiphenyls (PBB)	ND				NR			
Tetrabromobisphenol A (TBBPA)	ND				NR			
Tris-(2-chloro-1-methylethyl) phosphate (TCPP)	ND				NR			
Tris(1-aziridinyl)phosphone oxide (TEPA)	ND				NR			
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	ND				NR			
Tris(2-chloroethyl) phosphate (TCEP)	ND				NR			
Tris(2,3-dibromopropyl) phosphate (TRIS)	ND				NR			
Decabromobiphenyl (DecaBB)	ND				NR			
Dibromobiphenyls (DiBB)	ND				NR			
Octabromobiphenyls (OctaBB)	ND				NR			
Dibromopropylether	ND				NR			
Heptabromodiphenyl ether (HeptaBDE)	ND				NR			
Hexabromodiphenyl ether (HexaBDE)	ND				NR			
Monobromobiphenyls (MonoBB)	ND				NR			
Monobromodiphenylethers (MonoBDEs)	ND				NR			
Nonabromobiphenyls (NonaBB)	ND				NR			
Nonabromodiphenyl ether (NonaBDE)	ND				NR			
Tetrabromodiphenyl ether (TetraBDE)	ND				NR			
Tribromophenylethers (TriBDEs)	ND				NR			
Boric acid ^b	ND				NR			
Diboron trioxide ^b	ND				NR			
Disodium octaborate ^b	ND				NR			
Disodium tetraborate anhydrous ^b	ND	NR						
Tetraboron disodium heptaoxide, hydrate ^b	ND	NR						
1K) Glycols / Glycol Ethers								
2-ethoxyethanol	ND	NR	NR	NR	NR	50	-	-
2-ethoxyethyl acetate	ND				NR			
2-methoxyethanol	ND				NR			
2-methoxyethylacetate	ND				NR			
2-methoxypropylacetate	ND				NR			
Bis(2-methoxyethyl)-ether	ND				NR			
Ethylene glycol dimethyl ether	ND				NR			
Triethylene glycol dimethyl ether	ND				NR			
1L) Halogenated Solvents								
1,2-dichloroethane	ND	NR	NR	NR	NR	1	-	-
Methylene chloride	ND				NR			
Tetrachloroethylene	ND				NR			
Trichloroethylene	ND				NR			

b = Limit refers to elemental boron, not the salt.

#Limit refers to the chosen ZDHC sludge disposal pathway in Table 4 in accordance with the ZDHC Wastewater Guidelines.



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Test Result - ZDHC MRSL Parameters (continued)

Test Parameters	Results of Test Items					Requirements [Textile]		
	I001 (µg/L)	I002 (µg/L)	I003 [#] (mg/kg)	I004 [#] (mg/L)	I005 (µg/L)	Wastewater (µg/L)	Sludge # (mg/kg)	Leachate [#] -
1M) Organotin Compounds								
Dipropyltin compounds (DPT)	ND	NR	NR	NR	NR	0.01	-	-
Mono, di-, and tri-butyltin derivatives	ND							
Mono, di-, and tri-methyltin derivatives	ND							
Mono, di-, and tri-octyltin derivatives	ND							
Mono, di-, and tri-phenyltin derivatives	ND							
Tetrabutyltin compounds (TeBT)	ND							
Tripropyltin compounds (TPT)	ND							
Tetraoctyltin compounds (TeOT)	ND							
Tricyclohexyltin (TCyHT)	ND							
Tetraethyltin compounds (TeET)	ND							
1N) Other / Miscellaneous Chemicals								
AEEA [2-(2-aminoethylamino)ethanol]	ND	NR	NR	NR	NR	500	-	-
Bisphenol A	ND				NR	10		
Thiourea	79200				NR	50		
Quinoline	ND				NR	100		
Borate, zinc salt ^c	ND				NR	-		
Silica (used in sand blasting) ^d	NR				NR	-		
1O) Perfluorinated and Polyfluorinated Chemicals (PFCs)								
Perfluorooctane sulfonate (PFOS) and related substances, Perfluorooctanoic acid (PFOA)	ND	NR	NR	NR	NR	0.01	-	-
Perfluorooctanoic acid (PFOA) related substances	ND				NR	1		
1P) Phthalates - including all other esters of ortho-phthalic acid								
1,2-benzenedicarboxylic acid, di-C6-8 branched and linear alkyl esters, C7-rich (DIHP)	ND	NR	NR	NR	NR	10	-	-
1,2-benzenedicarboxylic acid, di-C7-11 branched and linear alkyl esters (DHNUP)	ND				NR			
Bis(2-methoxyethyl)phthalate (DMEP)	ND				NR			
Butyl benzyl phthalate (BBP)	ND				NR			
Di-cyclohexyl phthalate (DCHP)	ND				NR			
Di-iso-decyl phthalate (DIDP)	ND				NR			
Di-iso-octyl phthalate (DIOP)	ND				NR			
Di-iso-butyl phthalate (DIBP)	ND				NR			
Di-iso-nonyl phthalate (DINP)	ND				NR			
Di-n-hexyl phthalate (DnHP)	ND				NR			
Di-n-octyl phthalate (DNOP)	ND				NR			
Di-n-pentylphthalates	ND				NR			
Di-n-propyl phthalate (DPRP)	ND				NR			
Di(ethylhexyl) phthalate (DEHP)	ND				NR			
Dibutyl phthalate (DBP)	ND				NR			
Diethyl phthalate (DEP)	ND				NR			
Diisopentylphthalates	ND				NR			
Dinonyl phthalate (DNP)	ND				NR			

c = Limit refers to elemental boron and/or zinc, not the salt.

d = Not a ZDHC wastewater parameter, and not required to test this parameter as this is related to sand blasting

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Test Result - ZDHC MRSL Parameters (continued)

Test Parameters	Results of Test Items					Requirements [Textile]		
	I001	I002	I003 [#]	I004 [#]	I005	Wastewater	Sludge [#]	Leachate [#]
	(µg/L)	(µg/L)	(mg/kg)	(mg/L)	(µg/L)	(µg/L)	(mg/kg)	-
1Q) Polycyclic Aromatic Hydrocarbons (PAHs)								
Acenaphthene	ND		ND		NR			
Acenaphthylene	ND		ND		NR			
Anthracene	ND		ND		NR			
Benzo[a]anthracene	ND		ND		NR			
Benzo[a]pyrene (BaP)	ND		ND		NR			
Benzo[b]fluoranthene	ND		ND		NR			
Benzo[e]pyrene	ND		ND		NR			
Benzo[ghi]perylene	ND		ND		NR			
Benzo[j]fluoranthene	ND	NR	ND	NR	NR	1	0.2	-
Benzo[k]fluoranthene	ND		ND		NR			
Chrysene	ND		ND		NR			
Dibenz[a,h]anthracene	ND		ND		NR			
Fluoranthene	ND		ND		NR			
Fluorene	ND		ND		NR			
Indeno[1,2,3-cd]pyrene	ND		ND		NR			
Naphthalene	ND		ND		NR			
Phenanthrene	ND		ND		NR			
Pyrene	ND		ND		NR			
1R) Restricted Aromatic Amines (Cleavable from Azo-colourants)								
2-naphthylamine	ND				NR			
2-naphthylammoniumacetate	ND				NR			
2,4-xylidine	ND				NR			
2,4,5-trimethylaniline	ND				NR			
2,4,5-trimethylaniline hydrochloride	ND				NR			
2,6-xylidine	ND				NR			
3,3'-dichlorobenzidine	ND				NR			
3,3-dimethoxybenzidine	ND				NR			
3,3-dimethylbenzidine	ND				NR			
4-aminoazobenzene	ND				NR			
4-aminodiphenyl	ND				NR			
4-chloro-o-toluidine	ND				NR			
4-chloro-o-toluidinium chloride	ND				NR			
4-chloroaniline	ND				NR			
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate	ND	NR	NR	NR	NR	0.1	-	-
4-methoxy-m-phenylenediamine	ND				NR			
4-methyl-m-phenylenediamine	ND				NR			
4,4-methylene-bis-(2-chloro-aniline)	ND				NR			
4,4-methylenedi-o-toluidine	ND				NR			
4,4-methylenedianiline	ND				NR			
4,4-oxydianiline	ND				NR			
4,4-thiodianiline	ND				NR			
5-nitro-o-toluidine	ND				NR			
6-methoxy-m-toluidine	ND				NR			
Benzidine	ND				NR			
o-aminoazotoluene	ND				NR			
o-anisidine	ND				NR			
o-toluidine	ND				NR			

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Test Result - ZDHC MRSL Parameters (continued)

Test Parameters	Results of Test Items					Requirements [Textile]		
	I001	I002	I003 [#]	I004 [#]	I005	Wastewater	Sludge [#]	Leachate [#]
	(µg/L)	(µg/L)	(mg/kg)	(mg/L)	(µg/L)	(µg/L)	(mg/kg)	-
1S) UV Absorbers								
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	ND	NR	NR	NR	NR	100	-	-
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	ND				NR			
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	ND				NR			
2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)	ND				NR			
1T) Volatile Organic Compounds (VOC)								
Benzene	ND	NR	NR	NR	NR	1	-	-
m-cresol	ND				NR			
o-cresol	ND				NR			
p-cresol	ND				NR			
Xylene	ND				NR			
Toluene ^a	ND				NR			

a = Report only for mock leather

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Test Result - ZDHC Heavy Metals Parameters

Test Parameters	Unit			Results of Test Items					Requirements [Textile]				
	Wastewater	Sludge	Leachate	I001	I002	I003#	I004#	I005	Wastewater			Sludge	
									Foundational	Progressive	Aspirational	Discharge Limit	Sludge Threshold Values
ZDHC Heavy Metals													
Antimony	mg/L	mg/kg	mg/L	NR	NR	ND	NR	NR	0.1	0.05	0.01	-	12
Chromium (VI)	mg/L	mg/kg	mg/L		ND	ND	NR	NR	0.05	0.005	0.001	0.5	50
Barium	mg/L	mg/kg	mg/L		NR	ND	NR	NR	Sample & Report			-	700
Selenium	mg/L	mg/kg	mg/L		NR	ND	NR	NR	Sample & Report			-	10
Tin	mg/L	-	-		NR	NR	NR	NR	Sample & Report			-	-
Arsenic	mg/L	mg/kg	mg/L		ND	ND	NR	NR	0.05	0.01	0.005	-	10
Total Chromium	mg/L	mg/kg	mg/L		NR	ND	NR	NR	0.2	0.1	0.05	-	100
Cobalt	mg/L	mg/kg	mg/L		NR	ND	NR	NR	0.05	0.02	0.01	-	1600
Cadmium	mg/L	mg/kg	mg/L		ND	ND	NR	NR	0.1	0.05	0.01	-	3
Copper	mg/L	mg/kg	mg/L		NR	ND	NR	NR	1	0.5	0.25	-	200
Lead	mg/L	mg/kg	mg/L		ND	ND	NR	NR	0.1	0.05	0.01	-	10
Nickel	mg/L	mg/kg	mg/L		NR	28.5	NR	NR	0.2	0.1	0.05	-	70
Silver	mg/L	mg/kg	mg/L		NR	ND	NR	NR	0.1	0.05	0.005	-	100
Zinc	mg/L	mg/kg	mg/L		NR	ND	NR	NR	5	1	0.5	-	1000
Mercury	mg/L	mg/kg	mg/L		ND	ND	NR	NR	0.01	0.005	0.001	-	1

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Test Result - ZDHC Conventional and Anions Parameters

Test Parameters	Unit			Results of Test Items					Requirements [Textile]					
	Wastewater	Sludge	Leachate	I001	I002	I003#	I004#	I005	Wastewater			Sludge		
									Foundational	Progressive	Aspirational	Discharge Limit	Sludge Threshold Values	
ZDHC Conventional														
pH	pH					8.41					6 - 9	-		
Temperature difference	Δ °C									15	10	5	-	
E.coli	MPN/100-ml									126			-	
Colour (436 nm)	m ⁻¹									7	5	2	-	
Colour (525 nm)	m ⁻¹									5	3	1	-	
Colour (620 nm)	m ⁻¹									3	2	1	-	
Persistent Foam	-									No indication of Persistent Foam			-	
Wastewater Flowrate	m ³ /day									-			-	
Ammonium-Nitrogen	mg/L									10	1	0.5	-	
AOX	mg/L									3	0.5	0.1	-	
BOD ₅	mg/L									30	15	8	-	
COD	mg/L					NR				150	80	40	-	
DO	mg/L			NR	NR			NR	NR	Sample & Report			-	
Oil & Grease	mg/L									10	2	0.5	-	
Total Phenols / Phenol Index	mg/L									0.5	0.01	0.001	-	
Total Chlorine	mg/L									Sample & Report			-	
TDS	mg/L									-			-	
Total Nitrogen	mg/L									20	10	5	-	
Total Phosphorus	mg/L									3	0.5	0.1	-	
TSS	mg/L									50	15	5	-	
% Solids	-	%				87.12				-			-	
Paint Filter Test	-	-				Pass				-			-	
Fecal Coliform	-	MPN/g				ND				-			-	
ZDHC Anions														
Chloride	mg/L	-	-			NR				Sample & Report			-	
Cyanide, total	mg/L	mg/kg	-			ND				0.2	0.1	0.05	-	
Sulfate	mg/L			NR	NR			NR	NR	Sample & Report			-	
Sulfide	mg/L					NR				0.5	0.5	0.01	-	
Sulfite	mg/L									2	0.5	0.2	-	

#Limit refers to the chosen ZDHC sludge disposal pathway in Table 4 in accordance with the ZDHC Wastewater Guidelines.



Test Report: (9323)065-1791

Report Date: March 17, 2023

Appendix A - Discharge limit according to regulation / contract limit with CETP**(二) 排放许可限值**

表9 废水污染物排放

序号	排放口编号	排放口名称	污染物种类	许可排放浓度限值	许可年排放量限值 (t/a)				
					第一年	第二年	第三年	第四年	第五年
主要排放口									
1	DW001	工业废水总排口	总镉	0.10mg/L	/	/	/	/	/
2	DW001	工业废水总排口	氨氮 (NH ₃ -N)	20mg/L	/	/	/	/	/
3	DW001	工业废水总排口	可吸附有机卤化物	12mg/L	/	/	/	/	/
4	DW001	工业废水总排口	五日生化需氧量	50mg/L	/	/	/	/	/
5	DW001	工业废水总排口	色度	80	/	/	/	/	/
6	DW001	工业废水总排口	动植物油	100mg/L	/	/	/	/	/
7	DW001	工业废水	悬浮物	100mg/L	/	/	/	/	/

序号	排放口编号	排放口名称	污染物种类	许可排放浓度限值	许可年排放量限值 (t/a)				
					第一年	第二年	第三年	第四年	第五年
主要排放口									
8	DW001	工业废水总排口	硫化物	0.5mg/L	/	/	/	/	/
9	DW001	工业废水总排口	化学需氧量	200mg/L	/	/	/	/	/
10	DW001	工业废水总排口	二氧化氯	0.5mg/L	/	/	/	/	/
11	DW001	工业废水总排口	总氮 (以N计)	30mg/L	/	/	/	/	/
12	DW001	工业废水总排口	总磷 (以P计)	1.5mg/L	/	/	/	/	/
13	DW001	工业废水总排口	pH值	6-9	/	/	/	/	/
14	DW001	工业废水总排口	苯胺类	1mg/L	/	/	/	/	/
15	DW003	车间废水排放口	六价铬	0.5mg/L	/	/	/	/	/
主要排放口合计		CODcr			87.323000	87.323000	87.323000	87.323000	87.323000
		氨氮			8.586000	8.586000	8.586000	8.586000	8.586000
一般排放口									
1	DW004	生活污水排放口	总氮 (以N计)	30mg/L	/	/	/	/	/
2	DW004	生活污水排放口	总磷 (以P计)	2mg/L	/	/	/	/	/
3	DW004	生活污水排放口	pH值	6-9	/	/	/	/	/



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Appendix B - Sample Photos

I001) Sampling point
N 24° 40' 18", E 113° 30' 33"



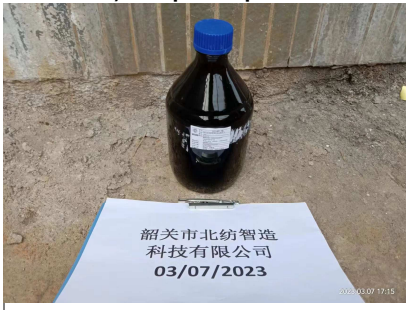
I001) Sampling location surrounding
N 24° 40' 18", E 113° 30' 33"



I001) Labelled sample bottles



I001) Sample for phthalate test



I001) Sample packaging



I002) Sampling point
N 24° 40' 14", E 113° 30' 36"



I002) Sampling location surrounding
N 24° 40' 14", E 113° 30' 36"



I002) Labelled sample bottles



I002) pH measurement



I002) Sample packaging



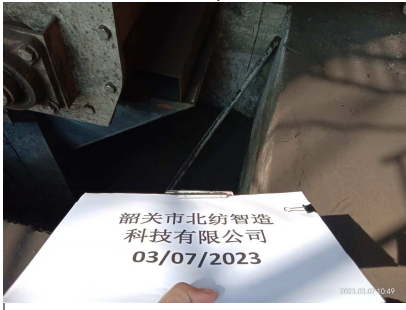


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Appendix B - Sample Photos (continued)

I003) Sampling point
N 24° 40' 17", E 113° 30' 34"



I003) Sampling location surrounding
N 24° 40' 17", E 113° 30' 34"



I003) Labelled sample bottles



I003) Sample packaging



I005) Sampling point
<Geolocation>

I005) Sampling location surrounding
<Geolocation>

I005) Labelled sample bottles

Not tested	Not tested	Not tested
------------	------------	------------

I005) pH measurement

I005) Sample packaging

Not tested	Not tested
------------	------------



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Appendix C - On-site Field Data Record Sheet

<p>FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)</p>	CPSD-AN-00613-DATA 04
	Issue Date:
	Version No.: 17
	Business Line: Analytical

General Data

Laboratory Sample Number: 93230651791

Client Name: 新嘉坡水处理有限公司

Field Contact Person: 李瑞敏 Phone No: 13615644623

Project (Facility Name and Address): 广东新嘉坡市由江经济新区D3B

Sampling Location / Description: Untreated wastewater

Sample Identification: Zero discharge with sampling plan

Sample Type: Composite Sample / Grab sample (Please delete as appropriate)

Name of Sampler: Leslie M

Discharge mode: Direct discharge to environment (Specify destination: River, Sea, Stream...) OR Indirect discharge to sewage treatment plant

Date of collection: 3/17/2023

Factory Type: Dyeing / Printing / Washing / Finishing / Others (please specify):

*Note: It would be selected more than one

Field Data for Wastewater							
Arrival Time:	10:59		Departure Time:	17:28			
Field Parameters	pH:	/	Temp: / °C	Color: Black		Flow rate: (volume/time)	
Control No. of field equipment	/						
Factory with effluent treatment plant:	No						
Sample matrix:	Incoming water (if required)						
	Wastewater before treatment						
	Wastewater after treatment - water at discharge point						
Sampler container number	1001						
Recording time	ID						
	Time	10:54	11:51	12:49	13:52	14:51	15:48
pH:	/						
Temp (°C):	/						
Color (visual estimation):	Black Black Black Black Black Black Black						
Flow rate (volume/time)	/						
Volume collected, ml	3000 3000 3000 3000 3000 3000						
Total volume collected	8.7L Remark: Total volume collected must be greater than total of sample size required						

Tests (ZDHC MRSL Parameters)		Test required (Y)	Total of sample size	Type of container	Preservation method	
Combined test or Individual test (Remark 4)	1. Phthalate	✓	1000 mL total or 1000 mL each	生料 N 40° 00' 18" E 103° 30' 33" Amber Glass, washed with nitric acid.	Without adding acid Store sample at 2-8°C	
	2. Chlorobenzenes, Chlorotoluene & PAH	✓				
	3. SOCPs	✓				
	4. APS	✓				
5. APEOs	✓	100 mL				
6. Chlorophenols & Cresols	✓	100 mL				
7. Flame retardant	✓	500 mL				
8. Dyes	✓	10 mL				
9. Glycol	✓	50 mL				
10. *Pesticides		1000 mL				
11. *Nitroamine		10 mL				
12. Banned Azodyes	✓	2000 mL				
13. *Free primary aromatic amines		500 mL				
14. Organotin Compounds	✓	500 mL				
15. UV absorbers	✓	100				
16. BPA	✓	2				
17. Disperse Dyes	✓	10				
18. VOC & Halogenated Solvents (Remark 5)	✓	10 mL	Fl, washed with pesticide grade Acetone			Fill to full container without air gap; acidity to pH 2 with HCl and store sample at 2-8°C Without adding acid Store sample at 2-8°C
19. PFCs (Remark 5)	✓	2 mL				



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Report Date: March 17, 2023

Appendix C - On-site Field Data Record Sheet (continued)

	FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)	CPSD-AN-00613-DATA 04 Issue Date: _____ Version No.: 17 Business Line: Analytical
--	---	---

Tests (Conventional Parameters)	Test required (Y)	Total of sample size	Type of container	Preservation method
20. Total suspended solids (TSS)		2000 mL total or 2000 mL each	Amber Glass, washed with nitric acid.	Without adding acid Store sample at 2-8°C
21. Total dissolved solids (TDS)				
22. 5-day Biochemical Oxygen Demand (BOD5)		1000 mL		
23. Colour		100 mL		
24. Heavy Metals except Cr(VI) & Total-P (Remark 5)		9 mL	PE, washed with nitric acid	Acidify to pH 2 with HNO ₃ and store at 2-8°C
25. Cyanide		500 mL	Amber Glass, washed with pesticide grade acetone	Adjust pH 12 with 50% NaOH, add 0.05 mL of 10% Na ₂ S ₂ O ₅ and store sample at 2-8°C
26. Cr(VI)		90 mL	Amber Glass, washed with nitric acid	Acidify to pH 2 with H ₂ SO ₄ Store sample at 2-8°C
27. Chemical oxygen demand (COD)		150 mL		
28. Phenols		500 mL		
29. Oil and Grease & Total Hydrocarbon		1000 mL		
30. Formaldehyde		25 mL		Fill to full container without air gap; acidify to pH 2 with H ₂ SO ₄ and store sample at 2-8°C
31. Sulfide (Remark 5)		50 mL	PE, washed with pesticide grade acetone;	Fill to full container without air gap; add 2 drops of 0M zinc acetate, adjust pH to 9 with 5M NaOH; Store sample at 2-8°C
32. E. coli (Remark 6)		125 mL	PE, clean, sterile, non-reactive	Add 0.1 mL of 10% Na ₂ S ₂ O ₃ Jump in dark; Store sample at 2-8°C
33. Persistent foam		N/A	Foam higher than 45 cm (visual estimation): Yes / No	
34. Sulfite		100 mL	Amber Glass, washed with pesticide grade acetone	Add 1ml of 2.5% EDTA; Store sample at 2-8°C
35. Total-N		100 mL	Amber Glass, washed with nitric acid;	Acidify to pH 2 with H ₂ SO ₄ Store sample at 2-8°C
36. Ammonium-N		500 mL		
37. Adsorbable organically bound halogens (AOX)		100 mL		
38. Acute aquatic toxicity: Luminescent Bacteria, Fish Eggs, Daphnia, Algae		1000 mL	Amber Glass, washed with nitric acid;	Without adding acid Store sample at 2-8°C
39. Sulphate		100 mL		
40. Chloride		100 mL		
41. Cond. Drywt		100 mL		
42. Dissolved oxygen		100 mL		Transfer in field
43. Total hardness		100 mL		
44. Others:				

Observation/Remark:

*Remarks:

- Individual sampling can be performed upon request.
- The minimum sampling time for 2019 ZDHC guideline is 6 hours with no more than one hour between discrete samples. Sampling time could be adjusted upon request.
- Scope of ZDHC Guideline Parameters: 1, 2, 14, 23, 27, 37, 38, 40
- Scope of ZDHC Guideline Parameters: 3, 9, 20, 21, 22, 25, 26, 33, 35, 36, 39, 50, 40
- Scope of MWCC Parameter: 1, 18, 20, 22, 25, 26, 37, 38, 39
- Free primary aromatic amine, pesticides, nitrosamine and formaldehyde are not in the scope of ZDHC Guideline, they are tested upon request.
- Refer to CPSD-AN-G00019-STP01, locations with those CPSD test capability inside TCD matrix can perform the combined test.
- Refer to CPSD-AN-G00570-MTHD for additional pretreatment of sulfide if only dissolved sulfide is required to be tested.
- Refer to CPSD-AN-00613-MTHD for preparation of field blank for specific parameters.

Recorded by: 李桂梅 袁耀昆 Date: 3/17/2023
 Comment from factory: 0140106817263

Acknowledgement by factory
 I hereby confirmed that Bureau Veritas has completed the stated sampling activity at captioned date, time and location. All sample(s) is/are collected in designated container(s) and without any observation in leakage. Sample(s) collected by Bureau Veritas is/are stored in portable freezer / fridge that is maintained in 1-6°C

Signature of Factory Representative: 李桂梅 Date: 2023.3.7



Test Report: (9323)065-1791

Report Date: March 17, 2023

Appendix C - On-site Field Data Record Sheet (continued)

<p>FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)</p>	CPSD-AN-00613-DATA 04
	Issue Date:
	Version No.: 17
	Business Line: Analytical

General Data

Laboratory Sample Number: _____

Client Name: _____

Field Contact Person: _____

Project (Facility Name and Address): _____

Sampling Location / Description: _____

Sample Identification: _____

Sample Type: _____

Name of Sampler: _____

Discharge mode: _____

Date of collection: _____

Factory Type: _____

Field Data for Wastewater

Arrival Time: 10:39 Departure Time: 17:28

Field Parameters: pH: _____ Temp: _____ °C Color: light yellow Flow rate: (volume/min) _____

Control No. of field equipment: _____

Factory with effluent treatment plant: _____

Sample matrix: _____

Sampler container number: _____

Recording time	ID	1	2	3	4	5	6	7	8
Time		10:56	11:53	12:51	13:56	14:54	15:51	16:50	
pH:									
Temp (°C):									
Color (visual estimation):		light yellow	light yellow	light yellow	light yellow	light yellow	light yellow	light yellow	
Flow rate (volume/time)									
Volume collected, mL		3000	3000	3000	3000	3000	3000	3000	
Total volume collected		1L							

Remark: Total volume collected must be greater than total of sample size required

Analysis Required and Preservation Method

Tests (ZDHC MRSI Parameters)	Test required (t)	Total of sample size	Type of container	Preservation method		
Combined test or individual test (Remark 4) 1. Phthalate 2. Chlorobenzenes, Chlorotoluene & PAH 3. SCCPs 4. APS		1000 mL total or 1000 mL each	Amber Glass, washed with nitric acid, N 7'40" E 2'14" E 4'30" S 3'36"	Without adding acid Store sample at 2-8°C		
	5. APEOs				100 mL	
	6. Chlorophenols & Cresols				100 mL	
	7. Flame retardant				500 mL	
8. Dyes		10 mL				
9. Glycol		50 mL				
10. *Pesticides		1000 mL				
11. *Nitrosamine		10 mL				
12. Banned Azodyo		2000 mL				
13. *Fine primary aromatic amines		500 mL				
14. Organotin Compounds		500 mL				
15. UV absorbers		100				
16. BPA		2				
17. Preservatives		52				
18. VOC & Halogenated Solvents (Remark 6)		10 mL			PE washed with pesticide grade Acetone	Fill to full container without air gap; acidify to pH 2 with HCl and store sample at 2-8°C
19. PFCA (Remark 6)		2 mL			PE washed with pesticide grade Acetone	Without adding acid Store sample at 2-8°C



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Appendix C - On-site Field Data Record Sheet (continued)

	FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)	CPSD-AN-00613-DATA 04
		Issue Date:
		Version No.: 17
		Business Line: Analytical

Tests (Conventional Parameters)	Test required (Y)	Total of sample size	Type of container	Preservation method
Combined test or individual test (Remark 4) 20. Total suspended solids (TSS) 21. Total dissolved solids (TDS)		2000 mL, total or 2000 mL each	Amber Glass, washed with nitric acid.	Without adding acid Store sample at 2-8°C
22. 5-day Biochemical Oxygen Demand (BOD5)		1000 mL		
23. Colour		100 mL		
24. Heavy Metals except Cr(VI) & Total (Remark 5)	Y	9 mL	PE, washed with nitric acid	Adjust pH 2 with HNO ₃ and store at 2-8°C
25. Cyanide		500 mL	Amber Glass, washed with pesticide grade acetone	Adjust pH 12 with 50% NaOH, add 0.05 ml of 10% Na ₂ S ₂ O ₅ and store sample at 2-8°C
26. Cr(VI)	Y	95 mL		Filter by 0.45µm filter in field, fill to full container without air gap; adjust pH to 5.8-6.8 by adding ammonium buffer. Store sample at 2-8°C
27. Chemical oxygen demand (COD)		150 mL		
28. Phenols		500 mL	Amber Glass, washed with nitric acid	Acidify to pH 2 with H ₂ SO ₄ Store sample at 2-8°C
29. Oil and Grease & Total Hydrocarbon		1000 mL		
30. *Formaldehyde		25 mL		Fill to full container without air gap; acidify to pH 2 with H ₂ SO ₄ and store sample at 2-8°C
31. Sulfide (Remark 5)		50 mL	PE, washed with pesticide grade Acetone;	Fill to full container without air gap; add 2 drops of 2M zinc acetate, adjust pH to 8 with 6M NaOH Store sample at 2-8°C
32. E. coli (Remark 6)		125 mL	PE, clean, sterile, non-reactive	Add 0.1 ml of 10% NaOCl and keep in dark Store sample at 2-8°C
33. Persistent foam		N.A.		Freeze higher than 46 cm (Visual estimation) Yes / No...
34. Sulfite		100 mL	Amber Glass, washed with pesticide grade acetone	Add 1mL of 2.5% BDTA Store sample at 2-8°C
35. Total-N		100 mL		Acidify to pH 2 with H ₂ SO ₄ Store sample at 2-8°C
36. Ammonium-N		500 mL		
37. Adsorbable organically bound halogens (AOX)		100 mL		Acidify to pH 2 with HNO ₃ and store at 2-8°C
38. Acute aquatic toxicity: Luminus Bacteria; Fish Egg; Daphne; Algae;		1000 mL	Amber Glass, washed with nitric acid;	
39. Sulfate		100 mL		Without adding acid Store sample at 2-8°C
40. Chloride		100 mL		
41. Conductivity		150 mL		
42. Dissolved oxygen		N/A		
43. Total Phosphorus		N/A		
44. Others:				
Observation/Remark:				

***Remarks:**

- Individual sampling can be performed upon request.
- The minimum sampling time for 2019 ZDHC guideline is 6 hours with no more than one hour between discrete samples. Sampling time could be adjusted upon request.
- Scope of ZDHC Guideline: Parameter: 1, 2, 12, 14, 22, 31, 37, 38, 43.
- Scope of ZDHC Guideline: Parameter: 1, 2, 12, 14, 22, 26, 29, 31, 33, 35, 36, 39, 40.
- Scope of HACC Parameter: 1, 2, 12, 14, 22, 26, 29, 31, 33, 35.
- Free primary aromatic amine, pesticides, nitroamine and formaldehyde are not in the scope of ZDHC Guideline, they are tested upon request.
- Refer to CPSD-AN-G0019-STIP01, locations with those CPSD test capability inside TCD mark can perform the combined test.
- Refer to CPSD-AN-000570-MTHD for additional pretreatment of sulfide if only dissolved sulfide is required to be tested.
- Refer to CPSD-AN-00613-MTHD for preparation of field blank for specific parameters.

Recorded by:

林松海 李耀星
Full name: 林松海 李耀星

Date: 3/17/2023

Comment from factory:

Acknowledgment by factory

I hereby confirmed that Bureau Veritas has completed the stated sampling activity at captioned date, time and location. All sample(s) were collected in designated container(s) and without any observation in leakage. Sample(s) collected by Bureau Veritas is/are stored in portable freezer / fridge that is maintained in 1-6°C

Signatory of Factory Representative:

林松海
Full Name: 林松海

Date:



Test Report: (9323)065-1791

Report Date: March 17, 2023

Appendix C - On-site Field Data Record Sheet (continued)

FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)		CPSD-AN-00613-DATA 04	
Issue Date:		Version No.: 17	
Business Line: Analytical			
Field Data for Sludge			
Arrival Time:	10:39	Departure Time:	17:28
Field Parameters	pH:	Temp: °C	Flow rate (volume/time) / sludge flux (weight/time):
Control No. of field equipment			
Recording time	ID	1	2
	Time	3	4
pH:		5	6
Temp (°C):		7	8
Flow rate (volume/time) / sludge flux (weight/time)			
Volume collected, mL			
Total volume collected	Remark: Total volume collected must be greater than total of sample size required		

Black. C

Analysis Required and Preservation Method		Yes	No
Factory with effluent treatment plant		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample matrix		Sludge in clarifier (sedimentation tank)	
Sampler container number		T002	
Recording time		17:12	
Tests (MRSL Parameter)	Test required (Y)	Total of sample size	Preservation method
Combined test or Individual test (Remark 3)	1. Phthalate	10g total or 10g each	Add 0.2 mL of 10% Na ₂ S ₂ O ₅ (0.008% WV). Store sample at 4°C
	2. Chlorobenzenes, Chlorophenols & PAHs		
	3. SCCPs		
	4. APS		
5. APEOs	<input checked="" type="checkbox"/>	20 g	Amber Glass, washed with nitric acid
6. Flame retardant		10 g	
7. Dyes		10 g	
8. Glycols		100 g	
9. *Pesticides		20g	
10. Stained Azodyes		20 g	
11. *Free primary aromatic amines		10 g	
12. Chlorophenols & Cresols		20 g	
13. Organotin Compounds		10 g	
14. VOC & Halogenated Solvents (Remark 5)		10 g	
15. PFCs (Remark 5)		10 g	

Handwritten notes and signatures on the right side of the table, including dates like 07/00/16/18 and 3/7/202.

Tests (Conventional Parameters)	Test required (Y)	Total of sample size	Type of container	Preservation method
16. Heavy Metals except Cr(VI) (Remark 5)	<input checked="" type="checkbox"/>	0.2 g	PE, wash with nitric acid	Add to -pH 2 with HNO ₃ . Store sample at 4°C
17. Cr(VI)	<input checked="" type="checkbox"/>	2.5 g	Amber Glass, wash with nitric acid	Fill to full container without any air gap and add and store at 4°C
18. Adsorbable organically bound halogens (AOX)		1 g		
19. Extractable organohalides (EOX)		20 g		
20. Total organic carbon (TOC)		20 g		
21. Cyanide	<input checked="" type="checkbox"/>	50 g	Amber Glass, wash with pesticide grade acetone	Adjust pH to 12-13 with 50% NaOH and store at 4°C
22. Pesticide	<input checked="" type="checkbox"/>	20 g	PE (new), Amber, non-aqueous	Add 0.1 mL of 10% Na ₂ S ₂ O ₅ before in dark. Store sample at 4°C
23. Alkalinity	<input checked="" type="checkbox"/>	20 g	Amber Glass, wash with nitric acid	Add to -pH 2 with HNO ₃ . Store sample at 4°C
24. Hardness Total	<input checked="" type="checkbox"/>	20 g	Amber Glass, wash with nitric acid	Add to -pH 2 with HNO ₃ . Store sample at 4°C



Test Report: (9323)065-1791

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Appendix D - Test methods, reporting limits and CAS numbers

Test Parameters	Unit		CAS No.	LOQ		Test methods
	Wastewater	Sludge		Wastewater	Sludge	
1A) AP and APEOs: including all isomers						
Nonylphenol ethoxylates (NPEO)	µg/L	mg/kg	9016-45-9, 26027-38-3, 37205-87-1, 68412-54-4, 127087-87-0	5	0.4	NP/OP: ISO 18857-2 (modified dichloromethane extraction) or ASTM D7065 (GC-MS or LC-MS(-MS)), OPEO/NPEO (n>2): ASTM D7742 ISO 18857-2
Nonylphenol (NP), mixed isomers			104-40-5, 11066-49-2, 25154-52-3, 84852-15-3			
Octylphenol ethoxylates (OPEO)			9002-93-1, 9036-19-5, 68987-90-6			
Octylphenol (OP), mixed isomers			140-66-9, 1806-26-4, 27193-28-8			
1B) Anti-Microbials & Biocides						
o-Phenylphenol (+salts)	µg/L	-	90-43-7	100	-	USEPA 8270E Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC-MS BS EN 12673-1999
Triclosan			3380-34-5			
Permethrin			Multiple	500		
1C) Chlorinated Paraffins						
Medium-chain chlorinated paraffins (MCCPs) (C14-C17)	µg/L	-	85535-85-9	500	-	EPA 3510 and analyzed by ISO18219-2:2021 Method for MCCP with GC-MS(NCI) or LC-MS/MS
Short-chain chlorinated paraffins (SCCPs) (C10-C13)			85535-84-8	25		
1D) Chlorobenzenes and Chlorotoluenes						
1,2-dichlorobenzene	µg/L	-	95-50-1	0.2	-	USEPA 8260D, 8270E, Purge and Trap, Head Space, Dichloromethane extraction followed by GC-MS
Other isomers of mono-, di, tri-, tetra-, penta-, and hexa- chlorobenzene			Multiple			
Other isomers of mono-, di-, tri-, tetra-, and penta- chlorotoluene		mg/kg	0.2			
1E) Chlorophenols						
2-chlorophenol	µg/L	-	95-57-8	0.5	-	USEPA 8270E Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC-MS, BS EN 12673-1999 the procedure of solvent extraction and derivatization are included
3-chlorophenol			108-43-0			
4-chlorophenol			106-48-9			
2,3-dichlorophenol			576-24-9			
2,4-dichlorophenol			120-83-2			
2,5-dichlorophenol			583-78-8			
2,6-dichlorophenol			87-65-0			
3,4-dichlorophenol			95-77-2			
3,5-dichlorophenol			591-35-5			
2,3,4-trichlorophenol			15950-66-0			
2,3,5-trichlorophenol			933-78-8			
2,3,6-trichlorophenol			933-75-5			
2,4,5-trichlorophenol			95-95-4			
2,4,6-trichlorophenol			88-06-2			
3,4,5-trichlorophenol			609-19-8			
2,3,5,6-tetrachlorophenol			935-95-5			
2,3,4,6-tetrachlorophenol			58-90-2			
2,3,4,5-tetrachlorophenol	4901-51-3					
Pentachlorophenol (PCP)	87-86-5					
1F) Dimethyl Formamide (DMFa)						
Dimethyl formamide; N,N-dimethylformamide (DMFa) ^a	µg/L	-	68-12-2	1000	-	EPA 8015, EPA 8270E

a = Report only for mock leather



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Appendix D - Test methods, reporting limits and CAS numbers (continued)

Test Parameters	Unit		CAS No.	LOQ		Test methods
	Wastewater	Sludge		Wastewater	Sludge	
1G) Dyes - Carcinogenic or Equivalent Concern						
Basic Violet 3 with >0.1% of Michler's Ketone	µg/L	-	548-62-9	500	-	Liquid extraction, LC-MS
C.I. Acid Red 26			3761-53-3			
C.I. Acid Violet 49			1694-09-3			
C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)			2580-56-5			
C.I. Basic Green 4 (Malachite Green Chloride)			569-64-2			
C.I. Basic Green 4 (Malachite Green Oxalate)			2437-29-8			
C.I. Basic Green 4 (Malachite Green)			10309-95-2			
C.I. Basic Red 9			569-61-9			
C.I. Basic Violet 14			632-99-5			
C.I. Direct Black 38			1937-37-7			
C.I. Direct Blue 6			2602-46-2			
C.I. Direct Red 28			573-58-0			
C.I. Disperse Blue 1			2475-45-8			
C.I. Disperse Blue 3			2475-46-9			
Disperse Orange 11	82-28-0					
1H) Dyes - Disperse (Allergenic)						
Disperse Blue 102	µg/L	-	12222-97-8	50	-	Liquid extraction, LC-MS
Disperse Blue 106			12223-01-7			
Disperse Blue 124			61951-51-7			
Disperse Blue 26			3860-63-7			
Disperse Blue 35			12222-75-2			
Disperse Blue 7			56524-77-7			
Disperse Brown 1			3179-90-6			
Disperse Orange 1			23355-64-8			
Disperse Orange 3			2581-69-3			
Disperse Orange 37/59/76			730-40-5			
Disperse Red 1			13301-61-6			
Disperse Red 11			2872-52-8			
Disperse Red 17			2872-48-2			
Disperse Yellow 1			3179-89-3			
Disperse Yellow 3			119-15-3			
Disperse Yellow 39			2832-40-8			
Disperse Yellow 49			12236-29-2			
Disperse Yellow 9	54824-37-2					
Disperse Yellow 9	6373-73-5					
1I) Dyes - Navy Blue Colourant						
Component 1: C39H23Cl-CrN7O12S 2Na	µg/L	-	118685-33-9	500	-	Liquid extraction, LC-MS
Component 2: C46H-30CrN10O20S2 3Na			Not Allocated			



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Appendix D - Test methods, reporting limits and CAS numbers (continued)

Test Parameters	Unit		CAS No.	LOQ		Test methods					
	Wastewater	Sludge		Wastewater	Sludge						
1J) Flame Retardants											
2,2-bis(bromomethyl)-1,3-propanediol (BRMP)			3296-90-0								
Bis(2,3-dibromopropyl) phosphate (BIS)			5412-25-9								
Decabromodiphenyl ether (DecaBDE)			1163-19-5								
Hexabromocyclodecane (HBCDD)			3194-55-6								
Octabromodiphenyl ether (OctaBDE)			32536-52-0								
Pentabromodiphenyl ether (PentaBDE)			32534-81-9								
Polybromobiphenyls (PBB)			59536-65-1								
Tetrabromobisphenol A (TBBPA)			79-94-7								
Tris(2-chloroethyl)phosphite (TCEP)			13674-84-5								
Tris(1-aziridinyl)phosphine oxide (TEPA)			545-55-1								
Tris(1,3-dichloro-isopropyl)phosphate (TDCP)			13674-87-8								
Tris(2-chloroethyl)phosphate (TCEP)			115-96-8								
Tris(2,3-dibromopropyl)-phosphate (TRIS)			126-72-7								
Decabromobiphenyl (DecaBB)			13654-09-6								
Dibromobiphenyls (DiBB)	µg/L	-	Multiple	25		USEPA 8270E, ISO 22032, USEPA 527 and USEPA 8321B Dichloromethane extraction GC-MS or LC-MS(-MS)					
Octabromobiphenyls (OctaBB)											
Dibromopropylether			21850-44-2								
Heptabromodiphenyl ether (HeptaBDE)			68928-80-3								
Hexabromodiphenyl ether (HexaBDE)			36483-60-0								
Monobromobiphenyls (MonoBB)			Multiple								
Monobromodiphenylethers (MonoBDEs)											
Nonabromobiphenyls (NonaBB)			63936-56-1								
Nonabromodiphenyl ether (NonaBDE)											
Tetrabromodiphenyl ether (TetraBDE)							40088-47-9				
Tribromodiphenylethers (TriBDEs)			Multiple								
Boric acid ^b								10043-35-3, 11113-50-1	100		Determined as total boron via ICP
Diboron trioxide ^b								1303-86-2			
Disodium octaborate ^b			12008-41-2								
Disodium tetraborate anhydrous ^b			1303-96-4, 1330-43-4								
Tetraboron disodium heptaoxide, hydrate ^b			12267-73-1								
1K) Glycols / Glycol Ethers											
2-ethoxyethanol	µg/L	-	110-80-5	50		USEPA 8270E Liquid extraction, LC-MS GC-MS					
2-ethoxyethyl acetate			111-15-9								
2-methoxyethanol			109-86-4								
2-methoxyethylacetate			110-49-6								
2-methoxypropylacetate			70657-70-4								
Bis(2-methoxyethyl)-ether			111-96-6								
Ethylene glycol dimethyl ether			110-71-4								
Triethylene glycol dimethyl ether			112-49-2								
1L) Halogenated Solvents											
1,2-dichloroethane	µg/L	-	107-06-2	1		USEPA 8260D Headspace GC-MS or Purge and trap GC-MS					
Methylene chloride			75-09-2								
Tetrachloroethylene			127-18-4								
Trichloroethylene			79-01-6								

b = Limit refer to elemental boron, not the salt.



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Appendix D - Test methods, reporting limits and CAS numbers (continued)

Test Parameters	Unit		CAS No.	LOQ		Test methods
	Wastewater	Sludge		Wastewater	Sludge	
1M) Organotin Compounds						
Dipropyltin compounds (DPT)	µg/L	-	Multiple	0.01	-	ISO 17353 Derivatisation with NaB (C2H5)4 GC-MS
Mono-, di- and tri-butyltin derivatives						
Mono-, di- and tri-methyltin derivatives						
Mono-, di- and tri-octyltin derivatives						
Mono-, di- and tri-phenyltin derivatives						
Tetrabutyltin compounds (TeBT)						
Tripropyltin Compounds (TPT)						
Tetraoctyltin compounds (TeOT)						
Tricyclohexyltin (TCyHT)						
Tetraethyltin Compounds (TeET)						
1N) Other/Miscellaneous Chemicals						
AEEA [2-(2-aminoethylamino)ethanol]	µg/L	-	111-41-1	500	-	Liquid extraction, LC-MSMS
Bisphenol A			80-05-7	10		
Thiourea			62-56-6	50		Liquid extraction, LC-MS
Quinoline			91-22-5	50		
Borate, zinc salt ^c			12767-90-7	100		Determine as total boron and total zinc via ICP
Silica (Used in sand blasting) ^d			14464-46-1	NA		Not a ZDHC Wastewater parameter
1O) Perfluorinated and Polyfluorinated Chemicals (PFCs)						
Perfluorooctane sulfonate (PFOS) and related substances, Perfluorooctanoic acid (PFOA)	µg/L	-	Multiple	0.01	-	PFCs: EPA 537:2020 FTOH: BS EN 12673-1999, EPA 8270 PFCs: LC-MSMS FTOH: GC-MS Derivatisation with acetic anhydride followed by GC-MS
Perfluorooctanoic acid (PFOA) related substances				1		
1P) Phthalates - including all other esters of ortho-phthalic acid						
1,2-benzenedicarboxylic acid, di-C6-8 branched and linear alkyl esters, C7-rich (DIHP)	µg/L	-	71888-89-6, 84777-06-0	10	-	USEPA 8270E, ISO 18856 Dichloromethane extraction GC-MS
1,2-benzenedicarboxylic acid, di-C7-11 branched and linear alkyl esters (DHNUP)			68515-42-4, 68515-50-4			
Bis(2-methoxyethyl)phthalate (DMEP)			117-82-8			
Butyl benzyl phthalate (BBP)			85-68-7			
Di-cyclohexyl phthalate (DCHP)			84-61-7			
Di-iso-decyl phthalate (DIDP)			26761-40-0			
Di-iso-octyl phthalate (DIOP)			27554-26-3			
Di-iso-butyl phthalate (DIBP)			84-69-5			
Di-iso-nonyl phthalate (DINP)			28553-12-0			
Di-n-hexyl phthalate (DnHP)			84-75-3			
Di-n-octyl phthalate (DNOP)			117-84-0			
Di-n-pentylphthalates			131-18-0			
Di-n-propyl phthalate (DPRP)			131-16-8			
Di(ethylhexyl) phthalate (DEHP)			117-81-7			
Dibutyl phthalate (DBP)			84-74-2			
Diethyl phthalate (DEP)			84-66-2			
Diisopentylphthalates			605-50-5			
Dinonyl phthalate (DNP)			84-76-4			

c = Limit refers to elemental boron and/or zinc, not the salt.

d = Not required to test this parameter as this is related to sand blasting



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Appendix D - Test methods, reporting limits and CAS numbers (continued)

Test Parameters	Unit		CAS No.	LOQ		Test methods				
	Wastewater	Sludge		Wastewater	Sludge					
1Q) Polycyclic Aromatic Hydrocarbons (PAHs)										
Acenaphthene	µg/L	mg/kg	83-32-9	1	0.2	USEPA 8270E DIN 38407-39 Solvent extraction GC-MS				
Acenaphthylene			208-96-8							
Anthracene			120-12-7							
Benzo[a]anthracene			56-55-3							
Benzo[a]pyrene (BaP)			50-32-8							
Benzo[b]fluoranthene			205-99-2							
Benzo[e]pyrene			192-97-2							
Benzo[ghi]perylene			191-24-2							
Benzo[j]fluoranthene			205-82-3							
Benzo[k]fluoranthene			207-08-9							
Chrysene			218-01-9							
Dibenz[a,h]anthracene			53-70-3							
Fluoranthene			206-44-0							
Fluorene			86-73-7							
Indeno[1,2,3-cd]pyrene			193-39-5							
Naphthalene			91-20-3							
Phenanthrene	85-01-8									
Pyrene	129-00-0									
1R) Restricted Aromatic Amines (Cleavable from Azo-colourants)										
2-naphthylamine	µg/L	-	91-59-8	0.1	-	Reduction step with sodium dithionite, solvent extraction EPA 8270				
2-naphthylammoniumacetate			553-00-4							
2,4-xylidine			95-68-1							
2,4,5-trimethylaniline			137-17-7							
2,4,5-trimethylaniline hydrochloride			21436-97-5							
2,6-xylidine			87-62-7							
3,3'-dichlorobenzidine			91-94-1							
3,3-dimethoxybenzidine			119-90-4							
4-aminoazobenzene			60-09-3							
4-aminodiphenyl			92-67-1							
4-chloro-o-toluidine			95-69-2							
4-chloro-o-toluidinium chloride			3165-93-3							
4-chloroaniline			106-47-8							
4-methoxy-m-phenylene diammonium sulphate;			39156-41-7							
2,4-diaminoanisole sulphate			615-05-4							
4-methoxy-m-phenylenediamine			95-80-7							
4-methyl-m-phenylenediamine			101-14-4							
4,4-methylene-bis-(2-chloro-aniline)			838-88-0							
4,4-methylenedi-o-toluidine			101-77-9							
4,4-methylenedianiline			101-80-4							
4,4-thiodianiline			139-65-1							
5-nitro-o-toluidine			99-55-8							
6-methoxy-m-toluidine			120-71-8							
Benzidine			92-87-5							
o-aminoazotoluene			97-56-3							
o-anisidine			90-04-0							
o-toluidine			95-53-4							
										Reduction step with sodium dithionite, solvent extraction EPA 8270E and ISO 14362-1 GC/MS and LC/MS/MS



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Appendix D - Test methods, reporting limits and CAS numbers (continued)

Test Parameters	Unit		CAS No.	LOQ		Test methods
	Wastewater	Sludge		Wastewater	Sludge	
1S) UV Absorbers						
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	µg/L	-	36437-37-3	100	-	USEPA 8270 ISO 22032, USEPA 527 and USEPA 8321B. Dichloromethane extraction GC-MS or LC-MS(-MS)
2-(2H-benzotriazol-2-yl)-4,6-diterpentyphenol (UV-328)			25973-55-1			
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)			3846-71-7			
2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)			3864-99-1			
1T) Volatile Organic Compounds (VOC)						
Benzene	µg/L	-	71-43-2	1	-	ISO 11423-1 Headspace or Purge and trap GC-MS USEPA 8260D Add ISO 20595 Static headspace for determination
m-cresol			108-39-4			
o-cresol			95-48-7			
p-cresol			106-44-5			
Xylene			1330-20-7			
Toluene ^a	108-88-3					ISO 11423-1 Headspace or Purge and trap GC-MS USEPA 8260D HJ 1067 or EPA 8260D or ISO 11423-1

a = Report only for mock leather



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Appendix D - Test methods, reporting limits and CAS numbers (continued)

Test Parameters	Unit		CAS No.	LOQ		Test methods
	Wastewater & Leachate	Sludge		Wastewater	Sludge	
Heavy Metals						
Antimony	mg/L	mg/kg	7440-36-0	0.01	5	With reference to EPA 3015A, 6020A, 200.8, 6020B, 3051A and ISO 17294-2 and analyzed by ICP-MS With reference to EPA 1311 and HJ/T 300 for leachate
Chromium (VI)			18540-29-9	0.001	20	
Barium			7440-39-3	1	200	
Selenium			7782-49-2	1	5	
Tin			7440-31-5	1	-	
Arsenic			7440-38-2	0.005	5	
Total Chromium			7440-47-3	0.05	50	
Cobalt			7440-48-4	0.01	400	
Cadmium			7440-43-9	0.01	1	
Copper			7440-50-8	0.25	50	
Lead			7439-92-1	0.01	5	
Nickel			7440-02-0	0.05	20	
Silver			7440-22-4	0.005	50	
Zinc			7440-66-6	0.5	400	
Mercury			7439-97-6	0.001	1	
Conventional						
pH	pH	pH		6 - 9		With reference to ISO 10523, EPA 150.2, APHA 4500-H+
Temperature difference	°C			-		USEPA 170.1 or GB/T 13195
E.coli	MPN/100-ml			126		-
Colour	m ⁻¹			2;1;1		ISO 7887 (Method A and B)
Persistent Foam	-			-		-
Wastewater Flowrate	m ³ /day			-		-
Ammonium-Nitrogen	mg/L			0.5		ISO 11732, ISO 7150, USEPA 350.1, APHA 4500 NH ³ -N, HJ 535 or HJ 536
AOX	mg/L			0.1		ISO 9562, EN ISO 9563, USEPA 1650, HJ.T 83-2001
Biochemical Oxygen Demand 5-days concentration (BOD ₅)	mg/L			8		ISO 5815-1 & -2, EN1899-1, USEPA 405.1, APHA 5210B or HJ 505
Chemical Oxygen Demand (COD)	mg/L			40		ISO 6060, USEPA 410.4, APHA 5220D or GB/T 11914
Dissolved Oxygen (DO)	mg/L			-		ISO 5814, EPA 360.1 or HJ 506
Oil & Grease	mg/L			0.5		ISO 9377-2, USEPA 1664 or HJ 637
Total Phenols / Phenol Index	mg/L			0.001		ISO 14402, APHA 5530B, C, D or HJ 503
Total Chlorine	mg/L			0.1		ISO 7393-2, EPA 330.5 or HJ 586
Total Dissolved Solids (TDS)	mg/L			5		APHA 2540C, GB/T 5750.4
Total Nitrogen	mg/L			5		ISO 5663, ISO 29411, USEPA 351.2, APHA 4500P-J, APHA 4500N-C/ HJ 636 or GB 11891
Total Phosphorus	mg/L			0.1		ISO 11885, ISO 6878, USEPA 365.4, APHA 4500P-J or GB/T 11893
Total Suspended Solids (TSS)	mg/L			5		ISO 11923, USEPA 160.2, APHA 2540D or GB/T 11901
% Solids	-	%				USEPA 160.3, HJ 613
Paint Filter Test	-	-				EPA SW-846 or EPA 9095B
Fecal Coliform	-	bacteria/100m				EPA 1681



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Appendix D - Test methods, reporting limits and CAS numbers (continued)

Test Parameters	Unit		CAS No.	LOQ		Test methods
	Wastewater & Leachate	Sludge		Wastewater	Sludge	
Anions						
Chloride	mg/L	-	-	-	-	ISO 10304-1, ISO 15923-1, USEPA 300, HJ 84-2016, IS 3025 (part 32)
Cyanide, total		mg/kg		0.05	20	ISO 6703-1 & 2, ISO 14403-1 & 2, USEPA 335.2, APAH 4500-CN or HJ 484
Sulfate		-		-	-	ISO 10304-1, ISO 15923-1, USEPA 300, HJ 84-2016, IS 3025 (part 24)
Sulfide		-		0.01	-	ISO 10530, SM 4500-S2-D, E, G or I, GB/T 16489 or IS 3025 (part 29), HJ 1226-2021
Sulfite		-		0.2	-	ISO 10304-3, SM 4500-SO32-C or HJ 84-2016

END OF REPORT