



Test Report: (7223)258-0072

Report Date: October 17, 2023

Factory Company Name: NURYILDIZ TEKSTIL SANAYI VE TICARET A.S.

Factory Address: VELIMESE ORGANIZE SAN. BOLGESI, 6. YANYOL CAD. NO: 46/1 59880 ERGENE / ÇORLU /TEKIRDAG /TURKEY

Sampling Method & Description:	I001) Untreated wastewater	Composite	Black Liquid
	I002) Effluent	Composite	Yellow, Light Yellow Liquid
	I003) Sludge	Grab	Black Solid
	I004) Leachate	-	Black Solid
	I005) Incoming water	-	Not tested

Discharge Type: **Direct Discharge**

On-site ETP / Pretreatment: Yes Homgenization Tank & Holding Time: No

Discharge Destination: ERGENE RIVER

Permit Validation Date: 05.10.2024

Conventional, Anions & Heavy Metals Overall Category: Exceed Foundational Limit ZDHC MRSL Parameters: Not detected

Sludge Parameters: Exceed ZDHC Threshold Value

Sample Pick Up Date: September 26, 2023 Sampler Number: C74D106817592

Test Period: September 27, 2023 to October 16, 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 D		
Type of Sludge:	Solid		

General enquiry and invoicing:
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Report reviewed by:

Report approved by:

Hasan Altıngül, Operation Manager - CS & Support

Sabiha Yazici, SCM Technical Lead

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Bureau Veritas Consumer Products Services, Inc.

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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	ND		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	Meet	NR
Chromium (VI)		Meet	NR
Barium		Refer to result	NR
Selenium		Refer to result	NR
Tin		Refer to result	NR
Arsenic		Meet	NR
Total Chromium		Meet	NR
Cobalt		Meet	NR
Cadmium		Meet	NR
Copper		Meet	NR
Lead		Meet	NR
Nickel		Meet	NR
Silver		Meet	NR
Zinc		Meet	NR
Mercury		Meet	NR
pH		Meet	NR
Temperature difference		NA	
E.coli		Not Meet	
Colour		Meet	
Persistent Foam		Meet	
Wastewater Flowrate		Refer to result	
Ammonium-Nitrogen		Meet	
AOX		Meet	
BOD ₅		Meet	
COD		Meet	
DO		Refer to result	
Oil & Grease		Not Meet	
Total Phenols / Phenol Index		Meet	
Total Chlorine		Refer to result	
TDS		Refer to result	
Total Nitrogen		Not Meet	
Total Phosphorus		Meet	
TSS	Meet		
Chloride	Refer to result		
Cyanide, total	Meet		
Sulfate	Refer to result		
Sulfide	Meet		
Sulfite	Meet		



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Result Summary - ZDHC Sludge Parameters

Test Items	Sludge	Leachate
Antimony	D	Refer to result
Arsenic	D	Refer to result
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	D	Refer to result
Zinc	ND	NR
Chromium (VI)	ND	NR
Mercury	D	Refer to result
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	ND	
PAHs	ND	
Chlorotoluenes	ND	

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				NR			
4-chlorophenol	ND				NR			
2,3-dichlorophenol	ND				NR			
2,4-dichlorophenol	ND				NR			
2,5-dichlorophenol	ND				NR			
2,6-dichlorophenol	ND				NR			
3,4-dichlorophenol	ND				NR			
3,5-dichlorophenol	ND				NR			
2,3,4-trichlorophenol	ND				NR			
2,3,5-trichlorophenol	ND				NR			
2,3,6-trichlorophenol	ND				NR			
2,4,5-trichlorophenol	ND				NR			
2,4,6-trichlorophenol	ND				NR			
3,4,5-trichlorophenol	ND				NR			
2,3,5,6-tetrachlorophenol	ND				NR			
2,3,4,6-tetrachlorophenol	ND				NR			
2,3,4,5-tetrachlorophenol	ND	NR						
Pentachlorophenol (PCP)	ND	NR						
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

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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 [#] -
1G) Dyes - Carcinogenic or Equivalent Concern								
Basic violet 3 with >0.1% of Michler's Ketone	ND				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	NR	NR	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	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	NR	NR	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	500	-	-
Component 2: C46H-30CrN10O20S2 3Na	ND	NR	NR	NR	NR			

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Test Result - ZDHC MRSL Parameters (continued)

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	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													
Thiourea	ND													
Quinoline	ND													
Borate, zinc salt ^c	ND													
Silica (used in sand blasting) ^d	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													
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													
Bis(2-methoxyethyl)phthalate (DMEP)	ND													
Butyl benzyl phthalate (BBP)	ND													
Di-cyclohexyl phthalate (DCHP)	ND													
Di-iso-decyl phthalate (DIDP)	ND													
Di-iso-octyl phthalate (DIOP)	ND													
Di-iso-butyl phthalate (DIBP)	ND													
Di-iso-nonyl phthalate (DINP)	ND													
Di-n-hexyl phthalate (DnHP)	ND													
Di-n-octyl phthalate (DNOP)	ND													
Di-n-pentylphthalates	ND													
Di-n-propyl phthalate (DPRP)	ND													
Di(ethylhexyl) phthalate (DEHP)	ND													
Dibutyl phthalate (DBP)	ND													
Diethyl phthalate (DEP)	ND													
Diisopentylphthalates	ND													
Dinonyl phthalate (DNP)	ND													

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 (µg/L)	I002 (µg/L)	I003 [#] (mg/kg)	I004 [#] (mg/L)	I005 (µg/L)	Wastewater (µg/L)	Sludge [#] (mg/kg)	Leachate [#] -
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			
Benzdine	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 (µg/L)	I002 (µg/L)	I003 [#] (mg/kg)	I004 [#] (mg/L)	I005 (µg/L)	Wastewater (µg/L)	Sludge [#] (mg/kg)	Leachate [#] -
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	0.08	17	ND	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	-	50
Barium	mg/L	mg/kg	mg/L		0.1	ND	NR	NR	Sample & Report	-	-	-	700
Selenium	mg/L	mg/kg	mg/L		ND	ND	NR	NR		-	-	-	10
Tin	mg/L	-	-		ND	NR	NR	NR		-	-	-	-
Arsenic	mg/L	mg/kg	mg/L		0.02	27	ND	NR	0,05	0,01	0,005	-	10
Total Chromium	mg/L	mg/kg	mg/L		0.07	118	ND	NR	0,2	0,1	0,05	-	100
Cobalt	mg/L	mg/kg	mg/L		ND	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		ND	197	NR	NR	1	0,5	0,25	-	200
Lead	mg/L	mg/kg	mg/L		ND	5.2	NR	NR	0,1	0,05	0,01	-	10
Nickel	mg/L	mg/kg	mg/L		ND	ND	NR	NR	0,2	0,1	0,05	-	70
Silver	mg/L	mg/kg	mg/L		ND	910	NR	NR	0,1	0,05	0,005	-	100
Zinc	mg/L	mg/kg	mg/L		ND	910	NR	NR	5	1	0,5	-	1000
Mercury	mg/L	mg/kg	mg/L		0.001	1.05	ND	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				7.62	7,03					6 - 9			
Temparture difference	Δ °C				NA*						15	10	5	-
E.coli	MPN/100-ml				1600						126			-
Colour (436 nm)	m ⁻¹				5.7						7	5	2	-
Colour (525 nm)	m ⁻¹				3.7						5	3	1	-
Colour (620 nm)	m ⁻¹				2.3						3	2	1	-
Persistent Foam	-				Absent						No indication of Persistent Foam			-
Wastewater Flowrate	m ³ /day				996.24						-			-
Ammonium-Nitrogen	mg/L				ND						10	1	0,5	-
AOX	mg/L				2.4						3	0,5	0,1	-
BOD ₅	mg/L	-			10.9	NR					30	15	8	-
COD	mg/L			NR	36.5		NR	NR			150	80	40	-
DO	mg/L				7.66						Sample & Report			-
Oil & Grease	mg/L				14.8						10	2	0,5	-
Total Phenols / Phenol Index	mg/L				0.27						0,5	0,01	0,001	-
Total Chlorine	mg/L				0.42						Sample & Report			-
TDS	mg/L				3313						-			-
Total Nitrogen	mg/L				29.22						20	10	5	-
Total Phosphorus	mg/L				0.4						3	0,5	0,1	-
TSS	mg/L				16						50	15	5	-
% Solids	-	%				4, 57					-			-
Paint Filter Test	-	-			NR	Pass					-			-
Fecal Coliform	-	MPN/g				4					-			-
ZDHC Anions														
Chloride	mg/L	-	-		992	NR					Sample & Report			-
Cyanide, total	mg/L	mg/kg	-		ND	ND					0,2	0,1	0,05	-
Sulfate	mg/L			NR	996		NR	NR			Sample & Report			-
Sulfide	mg/L	-	-		ND	NR					0,5	0,5	0,01	-
Sulfite	mg/L				ND						2	0,5	0,2	-

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

* The receiving ambient temperature was not measured because it was not accessible.



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Appendix A - contract limit with CETP

 <p style="text-align: center;">T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI ÇED İzin ve Denetim Genel Müdürlüğü</p> <p style="text-align: center;">GEÇİCİ FAALİYET BELGESİ</p>	
Belge No	: 223377846.1.1
Başlangıç Tarihi	: 05.10.2023
Bitiş Tarihi	: 05.10.2024
Tesis Adı	: NURYILDIZ TEKSTİL SAN.VE TİC.A.Ş.-ÇORLU FABRİKA ŞUBESİ
Tesis Adresi	: Velimeşe OSB Mahallesi 6.Yanyol Cadde No:46/1 Ergene/TEKİRDAĞ
İşletmenin Vergi No	: 6320048000
Çevre İzin ve Lisans Konusu	: Hava Emisyon,Athksu Deşarjı
<p>Yukarıda adı ve açık adresi belirtilen tesise Çevre İzin ve Lisans Yönetmeliği kapsamında GEÇİCİ FAALİYET BELGESİ verilmiş olup 03.10.2023 tarihli ve 58003700-150/E.3262 sayılı yazı ile birlikte geçerlidir. Aynı kullanılmaz.</p>	
<p> e-İmzalıdır Cihan TATAR Bakan a. Çevresel Etki Değerlendirmesi, İzin ve Denetim Genel Müdürü</p>	
<p>5070 sayılı Elektronik İmza Kanunu gereği bu belge elektronik imza ile imzalanmıştır.</p>	



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Appendix B - Sample Photos

I001) Sampling point

N/S 41° 12' 31.10" E/W 27° 50' 40.76"



I001) Sampling location surrounding

N/S 41° 12' 31.10" E/W 27° 50' 40.76"



I001) Labelled sample bottles



I001) Sample for phthalate test

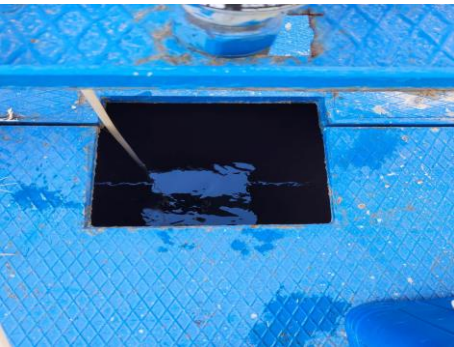


I001) Sample packaging



I002) Sampling point

N/S 41° 12' 31.10" E/W 27° 50' 40.76"



I002) Sampling location surrounding

N/S 41° 12' 31.10" E/W 27° 50' 40.76"



I002) Labelled sample bottles



I002) pH measurement



I002) Sample packaging





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Appendix B - Sample Photos (continued)

I003) Sampling point

N/S 41° 12' 31.10" E/W 27° 50' 40.76"



I003) Sampling location surrounding

N/S 41° 12' 31.10" E/W 27° 50' 40.76"



I003) Labelled sample bottles



I003) Sample packaging





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Appendix C - On-site Field Data Record Sheet

FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)		CPSC-AN-00613-DATA 04						
		Issue Date:						
		Version No.: 18						
		Business Line: Analytical						
General Data								
Laboratory Sample Number:	72232580072							
Client Name:	NURYILDIZ TEKSTİL SANAYİ VE TİCARET A.Ş.							
Field Contact Person:	TUĞBA AKFA Phone No: +90252746839							
Project (Facility Name and Address):	VELMESE ORGANİZE SAN. BÖLGESİ 6. YANIL CAD. NO: 401 5950 ERGENE / TEKİRDAĞ TURKEY							
Sample Identification:	Zero discharge with sampling plan							
Sample Type:	Composite Sample Grab sample (Please delete as appropriate)							
Discharge mode:	Direct discharge to environment (Specify destination: River, Sea, Stream...) OR indirect discharge to sewage treatment plant							
Date of collection:	26.08.2023							
Factory Type:	Dyeing / Printing / Washing / Finishing / Others (please specify):							
*Note: It would be selected more than one								
Sampling Collection Information								
Sampling Location / Description:	BEFORE TREATMENT							
Sampling Device Description/ Owner:								
Sampling mode:	Substrate (Manual)							
Sampler Information								
Sampler Name/ Email:	Ali Osman ALBAYRAK							
Sampler ZDHC Accredited no.:	C7410106817532							
ZDHC Composite Sample Code:								
Field Data for Wastewater								
Actual Time:	Departure Time:							
Flow Parameters:	pH: ---	Temp: --- °C	Color: ---					
Control No. of field equipment:	Flow rate: --- (volume/time)							
Factory with effluent treatment plant:	Yes							
Sample matrix:	X Incoming water (if required)							
Sampler container number:	Wastewater before treatment							
	Wastewater after treatment - water at discharge point							
ZDHC Wastewater Flow Device Dimensions								
Measurement (mm)	Meter	Rise (C)	Flange (J)					
Orifice	NA	NA	NA					
Orbit	NA	NA	NA					
ZDHC Wastewater Sampling Field Testing QA/QC								
Parameter	Laboratory control sample (LCS) Known	LCS Measured	Accuracy %					
pH								
Total Chlorine								
ZDHC Wastewater Sample Collection Field Test Measurements								
Sampling Time (Hours)	0	1	2	3	4	5	6	Average (Report with lab data)
Recording time	ID							
Temp (°C):	Time							
	10:50	11:50	12:50	13:50	14:50	15:50	16:50	
	34.8	35.8	36.5	37.1	37.4	37.7	37.9	
	Wastewater Discharge							
	Receiving Water							
pH	9.73	9.34	10.14	10.02	9.34	9.30	9.75	
Dissolved Oxygen (mg/L):								
Total Chlorine (mg/L):								
Persistent Foam (Yes/No):								
Wastewater Flow rate (L/min):	(m ³ /h)							
	47.65	48.73	48.23	48.84	49.15	50.00	51.21	
Alternate measured flow:	Depth (mm)							
	Velocity (cm/sec)							
Color (visual estimation):	Black							
Volume collected, mL:	Black							
Total volume collected:	Black							
*Remark: Total volume collected must be greater than total of sample size required								

FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)		CPSC-AN-00613-DATA 04	
		Issue Date:	
		Version No.: 18	
		Business Line: Analytical	
Analysis Required and Preservation Method			
Tests (ZDHC MRLS Parameters)	Test required (Y)	Total of sample size	Preservation method (Store sample at 2-8°C)
Combined test or Individual test (Remark 4)	1. Phenolate	√	1000 mL total or 1000 mL each
	2. Chlorobenzenes, Chlorotoluenes & PAH	√	
	3. SCCPs	√	
	4. APS	√	
5. APEDs	√	100 mL	Antibor Glass, washed with nitric acid, Without adding acid
6. Chlorophenols & Cresols	√	100 mL	
7. Flame retardant	√	500 mL	
8. Dyes	√	10 mL	
9. Glycol	√	50 mL	
10. *Pesticides		1000 mL	
11. *Nitrosamines		10 mL	
12. Sulfonated Acrylics	√	2000 mL	
13. *Free primary aromatic amines		500 mL	
14. Organotin Compounds	√	500 mL	
15. UV absorbers	√	100	
16. BPA	√	3	
17. Preservatives	√	52	
18. VOC & Halogenated Solvents (Remark 5)	√	10 mL	
19. PFCs (Remark 5)	√	2 mL	
			PE, washed with pesticide grade Acetone
			Fill to full container without air gap; acidity to pH 2 with HCl
			Without adding acid



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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-00513-DATA 04 Issue Date: _____ Version No.: 15 Business Line: Analytical
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General Data

Laboratory Sample Number: 72232580072

Client Name: MURYELI DIZ TEKSTIL SANAYI VE TICARET A.S.

Field Contact Person: TUGBA AKTA Phone No: +902926744909

Project (Facility Name and Address): VELMESE ORGANIZE SAN. BOLGESI 6. YANYOL CAD. NO. 46/1 59890 ERGENE / TEKIRDAG Turkey

Sample Identification: Zero discharge with sampling plan

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

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

Date of collection: 26.09.2023

Factory Type: Dyeing / Printing / Washing / Finishing / Others (please specify): _____
*Note: It would be selected more than one

Sampling Collection Information

Sampling Location / Description: AFTER TREATMENT

Sampling Device Description / Owner: _____

Sampling mode: Autosampler Manual

Sampler Information

Sampler Name / Email: Ali Osman ALBAYRAK

Sampler ZDHC Accredited no.: C740106817592

ZDHC Composite Sample Code: _____

Field Data for Wastewater

Arrival Time: _____	Departure Time: _____			
Field Parameters: pH: <u>—</u> Temp: <u>—</u> °C Color: <u>—</u> Flow rate: <u>—</u> (volume/min)	Control No. of field equipment: _____			
Factory with effluent treatment plant: Yes _____ No _____				
Sample matrix: _____	<input type="checkbox"/> Incoming water (if required) <input type="checkbox"/> Wastewater before treatment <input checked="" type="checkbox"/> Wastewater after treatment – water at discharge point			
Sampler container number: _____				
ZDHC Wastewater Flow Device Dimensions				
Measurement (cm)	Meter	Pipe (O)	Fume (L)	Wet (V)
Diameter	NA			
Depth	NA	NA	NA	

ZDHC Wastewater Sampling Field Testing QA/QC

Parameter	Laboratory control sample (LCS) Known	LCS Measured	Accuracy %
pH			
Total Chlorine			

ZDHC Wastewater Sample Collection Field Test Measurements

Sampling Time (Hours)	ID	0	1	2	3	4	5	6	Average (Report with last data)
		Recording time	11:00	12:00	13:00	14:00	15:00	16:00	
Temp (°C)	Wastewater Discharge	26.4	27.2	27.0	27.1	26.3	26.5	25.9	
	Receiving Water	—	—	—	—	—	—	—	
pH		7.62	7.69	7.73	7.53	7.74	7.40	7.68	
Dissolved Oxygen (mg/L)		—	—	—	—	—	—	—	
Total Chlorine (mg/L)		—	—	—	—	—	—	—	
Persistent Foam (Yes/No)		No	No	No	No	No	No	No	
Wastewater Flow meter (L/min) (m ³ /h)		37.2	39.3	38.2	41.0	43.9	44.9	46.1	
Alternate measured Flow	Depth (cm)	—	—	—	—	—	—	—	
	Velocity (cm/sec)	—	—	—	—	—	—	—	
Color (visual estimation)		Yellow	Yellow	Light Yellow	L. Yellow	L. Yellow	L. Yellow	L. Yellow	
Volume collected, mL		—	—	—	—	—	—	—	
Total volume collected		—	Remark: Total volume collected must be greater than total of sample size required						



Test Report: (7223)258-0072

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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.: 18 Business Line: Analytical
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Tests (Conventional Parameters)	Test required (v)	Total of sample size	Type of container	Preservation method (Store sample at 2-8°C)
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
	√			
22. 5-day Biochemical Oxygen Demand (BOD5)	√	1000 mL		
23. Colour	√	100 mL		
24. Heavy Metals except Cr(VI) & Total-P (Remark 6)	√	2 mL	PE, washed with nitric acid	Acidify to pH 2 with HNO ₃
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
26. Cr(VI)	√	95 mL		Filter by 0.45µm filter in field. Fill to full container without air gas; adjust pH to 8.0-9.5 by adding ammonium buffer
27. Chemical oxygen demand (COD)	√	150 mL	Amber Glass; washed with nitric acid	Acidify to pH 2 with H ₂ SO ₄
28. Phenols	√	500 mL		
29. Oil and Grease & Total Hydrocarbon	√	1000 mL		
30. *Formaldehyde	√	25 mL		Fill to full container without air gas; acidify to pH 2 with H ₂ SO ₄
31. Sulfide (Remark 5)	√	50 mL	PE, washed with pesticide grade Acetone.	Fill to full container without air gas; add 2 drops of 2M zinc acetate, adjust pH to 9 with 6M NaOH
32. E. coli (Remark 6)	√	125 mL	PE, clean, sterile, non-reactive	Add 0.1 ml of 10% Na2S2O5, keep in dark
33. Sulfite	√	100 mL	Amber Glass, washed with pesticide grade acetone	Add 1ml. of 2.5% EDTA
34. Total-N	√	100 mL	Amber Glass; washed with nitric acid.	Acidify to pH 2 with H ₂ SO ₄
35. Ammonium-N	√	500 mL		
36. Adsorbable organically bound halogens (AOX)	√	100 mL		
37. Acute aquatic toxicity; Luminescence; Fish Egg; Daphnia; Algae;	√	1000 mL		
38. Sulfate	√	100 mL		Without adding acid
39. Chloride	√	100 mL		
40. 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 1-6, 12, 14-25, 31-35, 36, 39
 Scope of synthetic leather industry: Parameter 1-9, 12, 14-24, 26-29, 31, 32, 34, 35, 38, 39
 Scope of MMCF: Parameter 5, 18, 20, 22-24, 26-28, 31, 34-37
 Free primary aromatic amines, pesticides, nitrosamine and formaldehyde are not in the scope of ZDHC Guideline, they are tested upon request.
 - Refer to CPSD-AN-000018-STIP01, locations with those CPSD test capability inside TCD matrix 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: Ali Osman ALBAYRAK Date: 26.09.2023
 Full Name: _____
 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) 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: Tugba AKTA Date: 26.09.2023
 Full Name: _____





Test Report: (7223)258-0072

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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.: 16			
	Business Line: Analytical			

Field Data for Studies

Arrival Time:			Departure Time:						
Field Parameters	pH: —	Temp: — °C	Flow rate (volume/time) / sludge flux (weight/time): —						
Control No. of test equipment:									
Sampling Time (Hours):		0	1	2	3	4	5	6	Average (Report with lab data)
Recording time	ID								—
	Time	12:30	—	—	—	—	—	—	—
pH:	—	—	—	—	—	—	—	—	—
Temp (°C):	—	—	—	—	—	—	—	—	—
Flow rate (volume/time) / sludge flux (weight/time)	—	—	—	—	—	—	—	—	—
Volume collected, mL	Black	—	—	—	—	—	—	—	—
Total volume collected	—	Remark: Total volume collected must be greater than total of sample size required							

Analysis Required and Preservation Method


Factory with effluent treatment plant		Yes		No			
Sample matrix		Sludge in clarifier (sedimentation tank)					
Sampler container number							
Recording time							
Tests (MRSL Parameter)	Test required (Y)	Total of sample size	Type of container	Preservation method (Store sample at 2-8°C)			
Combined test of individual test (Remark 3)	1. Phthalate	10g total or 10g each	Amber Glass, washed with nitric acid	Add 0.2 mL of 10% Na ₂ S ₂ O ₅ (0.008% WW)			
	2. Chlorobenzenes, Chlorotoluene & PAHs					✓	
	3. SCCPs						
	4. APS					✓	
5. APEDs	✓	20 g					
6. Flame retardant		10 g					
7. Dyes		10 g					
8. Glycols		100 g					
9. *Pesticides		20g					
10. Banned Azodyes		20 g					
11. *Free primary aromatic amines		10 g					
12. Chlorophenols & Cresols		20 g					Acidify to -pH 2 with H ₂ SO ₄ . Add 0.02 mL of 10% Na ₂ S ₂ O ₅ (0.008% WW)
13. Organotin Compounds		10 g					Fill to full container without any air gap and acid add
14. VOC & Halogenated Solvents (Remark 5)		10 g					Fill to full bottle without any air gap. Acidify to -pH 2 with HCl
15. PPCs (Remark 5)		10 g				PE, wash with pesticide grade acetone	Add 0.02 mL of 10% Na ₂ S ₂ O ₅ (0.008% WW)
Tests (Conventional Parameters)	Test required (Y)	Total of sample size	Type of container	Preservation method (Store sample at 2-8°C)			
16. Heavy Metals except Cr(VI) (Remark 5)	✓	0.2 g	PE, wash with nitric acid	Acidify to -pH 2 with HNO ₃			
17. Cr(VI)	✓	2.5 g					
18. Adsorbable organically bound halogens (AOX)		1 g	Amber Glass, wash with nitric acid	Fill to full container without any air gap and acid add			
19. Extractable organohalides (EOX)		20 g					
20. Total organic carbon (TOC)		20 g					
21. Cyanide	✓	50 g	Amber Glass, wash with pesticide grade acetone	Adjust pH to 12-13 with 50% NaOH			
22. Fecal Coliform	✓	20 g	PE, clean, sterile, non-reactive	Add 0.1 ml of 10% Na ₂ S ₂ O ₃ . keep in dark			
23. % Solids	✓	20 g	Amber Glass, wash with nitric acid	Acidify to -pH 2 with HNO ₃			
24. Paint Filter Test	✓	20 g					



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

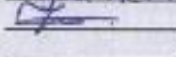

	FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)	CPSD-AN-00613-DATA 04
		Issue Date:
		Version No.: 10
		Business Line: Analytical

***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, 4, 5, 16-17, 21-24
Scope of synthetic leather industry: Parameter 1-3, 10, 12-17
Scope of MMCF: Parameter 16, 19-20
Free primary aromatic amine and pesticides are not in the scope of ZDHC Guideline, they are tested upon request.
- Refer to CPSD-AN-G00019-STIP01, locations with those CPSD test capability inside TCO matrix can perform the combined test.
- Refer to CPSD-AN-00019-MTHD for preparation of field blank for specific parameters.

ZDHC Wastewater Sampling - Facility Certification

The Wastewater samples have been collected under the facilities' normal production scale and wastewater flow rate. The sampler listed below was on-site and collected the samples.

Facility Name:	<u>Nuryıldız Tekstil</u>	Sampler's Name:	<u>Ali Osman ALBAYRAK</u>
Facility Representative Name:	<u>Tugba AKTA</u>	Sampler's ZDHC Accreditation:	<u>C74D106817592</u>
Facility Representative Signature and stamp:		Sampler's Signature:	

NURYILDIZ
 TEKSTİL, TIKKİ VE TİCARİT A.Ş.
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 Güneşli Y.O. No: 532 004 8000



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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						
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			
			56524-77-7			
Disperse Blue 7			3179-90-6			
Disperse Brown 1			23355-64-8			
Disperse Orange 1			2581-69-3			
Disperse Orange 3			730-40-5			
Disperse Orange 37/59/76			13301-61-6			
Disperse Red 1			2872-52-8			
Disperse Red 11			2872-48-2			
Disperse Red 17			3179-89-3			
Disperse Yellow 1			119-15-3			
Disperse Yellow 3			2832-40-8			
Disperse Yellow 39			12236-29-2			
Disperse Yellow 49			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 (BBMP)	µg/L	-	3296-90-0	25	-	USEPA 8270E, ISO 22032, USEPA 527 and USEPA 8321B Dichloromethane extraction GC-MS or LC-MS(-MS)
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-chloro-1-methylethyl)phosphate (TCPP)			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)			Multiple			
Octabromobiphenyls (OctaBB)			Multiple			
Dibromopropylether			21850-44-2			
Heptabromodiphenyl ether (HeptaBDE)			68928-80-3			
Hexabromodiphenyl ether (HexaBDE)			36483-60-0			
Monobromobiphenyls (MonoBB)			Multiple			
Monobromodiphenylethers (MonoBDEs)			Multiple			
Nonabromobiphenyls (NonaBB)			63936-56-1			
Nonabromodiphenyl ether (NonaBDE)			40088-47-9			
Tetrabromodiphenyl ether (TetraBDE)			Multiple			
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- ditertpentylphenol (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