

**TEST REPORT (TEXTILES)** 

Report Date: 20/10/2024

Factory's name : SISTER DENIM COMPOSITE LIMITED

Factory's address : KARARDI, SHIBPUR, NARSINGDI, BANGLADESH

Type of wastewater discharge: Direct discharge

On-site Wastewater treatment plant: With wastewater treatment plant

Average total industrial wastewater ≥ 15m3/day

generated:

Date and time of the beginning of sampling: 07/10/2024, 09:00
Date and time of the end of sampling: 07/10/2024, 16:30
Date received sample: 07/10/2024

Testing period: From 07/10/2024 to 20/10/2024

Arrival temperature at laboratory: 7 °C

Sample type:

Sample / Untreated wastewater Light blue, composite sample at

09:00; 10:00; 11:00; 12:00; 13:00; 14:00; 15:00 Sampling location: N 23.95782, E 90.72039

Sample / Effluent Light brown, composite sample at

10:30; 11:30; 12:30; 13:30; 14:30; 15:30; 16:30 Sampling location: N 23.94170, E 90.72997

Sample / Sludge Grey, composite sample at 14:45

Sampling location: N 23.95771, E 90.72061

Sampling laboratory: ITS Labtest Bangladesh Ltd. Testing laboratory: ITS Labtest Bangladesh Ltd.

ZDHC sampler accreditation certification

number:

ZDHC-A-22-E-C001068-R2280-609FB

Local legal standard name<sup>[a]</sup>: The Environment Conservation Rules, 2023; Government of the

People's Republic of Bangladesh; Ministry of Environment, Forest

Number: BGDT24139454

and Climate Change

Local legal standard no. [a]: The Environment Conservation Rules, 2023; Government of the

People's Republic of Bangladesh; Ministry of Environment, Forest

and Climate Change

Parameters (ZDHC WWSG V2.1, Table 2-3)

exceeded local regulation:

No exceeded

Discharge permit provided: Yes

Tests conducted:

As requested by a brand program, for details refer to attached page(s).

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#### Summary of test results:

Wastewater / MRSL - Test items **Testing period Untreated Wastewater** Alkylphenol ethoxylates / Alkylphenols From 10/10/2024 to ND (APEOs/APs) 10/10/2024 From 14/10/2024 to Anti-Microbials & Biocides ND 14/10/2024 From 12/10/2024 to **Chlorinated Parafins** ND 13/10/2024 From 14/10/2024 to Chlorobenzenes and Chlorotoluenes ND 14/10/2024 From 14/10/2024 to Chlorophenols ND 14/10/2024 From 12/10/2024 to Dimethyl Formamide (DMFa) (\*) ND 13/10/2024 From 10/10/2024 to Dyes – Carcinogenic or Equivalent Concern ND 10/10/2024 From 10/10/2024 to ND Dyes - Disperse (Allergenic) 10/10/2024 From 10/10/2024 to Dyes - Navy Blue Colourant ND 10/10/2024 From 14/10/2024 to Flame Retardants ND 14/10/2024 From 14/10/2024 to Glycols / Glycol Ethers ND 14/10/2024 From 14/10/2024 to Halogenated solvents ND 14/10/2024 From 14/10/2024 to Organotin compounds ND 14/10/2024 From 10/10/2024 to Other/Miscellaneous Chemicals (^) ND 10/10/2024 Perfluorinated & Polyfluorinated chemicals From 10/10/2024 to ND (PFCs) 10/10/2024 From 12/10/2024 to Phthalates (Ortho-phthalates) ND 13/10/2024 From 14/10/2024 to Polycyclic aromatic hydrocarbons (PAHs) ND 14/10/2024 Restricted Aromatic Amines (Cleavable from From 12/10/2024 to ND Azo- colourants) 13/10/2024 From 12/10/2024 to **UV** Absorbers ND 13/10/2024 From 14/10/2024 to Volatile Organic Compounds (VOC) ND 14/10/2024



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Wastewater / Heavy metals - Test	Tanking a social	Effluent			
items	Testing period	Foundational	Progressive	Aspirational	
Antimony	From 10/10/2024 to			Meet	
Antimony	10/10/2024			ivieet	
Chromium (VI)	From 10/10/2024 to			Meet	
Cirollium (vi)	10/10/2024			ivieet	
Barium	From 10/10/2024 to Report only, refer da		lata		
Darium	10/10/2024	Kej	Jort Offiy, refer o	lata	
Selenium	From 10/10/2024 to	Dos	aart anly rafar a	lata	
Selenium	10/10/2024	Report only, refer data		ldld	
Tin	From 10/10/2024 to	Por	oort only, refer d	lata	
IIII	10/10/2024	Kel	Jort only, refer o	ldld	
Arsenic	From 10/10/2024 to			Moot	
Arsenic	10/10/2024			Meet	
Chromium (total)	From 10/10/2024 to			Moot	
Chromium (total)	10/10/2024			Meet	
Cobalt	From 10/10/2024 to			Meet	
Cobait	10/10/2024			Meet	
Cadmium	From 10/10/2024 to			Most	
Caumum	10/10/2024			Meet	
Connor	From 10/10/2024 to			Most	
Copper	10/10/2024			Meet	
Lood	From 10/10/2024 to	)			
Lead	10/10/2024			Meet	
Nickel	From 10/10/2024 to	N		Most	
NICKEI	10/10/2024			Meet	
Silver	From 10/10/2024 to			Moot	
Silvel	10/10/2024			Meet	
7ino	From 10/10/2024 to			Moot	
Zinc	10/10/2024			Meet	
Moround	From 10/10/2024 to			Most	
Mercury	10/10/2024			Meet	



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Wastewater / Conventional	Tosting pariod	Effluent		
parameters - Test items	Testing period	Foundational	Progressive	Aspirationa
pH <sup>[f]</sup>	From 07/10/2024 to		Meet	
hu.,	07/10/2024		Meet	
Temperature difference <sup>[f]</sup>	From 07/10/2024 to	N/A	N/A	N/A
remperature difference.	07/10/2024	IN/A	IV/A	IN/A
E.coli	From 07/10/2024 to		Meet	
L.com	12/10/2024		ivicet	
Colour	From 08/10/2024 to		Meet	
Coloui	08/10/2024		IVICEL	
Persistent foam <sup>[f]</sup>	From 07/10/2024 to		N/A	
reisistent ioani-	07/10/2024		IN/A	
Wastewater flowrate <sup>[f]</sup>	From 07/10/2024 to	Por	oort only, refer d	lata
wastewater nowrater	07/10/2024	ivel	Joil Office of	
Ammonium-Nitrogen	From 11/10/2024 to			Meet
Allinonium-Nitrogen	11/10/2024			Meet
AOX	From 20/10/2024 to			Meet
AOX	20/10/2024			ivicet
Biochemical Oxygen Demand	From 08/10/2024 to			Meet
(BOD <sub>5</sub> )	13/10/2024			IVICEL
Chemical Oxygen Demand (COD)	From 09/10/2024 to			Meet
Chemical Oxygen Demand (COD)	09/10/2024			IVICET
Dissolved Oxygen (DO) [f]	From 07/10/2024 to	Report only, refer data		lata
Dissolved Oxygen (DO)	07/10/2024	ivel	Joir Offiy, Telef d	
Oil & Grease	From 11/10/2024 to			Meet
Oli & Grease	11/10/2024			IVICEL
Total Phenols / Phenol Index	From 09/10/2024 to			Meet
Total Friendis / Friendi maex	09/10/2024			Wicci
Total Chlorine <sup>[f]</sup>	From 07/10/2024 to	Rer	oort only, refer d	lata
Total chiornic	07/10/2024	ive,		
Total Dissolved Solids (TDS)	From 08/10/2024 to	Rer	oort only, refer d	lata
Total Dissolved Solids (TDS)	08/10/2024	I(C)	Joir Offiy, Terer o	
Total Nitrogen	From 11/10/2024 to			Meet
Total Mitrogen	11/10/2024			IVICEL
Total Phosphorus	From 10/10/2024 to		Meet	
τοται ι πουρποιαύ	10/10/2024		IVICCL	
Total Suspended Solids (TSS)	From 08/10/2024 to		Meet	
iotai suspenueu sonus (133)	08/10/2024		ivieet	

Masternator / Aniena Testitoma	Testing posical	Effluent		
Wastewater / Anions - Test items	Testing period	Foundational	Progressive	Aspirational
Chloride	From 11/10/2024 to 11/10/2024	Report only, refer data		
Cyanide, total	From 08/10/2024 to 08/10/2024	N N		Meet
Sulfate	From 11/10/2024 to 11/10/2024	Rep	Report only, refer data	



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Sulfide	From 11/10/2024 to 11/10/2024		Meet
Sulfite	From 08/10/2024 to 08/10/2024		Meet

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# Sludge – Disposal Pathways

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Sludge / Heavy Metals - Test items	Testing period	Sludge (Total)	Sludge (Leachate)
Antimony	From 10/10/2024 to	Meet	
Antimony	10/10/2024	ivieet	
Arsenic	From 10/10/2024 to	Meet	
Alseliic	10/10/2024	ivieet	
Barium	From 10/10/2024 to	Meet	
Ballulli	10/10/2024	IVICEL	
Cadmium	From 10/10/2024 to	Meet	
Cadillidili	10/10/2024	IVICEL	
Cobalt	From 10/10/2024 to	Meet	
Cobait	10/10/2024	IVICEL	
Copper	From 10/10/2024 to	Meet	
Сорреі	10/10/2024	IVICEL	
Lead	From 10/10/2024 to	Meet	
Leau	10/10/2024	IVICEL	
Nickel	From 10/10/2024 to	Meet	
Mickel	10/10/2024	IVICEL	
Selenium	From 10/10/2024 to	Meet	
Selemani	10/10/2024	ivieet	
Silver	From 10/10/2024 to	Meet	
Silvei	10/10/2024	IVICEL	
Chromium (total)	From 10/10/2024 to	Meet	
Chronilani (total)	10/10/2024	IVICEL	
Zinc	From 10/10/2024 to	Meet	
ZITIC	10/10/2024	IVICEL	
Chromium VI	From 10/10/2024 to	Meet	
Cinomium vi	10/10/2024	IVICCL	
Mercury	From 10/10/2024 to	Meet	
iviercury	10/10/2024	ivieet	

Sludge / Anion - Test items	Testing period	Sludge
Cyanide	From 08/10/2024 to 08/10/2024	Meet
Sludge / Conventional parameters - Test items	Testing period	Sludge
рН	From 08/10/2024 to 08/10/2024	Meet
	From 08/10/2024 to	Report only, refer data



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Paint filter test	From 08/10/2024 to 08/10/2024	Report only, refer data
Faecal coliform	From 07/10/2024 to 11/10/2024	Report only, refer data

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Sludge / MRSL - Test items	Testing period	Sludge
Alkylphenol (AP) and Alkylphenol Ethoxylates	From 10/10/2024 to	Report only, refer data
(APEOs): including all isomers	10/10/2024	Report only, refer data
Delvevelie Aremetic Hudrocarbons (DAHs)	From 14/10/2024 to	Donort only refer data
Polycyclic Aromatic Hydrocarbons (PAHs)	14/10/2024	Report only, refer data
Chlorotoluenes	From 14/10/2024 to	Report only, refer data
Chlorotolueries	14/10/2024	Report only, refer data

Note	e:	
ND	=	Not detected (less than ZDHC reporting limit for MRSL parameters) / Not detected (less than lab reporting limit for other parameters)
D	=	Detected
N/A	=	Not applicable (Out of scope according to ZDHC WWSG v2.1)
NT	=	Not tested (Did not test according to applicant's request)
(T)	=	If sample temperature is greater than 8°C and less than 10°C when received from the laboratory.
(TT)	=	If sample temperature is exceeded 10°C when received from the laboratory.
@	=	Maximum holding time exceeded.
(*)	=	Sample and report for mock leather.
(^)		Borate, zinc salt would report ND when total boron or total zinc less than 100 μg/L.
[f]	=	On-site test by sampler.
[a]	=	The local legal standard name and legal standard no. is referenced to discharge permit (or contractual agree
		by CETP) that provided by applicant.

This report shows the test results of the environmental samples of the above factory which were collected on a specific date and time. The results of this report shall not be used for any regulatory compliance purposes.

## Remarks:

- Factory uses shared ETP.
- Effluent & Sludge collected from shared ETP.
- Untreated Wastewater collected from two separate raw wastewater discharge points of Sister Denim Composite Limited only and mixed as per raw wastewater flowrate ratio.
- Not possible to take receiving water temperature and persistent foam due to underground discharge wastewater piping and far away from the factory boundary and no suitable location.
- Temperature of Effluent is 32 °C.
- This sampling is agreed with the client.

#### Authorized By

For ITS Labtest Bangladesh Ltd. [Testing - Dhaka]

Mominul Islam

Head of Analytical, Softlines



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#### Sample / Wastewater

## 1. Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers

NP/OP: With reference to ASTM D7742, modified from ISO 18218 (LC-MS Analysis). OPEO/NPEO (n>2): With reference to ASTM D7742, modified from ISO 18254 (LC-MS Analysis).

Chemical substances	CAS no.	ZDHC reporting limit (µg/L)	Untreated wastewater	Unit
Nonylphenol ethoxylates (NPEO)	9016-45-9; 26027-38-3; 37205-87-1; 68412-54-4; 127087-87-0	5	ND	μg/L
Nonylphenol (NP), mixed isomers	104-40-5; 11066-49-2; 25154-52-3; 84852-15-3	5	ND	μg/L
Octylphenol ethoxylates (OPEO)	9002-93-1; 9036-19-5; 68987-90-6	5	ND	μg/L
Octylphenol (OP), mixed isomers	140-66-9; 1806-26-4; 27193-28-8	5	ND	μg/L

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## 2. <u>Anti- Microbials & Biocides</u>

OPP, Triclosan: With reference to USEPA 8270E Solvent extraction, derivatization with KOH, acetic anhydride followed by GC-MS analysis; with reference to modified from EN 17134 (GC-MS Analysis), an alternative method of solvent extraction and derivatization are included.

Permethrin: With reference to USEPA 8270E Solvent extraction, followed by GC-MS analysis; With reference to ISO 14154 without derivatization and determination by GC-MS analysis.

Chemical substances	CAS no.	ZDHC reporting limit (µg/L)	Untreated wastewater	Unit
o-Phenylphenol (+salts)	90-43-7	100	ND	μg/L
Triclosan	3380-34-5	100	ND	μg/L
Permethrin	Multiple	500	ND	μg/L



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## 3. Chlorinated Parafins

For MCCP: With reference to analysis by ISO18219-2 with GC-MS-NCI analysis. For SCCP: With reference to analysis by ISO18219-1 with GC-MS-NCI analysis.

Chemical substances	CAS no.	ZDHC reporting limit (μg/L)	Untreated wastewater	Unit
Medium-chain Chlorinated paraffins (MCCPs) (C14-C17)	85535-85-9	500	ND	μg/L
Short-chain Chlorinated paraffin (C10 – C13)	85535-84-8	25	ND	μg/L

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## 4. <u>Chlorobenzenes and Chlorotoluenes</u>

With reference to modified from ISO 17137 (GC-MS Analysis), USEPA 8270E, Purge and Trap, Head Space, Dichloromethane extraction followed by GC-MS analysis.

Chemical substances	CAS no.	ZDHC reporting limit (µg/L)	Untreated wastewater	Unit
1,2-Dichlorobenzene	95-50-1	0.2	ND	μg/L
Other isomers of mono-, di-, tri-, tetra-, penta- and hexa- Chlorobenzene and mono-, di-, tri-, tetra- and penta-chlorotoluene	Multiple	0.2	ND	μg/L

## 5. <u>Chlorophenols</u>

With reference to US EPA 8270E solvent extraction, derivatization with KOH, acetic anhydride followed by GC-MS; with reference to modified from DIN 50009 (GC-MS Analysis), solvent extraction and derivatization are included.

Chemical substances	CAS no.	ZDHC reporting limit (μg/L)	Untreated wastewater	Unit
2-Chlorophenol	95-57-8	0.5	ND	μg/L
3-Chlorophenol	108-43-0	0.5	ND	μg/L
4-Chlorophenol	106-48-9	0.5	ND	μg/L
2,3-Dichlorophenol	576-24-9	0.5	ND	μg/L
2,4-Dichlorophenol	120-83-2	0.5	ND	μg/L
2,5-Dichlorophenol	583-78-8	0.5	ND	μg/L
2,6-Dichlorophenol	87-65-0	0.5	ND	μg/L
3,4-Dichlorophenol	95-77-2	0.5	ND	μg/L
3,5- Dichlorophenol	591-35-5	0.5	ND	μg/L
2,3,4-Trichlorophenol	15950-66-0	0.5	ND	μg/L
2,3,5-Trichlorophenol	933-78-8	0.5	ND	μg/L
2,3,6-Trichlorophenol	933-75-5	0.5	ND	μg/L
2,4,5-Trichlorophenol	95-95-4	0.5	ND	μg/L
2,4,6-Trichlorophenol	88-06-2	0.5	ND	μg/L
3,4,5-Trichlorophenol	609-19-8	0.5	ND	μg/L
2,3,4,5-Tetrachlorophenol	4901-51-3	0.5	ND	μg/L



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2,3,4,6-Tetrachlorophenol	58-90-2	0.5	ND	μg/L
2,3,5,6-Tetrachlorophenol	935-95-5	0.5	ND	μg/L
Pentachlorophenol (PCP)	87-86-5	0.5	ND	μg/L

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## 6. <u>Dimethyl Formamide (DMFa)</u>

With reference to modified from EN ISO 16189 (GC-MS Analysis), EPA 8270E with GC-MS Analysis.

Chemical substances	CAS no.	ZDHC reporting limit (μg/L)	Untreated wastewater	Unit
Dimethyl formamide; N,N-dimethylformamide (DMFa) (*)	68-12-2	1000	ND	μg/L

<sup>(\*) =</sup> Sample and report for mock leather.

## 7. <u>Dyes – Carcinogenic or Equivalent Concern</u>

With reference to modified DIN 54231 (LC-MS Analysis) By Liquid extraction.

Chemical substances	CAS no.	ZDHC	Untreated	Unit
Chemical substances	CAS IIO.	reporting limit (μg/L)	wastewater	
Basic violet 3 with >0.1% of Michler's Ketone	548-62-9	500	ND	μg/L
C.I. Acid Red 26	3761-53-3	500	ND	μg/L
C.I. Acid Violet 49	1694-09-3	500	ND	μg/L
C.I. Basic Blue 26 (with Michler's Ketone >	2580-56-5	500	ND	ua/I
0.1%)	2380-30-3	300	ND	μg/L
C.I. Basic Green 4 (malachite green chloride)	569-64-2	500	ND	μg/L
C.I. Basic Green 4 (malachite green oxalate)	2437-29-8	500	ND	μg/L
C.I. Basic Green 4 (malachite green)	10309-95-2	500	ND	μg/L
C.I. Basic Red 9	569-61-9	500	ND	μg/L
C.I. Basic Violet 14	632-99-5	500	ND	μg/L
C.I. Direct Black 38	1937-37-7	500	ND	μg/L
C.I. Direct Blue 6	2602-46-2	500	ND	μg/L
C.I. Direct Red 28	573-58-0	500	ND	μg/L
C.I. Disperse Blue 1	2475-45-8	500	ND	μg/L
C.I. Disperse Blue 3	2475-46-9	500	ND	μg/L
Disperse Orange 11	82-28-0	500	ND	μg/L



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## 8. <u>Dyes – Disperse (Allergenic)</u>

With reference to modified DIN 54231 (LC-MS Analysis) By Liquid extraction.

Chemical substances	CAS no.	ZDHC Reporting limit (μg/L)	Untreated wastewater	Unit
Disperse Blue 102	12222-97-8	50	ND	μg/L
Disperse Blue 106	12223-01-7	50	ND	μg/L
Disperse Blue 124	61951-51-7	50	ND	μg/L
Disperse Blue 26	3860-63-7	50	ND	μg/L
Disperse Blue 35	12222-75-2 56524-77-7	50	ND	μg/L
Disperse Blue 7	3179-90-6	50	ND	μg/L
Disperse Brown 1	23355-64-8	50	ND	μg/L
Disperse Orange 1	2581-69-3	50	ND	μg/L
Disperse Orange 3	730-40-5	50	ND	μg/L
Disperse Orange 37/59/76	13301-61-6	50	ND	μg/L
Disperse Red 1	2872-52-8	50	ND	μg/L
Disperse Red 11	2872-48-2	50	ND	μg/L
Disperse Red 17	3179-89-3	50	ND	μg/L
Disperse Yellow 1	119-15-3	50	ND	μg/L
Disperse Yellow 3	2832-40-8	50	ND	μg/L
Disperse Yellow 39	12236-29-2	50	ND	μg/L
Disperse Yellow 49	54824-37-2	50	ND	μg/L
Disperse Yellow 9	6373-73-5	50	ND	μg/L

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## 9. <u>Dyes – Navy Blue Colourant</u>

With reference to modified DIN 54231 (LC-MS Analysis) By Liquid extraction.

Chemical substances	CAS no.	ZDHC Reporting limit (μg/L)	Untreated wastewater	Unit
Component 1: C39H23Cl-CrN7O12S 2Na	118685-33- 9	500	ND	μg/L
Component 2: C46H-30CrN10O20S2 3Na	Not Allocated	500	ND	μg/L



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## 10. Flame retardants

Other flame retardant substances: With reference to USEPA 8270E, modified from ISO 17881-1 (GC-MS Analysis), modified from ISO 17881-2 (GC-MS Analysis), Dichloromethane extraction GC-MS or LC-MS analysis.

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Borate salt: Determined as total boron via ICP analysis.

Chemical substances	CAS no.	ZDHC reporting limit (µg/L)	Untreated wastewater	Unit
2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	25	ND	μg/L
Bis(2,3-dibromopropyl) phosphate (BIS)	5412-25-9	25	ND	μg/L
Decabromodiphenyl ether (DecaBDE)	1163-19-5	25	ND	μg/L
Hexabromocyclododecane (HBCDD)	3194-55-6	25	ND	μg/L
Octabromodiphenyl ehter (OctaBDE)	32536-52-0	25	ND	μg/L
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	25	ND	μg/L
Polybromobiphenyls (PBBs)	59536-65-1	25	ND	μg/L
Tetrabromobisphenol A (TBBPA)	79-94-7	25	ND	μg/L
Tris-(2-chloro-1-methylethyl) phosphate (TCPP)	13674-84-5	25	ND	μg/L
Tris(1-aziridinyl) phosphine oxide) (TEPA)	545-55-1	25	ND	μg/L
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	25	ND	μg/L
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	25	ND	μg/L
Tris(2,3-dibromopropyl) phosphate (TRIS)	126-72-7	25	ND	μg/L
Decabromobiphenyl (DecaBB)	13654-09-6	25	ND	μg/L
Dibromobiphenyls (DiBB)	Multiple	25	ND	μg/L
Octabromobiphenyls (OctaBB)	Multiple	25	ND	μg/L
Dibromopropylether	21850-44-2	25	ND	μg/L
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3	25	ND	μg/L
Hexabromodiphenyl ether (HexaBDE)	36483-60-0	25	ND	μg/L
Monobromobiphenyls (MonoBB)	Multiple	25	ND	μg/L
Monobromodiphenylethers (MonoBDEs)	Multiple	25	ND	μg/L
Nonabromobiphenyls (NonaBB)	Multiple	25	ND	μg/L
Nonabromodiphenyl ether (NonaBDE)	63936-56-1	25	ND	μg/L
Tetrabromodiphenyl ether (TetraBDE)	40088-47-9	25	ND	μg/L
Tribromodiphenylethers (TriBDEs)	Multiple	25	ND	μg/L
Boric acid **	10043-35-3 11113-50-1	100 in Boron	ND	μg/L
Diboron trioxide **	1303-86-2	100 in Boron	ND	μg/L
Disodium octaborate **	12008-41-2	100 in Boron	ND	μg/L
Disodium tetraborate anhydrous **	1303-96-4 1330-43-4	100 in Boron	ND	μg/L
Tetraboron disodium heptaoxide, hydrate **	12267-73-1	100 in Boron	ND	μg/L

<sup>\*\*</sup> Report total boron directly, no conversion from Boron salt.



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## 11. Glycols / Glycol Ethers

With reference to US EPA 8270E, modified from ISO 22892 (GC-MS Analysis), Liquid extraction, GC-MS analysis.

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Chemical substances	CAS no.	ZDHC Reporting limit (μg/L)	Untreated wastewater	Unit
2-ethoxyethanol	110-80-5	50	ND	μg/L
2-ethoxyethyl acetate	111-15-9	50	ND	μg/L
2-methoxyethanol	109-86-4	50	ND	μg/L
2-methoxyethylacetate	110-49-6	50	ND	μg/L
2-methoxypropylacetate	70657-70-4	50	ND	μg/L
Bis(2-methoxyethyl)-ether	111-96-6	50	ND	μg/L
Ethylene glycol dimethyl ether	110-71-4	50	ND	μg/L
Triethylene glycol dimethyl ether	112-49-2	50	ND	μg/L

## 12. <u>Halogenated solvents</u>

With reference to USEPA 8260D, Headspace GC-MS or Purge and trap GC-MS analysis.

Chemical substances	CAS no.	ZDHC Reporting limit (μg/L)	Untreated wastewater	Unit
1,2-Dichloroethane	107-06-2	1	ND	μg/L
Methylene chloride	75-09-2	1	ND	μg/L
Tetrachloroethylene	127-18-4	1	ND	μg/L
Trichloroethylene	79-01-6	1	ND	μg/L

## 13. Organotin compounds

With reference to modified from ISO/TS 16179 (GC-MS Analysis), ISO 17353, Derivatisation with NaB (C2H5)4, with GC-MS analysis.

Chemical substances	CAS no.	ZDHC Reporting limit μg/L)	Untreated wastewater	Unit
Dipropyltin compounds (DPT)	Multiple	0.01	ND	μg/L
Mono-, di- and tri-butyltin derivatives	Multiple	0.01	ND	μg/L
Mono, di-, and tri-methyltin derivatives	Multiple	0.01	ND	μg/L
Mono, di-, and tri-octyltin derivatives	Multiple	0.01	ND	μg/L
Mono, di-, and tri-phenyltin derivatives	Multiple	0.01	ND	μg/L
Tetrabutyltin compounds (TeBT)	Multiple	0.01	ND	μg/L
Tripropyltin Compounds (TPT)	Multiple	0.01	ND	μg/L
Tetraoctyltin compounds (TeOT)	Multiple	0.01	ND	μg/L
Tricyclohexyltin (TCyHT)	Multiple	0.01	ND	μg/L
Tetraethyltin Compounds (TeET)	Multiple	0.01	ND	μg/L



**TEST REPORT (TEXTILES)** 

#### 14. Other/Miscellaneous Chemicals

Others: With reference to Liquid extraction, LC-MS-MS analysis.

Borate salt: Determined as total boron and total zinc via ICP analysis.

Chemical substances	CAS no.	ZDHC Reporting limit (μg/L)	Untreated wastewater	Unit
AEEA [2-(2-aminoethylamino) ethanol]	111-41-1	500	ND	μg/L
Bisphenol A	80-05-7	10	ND	μg/L
Thiourea	62-56-6	50	ND	μg/L
Quinoline	91-22-5	50	ND	μg/L
Borate, zinc salt ^^	12767-90-7	100 in Boron & 100 in	Boron: ND	ug/l
Borate, Ziric Sait	12/0/-90-/	Zinc	Zinc: ND	μg/L

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## 15. Perfluorinated & polyfluorinated chemicals (PFCs)

PFCs: With reference to modified from ISO 23702-1 (LC-MS Analysis), EPA 8270 with LC-MS Analysis FTOH: With reference to modified from ISO 23702-1 (LC-MS Analysis), EPA 8270 with LC-MS Analysis

Chemical substances	CAS no.	ZDHC Reporting limit (μg/L)	Untreated wastewater	Unit
Perfluoro octane sulfonate (PFOS) and related substances, Perfluorooctanoic acid (PFOA)	Multiple	0.01	ND	μg/L
Perfluorooctanoic acid (PFOA) related substances	Multiple	1	ND	μg/L

## 16. <u>Phthalates – including all other esters of ortho-phthalic acid</u>

With reference to USEPA 8270E, modified from ISO 14389 (GC-MS Analysis), Dichloromethane extraction GC-MS analysis.

Chemical substances	CAS no.	ZDHC Reporting limit (μg/L)	Untreated wastewater	Unit
1,2-benzenedicarboxylic acid, di- C6-8- branched alkyl esters, C7- rich (DIHP)	71888-89-6	10	ND	μg/L
1,2-benzenedicarboxylic acid, di- C7-11- branched and linear alkyl esters (DHNUP)	68515-42-4	10	ND	μg/L
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8	10	ND	μg/L
Butyl benzyl phthalate (BBP)	85-68-7	10	ND	μg/L
Di-cyclohexyl phthalate DCHP)	84-61-7	10	ND	μg/L
Di-iso-decyl phthalate (DIDP)	26761-40-0	10	ND	μg/L

<sup>^^ =</sup> Report total boron & total zinc individually, and no conversion from boron / zinc salt.



**TEST REPORT (TEXTILES)** 

27554-26-3 μg/L Di-iso-octyl phthalate (DIOP) 10 ND Di-isobutyl phthalate (DIBP) 84-69-5 10 ND μg/L Di-isononyl phthalate (DINP) 10 28553-12-0 ND μg/L Di-n-hexyl phthalate (DnHP) 84-75-3 10 ND μg/L Di-n-octyl phthalate (DNOP) 10 117-84-0 ND μg/L Di-n-pentylphthalates 131-18-0 10 ND μg/L Di-n-propyl phthalate (DPRP) 10 ND 131-16-8 μg/L Di(ethylhexyl) phthalate (DEHP) 117-81-7 10 ND μg/L Dibutyl phthalate (DBP) 84-74-2 10 ND μg/L Diethyl phthalate (DEP) 10 ND 84-66-2 μg/L Diisopentylphthalates ND 605-50-5 10 μg/L Dinonyl phthalate (DNP) 84-76-4 10 ND μg/L

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#### 17. Polycyclic aromatic hydrocarbons (PAHs)

With reference to US EPA 8270E, DIN 38407-39, solvent extraction GC-MS analysis.

Chemical substances	CAS no.	ZDHC Reporting limit (μg/L)	Untreated wastewater	Unit
Acenaphthene	83-32-9	1	ND	μg/L
Acenaphthylene	208-96-8	1	ND	μg/L
Anthracene	120-12-7	1	ND	μg/L
Benzo[a]anthracene	56-55-3	1	ND	μg/L
Benzo[a]pyrene (BaP)	50-32-8	1	ND	μg/L
Benzo[b]fluoranthene	205-99-2	1	ND	μg/L
Benzo[e]pyrene	192-97-2	1	ND	μg/L
Benzo[ghi]perylene	191-24-2	1	ND	μg/L
Benzo[j]fluoranthene	205-82-3	1	ND	μg/L
Benzo[k]fluoranthene	207-08-9	1	ND	μg/L
Chrysene	218-01-9	1	ND	μg/L
Dibenz[a,h]anthracene	53-70-3	1	ND	μg/L
Fluoranthene	206-44-0	1	ND	μg/L
Fluorene	86-73-7	1	ND	μg/L
Indeno[1,2,3-cd]pyrene	193-39-5	1	ND	μg/L
Naphthalene	91-20-3	1	ND	μg/L
Phenanthrene	85-01-8	1	ND	μg/L
Pyrene	129-00-0	1	ND	μg/L



**TEST REPORT (TEXTILES)** 

## 18. Restricted Aromatic Amines (Cleavable from Azo-colourants)

With reference to reduction step with sodium dithionite, solvent extraction, EPA 8270E and ISO 14362-1, ISO 14362-3 with GC-MS analysis.

Chemical substances	CAS no.	ZDHC Reporting limit µg/L)	Untreated wastewater	Unit
2-Naphthylamine	91-59-8	0.1	ND	μg/L
2-Naphthylammoniumacetate	553-00-4	0.1	ND	μg/L
2,4-Xylidine	95-68-1	0.1	ND	μg/L
2,4,5-Trimethylaniline	137-17-7	0.1	ND	μg/L
2,4,5-Trimethylaniline hydrochloride	21436-97-5	0.1	ND	μg/L
2,6-Xylidine	87-62-7	0.1	ND	μg/L
3,3'-Dichlorobenzidine	91-94-1	0.1	ND	μg/L
3,3'-Dimethoxybenzidine	119-90-4	0.1	ND	μg/L
3,3'-Dimethylbenzidine	119-93-7	0.1	ND	μg/L
4-Aminoazobenzene	60-09-3	0.1	ND	μg/L
4-Aminodiphenyl	92-67-1	0.1	ND	μg/L
4-Chloro-o-toluidine	95-69-2	0.1	ND	μg/L
4-Chloro-o-toluidinium chloride	3165-93-3	0.1	ND	μg/L
4-Chloroaniline	106-47-8	0.1	ND	μg/L
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate	39156-41-7	0.1	ND	μg/L
4-methoxy-m-phenylenediamine	615-05-4	0.1	ND	μg/L
4-methyl-m-phenylenediamine	95-80-7	0.1	ND	μg/L
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	0.1	ND	μg/L
4,4'-methylenedi-o-toluidine	838-88-0	0.1	ND	μg/L
4,4'-methylenedianiline	101-77-9	0.1	ND	μg/L
4,4'-Oxydianiline	101-80-4	0.1	ND	μg/L
4,4'-Thiodianiline	139-65-1	0.1	ND	μg/L
5-Nitro-o-toluidine	99-55-8	0.1	ND	μg/L
6-methoxy-m-toluidine	120-71-8	0.1	ND	μg/L
Benzidine	92-87-5	0.1	ND	μg/L
o-Aminoazotoluene	97-56-3	0.1	ND	μg/L
o-Anisidine	90-04-0	0.1	ND	μg/L
o-Toluidine	95-53-4	0.1	ND	μg/L



**TEST REPORT (TEXTILES)** 

#### 19. <u>UV Absorbers</u>

With reference to USEPA 8270, ISO 22032, USEPA 527, and USEPA 8321B, dichloromethane extraction GC-MS or LC-MS-MS analysis.

Chemical substances	CAS no.	ZDHC Reporting limit (μg/L)	Untreated wastewater	Unit
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)- 6-(sec- butyl) phenol (UV-350)	36437-37-3	100	ND	μg/L
2-(2H-benzotriazol-2-yl)-4,6- ditertpentylphenol (UV-328)	25973-55-1	100	ND	μg/L
2-benzotriazol-2-yl-4,6-di- tertbutylphenol (UV-320)	3846-71-7	100	ND	μg/L
2,4-Di-tert-butyl-6-(5- chlorobenzotriazole-2-yl) phenol (UV- 327)	3864-99-1	100	ND	μg/L

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## 20. <u>Volatile organic compounds (VOCs)</u>

With reference to ISO 11423-1 Headspace or Purge and trap, GC-MS analysis. USEPA 8260D static headspace for determination of VOC in wastewater.

Chemical substances	CAS no.	ZDHC Reporting limit (μg/L)	Untreated wastewater	Unit
Benzene	71-43-2	1	ND	μg/L
m-cresol	108-39-4	1	ND	μg/L
o-cresol	95-48-7	1	ND	μg/L
p-cresol	106-44-5	1	ND	μg/L
Xylene	1330-20-7	1	ND	μg/L
Toluene (*)	108-88-3	1	ND	μg/L

<sup>(\*) =</sup> Sample and report for mock leather.



**TEST REPORT (TEXTILES)** 

## 21. Heavy metals

With reference to ISO 11885, USEPA 200.8, ISO 18412, modified from EN 16711-1 (ICP-MS Analysis).

Chemical		Limit		Legal *	Lab		
substances	Foundational	Progressive	Aspirational	Requirem ent	Reporting limit (mg/L)	Effluent	Unit
Antimony	0.1 mg/L	0.05 mg/L	0.01 mg/L	-	0.01	ND	mg/L
Chromium (VI)	0.05 mg/L	0.005 mg/L	0.001 mg/L	1	0.001	ND	mg/L
Barium	Sam	ple and report	only	1	0.01	ND	mg/L
Selenium	Sam	ple and report	only	1	0.01	ND	mg/L
Tin	Sam	ple and report	only	1	0.01	ND	mg/L
Arsenic	0.05 mg/L	0.01 mg/L	0.005 mg/L	-	0.005	ND	mg/L
Chromium (total)	0.2 mg/L	0.1 mg/L	0.05 mg/L	0.5 mg/L	0.05	ND	mg/L
Cobalt	0.05 mg/L	0.02 mg/L	0.01 mg/L	0.5 mg/L	0.01	ND	mg/L
Cadmium	0.1 mg/L	0.05 mg/L	0.01 mg/L	0.02 mg/L	0.01	ND	mg/L
Copper	1 mg/L	0.5 mg/L	0.25 mg/L	-	0.25	ND	mg/L
Lead	0.1 mg/L	0.05 mg/L	0.01 mg/L	0.1 mg/L	0.01	ND	mg/L
Nickel	0.2 mg/L	0.1 mg/L	0.05 mg/L	1 mg/L	0.05	ND	mg/L
Silver	0.1 mg/L	0.05 mg/L	0.005 mg/L	-	0.005	ND	mg/L
Zinc	5.0 mg/L	1.0 mg/L	0.5 mg/L	-	0.5	ND	mg/L
Mercury	0.01 mg/L	0.005 mg/L	0.001 mg/L	-	0.001	ND	mg/L

<sup>\*</sup> Regulation/Standard information for discharged wastewater as well as the limitation value (or contractual limit value agreed by CETP) for the required parameters (mandatory).



**TEST REPORT (TEXTILES)** 

#### 22. **Conventional parameters**

			Limit		Legal*	Lab		
Parameters	Test method	Foundational	Progressive	Aspirational	Require ment	Reporting limit	Effluent	Unit
рН	USEPA 150.1		6-9		6-9	N/A	8.2	[f]
Temperature difference	USEPA 170.1	△+15 °C	△+10 °C	∆+5 °C	△+5 °C	N/A	N/A	<sup>[f]</sup> °C
E.coli	SM 9221B presumptive, confirm positive with SM9221 F or G	12	126 MPN/100-ml		-	25 MPN/ 100-ml	ND	MPN /100- ml
Colour (436 nm; 525 nm; 620 nm)	ISO 7887-B	7;5;3 [m <sup>-1</sup> ]	5;3;2 [m <sup>-1</sup> ]	2;1;1 [m <sup>-1</sup> ]	-	N/A	3.0; 1.5; 0.9	[m <sup>-1</sup> ]
Persistent Foam	/		o indication of		-	N/A	N/A	[f]
Wastewater Flowrate	/		N/A		-	N/A	4945	<sup>[f]</sup> m <sup>3</sup> / day
Ammonium- Nitrogen	ISO 7150 / USEPA 350.1 / SM 4500 NH3 -F	10 mg/L	1 mg/L	0.5 mg/L	-	0.5 mg/L	ND	mg/L
AOX	ISO 9562	3 mg/L	0.5 mg/L	0.1 mg/L	-	0.1 mg/L	ND	mg/L
Biochemical Oxygen Demand (BOD <sub>5</sub> )	USEPA 405.1 / SM 5210-B / modified SM 5210-B,D (Hach BOD)	30 mg/L	15 mg/L	8 mg/L	30 mg/L	8 mg/L	ND	mg/L
Chemical Oxygen Demand (COD)	SM 5220-D / Validated Cuvette Method	150 mg/L	80 mg/L	40 mg/L	200 mg/L	20 mg/L	31	mg/L
Dissolved Oxygen (DO)	EPA 360.1 / SM 4500-O-G	Samp	le and report	only	-	N/A	6.5	<sup>[f]</sup> mg/L
Oil and grease	USEPA 1664 revision B / ISO 9377-2	10 mg/L	2 mg/L	0.5 mg/L	10 mg/L	0.5 mg/L	ND	mg/L
Total Phenols / Phenol Index	ISO 6439 / SM 5530-B,C,D / IS 3025 (Part 43)	0.5 mg/L	0.01 mg/L	0.001 mg/L	1 mg/L	0.001 mg/L	ND	mg/L
Total Chlorine	USEPA 330.5 / SM4500-CI-G	Samp	Sample and report only			0.2 mg/L	ND	<sup>[f]</sup> mg/L
Total Dissolved Solids (TDS)	SM 2540-C / USEPA 160.1	Samp	le and report	only	2100 mg/L	10 mg/L	706	mg/L



**TEST REPORT (TEXTILES)** 

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Total- Nitrogen	ISO 11905 - Part 1	20 mg/L	10 mg/L	5 mg/L	-	5 mg/L	ND	mg/L
Total- Phosphorus	ISO 11885, USEPA 200.8	3 mg/L	0.5 mg/L	0.1 mg/L	-	0.1 mg/L	0.4	mg/L
Total Suspended Solids (TSS)	USEPA 160.2 / SM 2540D	50 mg/L	15 mg/L	5 mg/L	100 mg/L	5 mg/L	8	mg/L
Chloride	SM 4500-Cl E	Samp	le and report	only	1	10 mg/L	72	mg/L
Cyanide, total	ISO 6703 – 1, 2, 3 / USEPA 335.2 / SM 4500-CN E	0.2 mg/L	0.1 mg/L	0.05 mg/L	•	0.05 mg/L	ND	mg/L
Sulfate	SM 4500 SO4 E	Samp	le and report	only	-	10 mg/L	101	mg/L
Sulfide	SM 4500-S2-D / ISO 10530	0.5 mg/L	0.05 mg/L	0.01 mg/L	2 mg/L	0.01 mg/L	ND	mg/L
Sulfite	ISO 10304-3	2 mg/L	0.5 mg/L	0.2 mg/L	-	0.2 mg/L	ND	mg/L

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#### Remark:

 $\Delta$  is the degree above ambient temperature of receiving water body.

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Additional Color Test by using local standard required method:

As Per applicant's request, testing was conducted on composite sample based on ZDHC WWSG V2.1.

Parameters	Test Method	Legal Requirement*	Effluent
Color	ISO 7887-C	150 mg Pt /L	70 mg Pt /L

<sup>\*</sup> Legal requirement based on Regulation/Standard information for discharged wastewater as well as the limitation value (or contractual limit value agreed by CETP) for the required parameters (mandatory), it was quoted for reference only.

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<sup>\*</sup> Legal requirement based on Regulation/Standard information for discharged wastewater as well as the limitation value (or contractual limit value agreed by CETP) for the required parameters (mandatory). It is quoted only when the test method used is identical to the ZDHC WWG listed method.



**TEST REPORT (TEXTILES)** 

## Sample / Sludge

Sludge flux (weight/time) and / or flow data volume/time: N/A

## 1. Heavy metals

Other heavy metals: With reference to acid/peroxide digestion EPA 6010C or EPA 6020A, modified from EN 16711-1 (ICP-MS Analysis), USEPA 200.8 with ICP/OES, or ICP-MS analysis.

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Chromium VI: With reference to alkaline digestion modified from ISO 17075-1 (UV-VIS Analysis), ISO 18412 with Colorimetric UV/VIS analysis.

Mercury: With reference to Dissolution, acid digestion, modified from EN 16711-1 (ICP-MS Analysis), modified from ISO 11885 (ICP-MS Analysis).

Chemical substances	ZDHC reporting limit (Dry weight) (mg/kg)	Lab reporting limit (Dry weight) (mg/kg)	Sludge (Dry weight)	Unit
Antimony	5	3	ND	mg/kg
Arsenic	5	2	ND	mg/kg
Barium	200	100	ND	mg/kg
Cadmium	1	1	ND	mg/kg
Cobalt	400	100	ND	mg/kg
Copper	50	25	ND	mg/kg
Lead	5	2	ND	mg/kg
Nickel	20	10	ND	mg/kg
Selenium	5	3	ND	mg/kg
Silver	50	25	ND	mg/kg
Total Chromium	50	25	ND	mg/kg
Zinc	400	200	ND	mg/kg
Chromium (VI)	20	2	ND	mg/kg
Mercury	1	0.2	ND	mg/kg

## 2. Anions

With reference to USEPA 9013, USEPA 9014, ISO 6703 – 1, 2, 3 / USEPA 335.2 / APHA 4500-CN E with Colourimetry.

Chemical substances	ZDHC reporting limit (Dry weight) (mg/kg)	Lab reporting limit (Dry weight) (mg/kg)	Sludge (Dry weight)	Unit
Cyanide	20	15	ND	mg/kg



**TEST REPORT (TEXTILES)** 

## 3. Conventional parameters

Chemical substances	Test method	Lab reporting limit (Dry Weight)	Sludge (Dry weight)	Unit
рН	USEPA SW 9045D	N/A	6.6	N/A
% Solids	USEPA 160.3	N/A	92	%
Paint Filter Test ^	USEPA 9095B	N/A	Pass	N/A
Fecal Coliform	USEPA 1681	10 MPN/g	90	MPN/g

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## 4. Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers

With reference to ASTM D7065, ISO 18254-1, with LC-MS-MS analysis.

Chemical substances	CAS no.	ZDHC reporting limit (Dry weight) (mg/kg)	Sludge (Dry weight)	Unit
	9016-45-9;			
	26027-38-3;			
Nonylphenol ethoxylates (NPEO)	37205-87-1;	0.4	ND	mg/kg
	68412-54-4;			
	127087-87-0			
	104-40-5;			
Nanylphanal (ND) mixed isomers	11066-49-2;	0.4	ND	ma/ka
Nonylphenol (NP), mixed isomers	25154-52-3;	0.4	ND	mg/kg
	84852-15-3			
	9002-93-1;			
Octylphenol ethoxylates (OPEO)	9036-19-5;	0.4	ND	mg/kg
	68987-90-6			
	140-66-9;			
Octylphenol (OP), mixed isomers	1806-26-4;	0.4	ND	mg/kg
	27193-28-8			

<sup>^ -</sup> Report "Pass" when Paint Filter Test does not contain free liquid; Report "Fail" when Paint Filter Test does contain free liquid.



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## 5. Polycyclic aromatic hydrocarbons (PAHs)

With reference to USEPA 827E, modified from AFPS GS 2019-01 PAK (GC-MS Analysis) with Solvent extraction GC-MS analysis.

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Chemical substances	CAS no.	ZDHC reporting limit (Dry weight) (mg/kg)	Sludge (Dry weight)	Unit
Acenaphthene	83-32-9	0.2	ND	mg/kg
Acenaphthylene	208-96-8	0.2	ND	mg/kg
Anthracene	120-12-7	0.2	ND	mg/kg
Benzo[a]anthracene	56-55-3	0.2	ND	mg/kg
Benzo[a]pyrene (BaP)	50-32-8	0.2	ND	mg/kg
Benzo[b]fluoranthene	205-99-2	0.2	ND	mg/kg
Benzo[e]pyrene	192-97-2	0.2	ND	mg/kg
Benzo[ghi]perylene	191-24-2	0.2	ND	mg/kg
Benzo[j]fluoranthene	205-82-3	0.2	ND	mg/kg
Benzo[k]fluoranthene	207-08-9	0.2	ND	mg/kg
Chrysene	218-01-9	0.2	ND	mg/kg
Dibenz[a,h]anthracene	53-70-3	0.2	ND	mg/kg
Fluoranthene	206-44-0	0.2	ND	mg/kg
Fluorene	86-73-7	0.2	ND	mg/kg
Indeno[1,2,3-cd]pyrene	193-39-5	0.2	ND	mg/kg
Naphthalene	91-20-3	0.2	ND	mg/kg
Phenanthrene	85-01-8	0.2	ND	mg/kg
Pyrene	129-00-0	0.2	ND	mg/kg

## 6. Chlorotoluenes

With reference to US EPA 827, modified from BS EN 17137 (GC-MS Analysis).

Chemical substances	CAS no.	ZDHC reporting limit (Dry weight) (mg/kg)	Sludge (Dry weight)	Unit
Other isomers of mono-, di-, tri-, tetra- and penta-	Multiple	0.2	ND	mg/kg
chlorotoluene				



**TEST REPORT (TEXTILES)** 

## 7. Leachate heavy metals

With reference to toxicity leachate extraction procedure EPA 1311 followed by Acid digestion with ICP-OES, ICP-MS ISO 11885, USEPA 200.8, modified from EN 16711-1 (ICP-MS Analysis).

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Chromium VI: With reference to toxicity leachate extraction procedure EPA 1311 followed by ISO 18412 Colorimetric UV/VIS analysis.

Mercury: With reference to toxicity leachate extraction procedure EPA 1311 followed by acid digestion, EPA 3051A, EPA 6020b, modified from EN 16711-1 (ICP-MS Analysis) with ICP MS analysis.

Chemical substances	Lab reporting limit (mg/L)	Sludge	Unit
Arsenic	0.5	N/A	mg/L
Cadmium	0.15	N/A	mg/L
Total Chromium	5	N/A	mg/L
Lead	0.5	N/A	mg/L
Antimony	0.6	N/A	mg/L
Barium	35	N/A	mg/L
Cobalt	80	N/A	mg/L
Copper	10	N/A	mg/L
Nickel	3.5	N/A	mg/L
Selenium	0.5	N/A	mg/L
Silver	5	N/A	mg/L
Zinc	50	N/A	mg/L
Chromium (VI)	2.5	N/A	mg/L
Mercury	0.05	N/A	mg/L



**TEST REPORT (TEXTILES)** 

## Appendix 1: reference to ZDHC WWSG v2.1 Table 4B

	1							1
Parameters			1	Di	sposal path	ways	r	
	Total metals and	A and B	С	D	E	F	G	G
	anions threshold	(Leachate	(Leachate	(Leachate	(Leachate	(Leachate	(Leachate	(Total metals
	values (mg/kg)	result in	result in	result in	result in	result in	result in	limit in
		mg/L)	mg/L)	mg/L)	mg/L)	mg/L)	mg/L)	mg/kg)
Arsenic	10		5	2.75	0.5	0.5	0.5	75
Cadmium	3		1	0.58	0.15	0.15	0.15	85
Total Chromium	100		15	10	5	5	5	3000
Lead	10		5	2.75	0.5	0.5	0.5	840
Antimony	12		15	7.8	0.6	0.6	0.6	Sample and
Barium	700	Report	100	67.5	35	35	35	report only
Cobalt	1600	only if	80	80	80	80	80	
Copper	200	required	25	17.5	10	10	10	4300
Nickel	70	to test	20	11.75	3.5	3.5	3.5	420
Selenium	10		1	0.75	0.5	0.5	0.5	100
Silver	100		5	5	5	5	5	Sample and report only
Zinc	1000		250	150	50	50	50	7500
Chromium VI	50		5	3.75	2.5	2.5	2.5	50
Mercury	1		0.2	0.125	0.05	0.05	0.05	57

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## Appendix 2: reference to ZDHC WWSG v2.1 Table 4C

Parameters	Disposal pathways						
	A and B	С	D	E	F	G	
рН		5 – 11 s.u.	5 – 11 s.u.	5 – 11 s.u.	6.5 – 9 s.u.	6.5 – 9 s.u.	
% Solids			Sample and	Sample and	Sample and report only	Sample and report only	
Fecal Coliform			report only	report only	< 1000	(MPN/g)	
Paint Filter Test	Sample	Sample	Pa	ass Paint filter tes	st	Sample and report only	
Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): including all isomers	and report only	and report only	< 0.4 mg/kg				
Polycyclic Aromatic Hydrocarbons (PAHs) Chlorotoluenes			< 0.2 mg/kg				

## Appendix 2: reference to ZDHC WWSG v2.1 Table 4D

Parameters		Disposal pathways							
	A and B	С	D	E	F	G			
Cyanide	Report only if required to test	100 mg/kg	85 mg/kg	70 mg/kg	70 mg/kg	70 mg/kg			



**TEST REPORT (TEXTILES)** 

## Photo of sampling points:

## Untreated wastewater



Sampling point 1

Sampling point 2

## Effluent



Number: BGDT24139454

## Sludge





**TEST REPORT (TEXTILES)** 

Photo of samples:

## Untreated wastewater



## Effluent



Number: BGDT24139454

## Sludge





**TEST REPORT (TEXTILES)** 

Photo of Receiving Water Temperature and Foam Sampling Risk / Reason:





**TEST REPORT (TEXTILES)** 

Attachment – sampling protocol for wastewater & sludge:

Samplin	ng P	rotoco	I for	Wa	stewa	iter a	nd Slude	ge a	cc. ZI	DHC SA	P 2.1	incl. A	Apdx. E	
Facility Name		Sig	lerz	Deni	m Com	posite	e LTd.							
Address and C		andi	, sh	ibpun	, NATS	singdi, l	Bangl	ladesh	•					
Facility type :	able)		ing and	0	Fabric Mill		undry, Washing d Finishing	0	Natural L		Printing		thetic Leather cessing	
Date of sampl	ling:	07/1	0/20	24										
ample Gener if applicable):	ample General ID			4100	22	☐ indired	discharge ct discharge iquid Discharge	(ZLD)	□ with	pre-treatme out treatme own ETP		rge to: Rive	ito: River	
Discharge descr	ription:	N/	/A								J			
Weather cond	ditions	on sam	pling da	ay:	Sunny		on	day b	efore:	Sunny	4			
Fill in all above in	nformati	ion as applicab	ole.											
S		mpling times Details (page	2), Inc	direct dis	oling time(s) scharge. Field	1	Facility has WV			Retention Ti of tank [m <sup>3</sup> ]			h	
	parame	ters.	exc	cept on	s are not required	est. O	Plant is in perating condition	on I		2h, grab sam	pling from	EQT is allo		
Pre-treated without slud	ww	ters.		cept on	olient's requirements  with Editor  HRT:	ualisation		sent:	f HRT > 12	2h, grab sam		EQT is allo	owed.	
Sludge with  O A  >1000 °C offsincineration	below crisite L	disposal path  B  andfill with ignificant con	reated 'nway*):	ww Buildin proces	⇔ with Ed ⇔ with Ed HRT: If HRT > 1 g products sed >1000 °C	est. opqualisation h (.2h, grab s	perating condition Tank (EQT) pre Volume of ta sampling from	sent: nk [m³] EQT is	f HRT > 12  / Flow ra allowed  ion / Build	te [m³/h]) age of sli	pling from	EQT is allo	□ MMCF reeks	
Sludge with O A >1000 °C offs incineration	below Consiste Losinot provi	disposal path  B andfill with ignificant corvide informatic	reated nway*):	Buildin proces	⇔ with Ed ⇔ with Ed HRT: If HRT > 1 g products sed >1000 °C	Qualisation h ( 2h, grab s  O D  Land C limit med.	perating condition Tank (EQT) pre Volume of ta sampling from  Offill with ed control	sent: nk [m³] EQT is E	f HRT > 12  ] / Flow ra allowed  ion / Build processed	age of sling	Incoming Inc	days / w	□ MMCF veeks	
Sludge with  O A  >1000 °C offs incineration  *) if supplier cann Sludge volume	below consistency below consistency below consistency below consistency below to be be below to be be below to be	disposal path  B andfill with ignificant corvide information	extreated  nway*):  ntrol on, patho	Buildin proces way "F"	⇔ with Edham of the control of t	pest. of pullisation h (.2h, grab s	perating condition Tank (EQT) pre Volume of ta sampling from  In the control	sent: nk [m³] EQT is E	f HRT > 12  ] / Flow ra allowed  ion / Build processed	age of sling of <1000 °C	pling from Incoming I	days / water days	MMCF veeks G d application	
Sludge with O A >1000 °C offinicineration of supplier can Sludge volume	below construction of proving general	disposal path  B andfill with ignificant corvide informaticated:	excreated hway*):	C Buildin processway "F" Om <sup>3</sup> /h	⇔ with Ec     HRT:     If HRT > 1      g products     sed >1000 °c      shall be assure     OL/sec ○	pest. of pullisation h (.2h, grab s	perating conditions are the control of the control	sent: nk [m³] EQT is  E cineratioducts	f HRT > 12  / Flow ra allowed  ion / Build processed	age of sling of <1000 °C	pling from Incoming I	days / w days / w n no Lan d O es n wareho	MMCF veeks G d application	
Sludge with  A >1000 °C offs incineration  if supplier cann Sludge volume	below below control below belo	disposal path  B andfill with ignificant corvide informatic ated:  O liqui	reated nway*): introl on, patho A	Buildin processway "F" Om³/h O soli	client's requirements of the control	pualisation h ( 2h, grab :  O D Land limit med. other unit granulate.	perating condition  Tank (EQT) pre  = Volume of ta sampling from  Offill with ed control  t (specify):  /pieces)	sent: nk [m³] EQT is  Ecineratioducts  \$\phi\$ fro  5 1.5	f HRT > 12  / Flow ra allowed  ion / Build processed  per f om runnin	2h, grab sam te [m³/h]) age of sli ing i <1000 °C acility info g process  6 [4:00	udge: \$0 O F Landfill with control O measure  \$\forall \text{fror}\$	days / wareho	mMMCF  reeks G G d application  timated  use/storage ab (HRT>12h):	
Sludge with O A >1000 °C officincineration of supplier cans Sludge volume Process Cheir Times of sampling	below consistence in the consistence is general consistence in the con	disposal path O B andfill with ignificant cor vide informatic ated: O liqui	reated nway*):	Buildin proces way "F" Om3/h O soli	© with Ec HRT: If HRT > 1  g products sed > 1000 *(shall be assure to OL/sec ○ d (powder/	O D Land C limit med. other unit	perating conditions are the control of the control	sent: nk [m³] EQT is  Ecineration oducts	f HRT > 12  / Flow ra allowed  ion / Build processed  per f om runnin	age of sling d <1000 °C acility info	udge: \$0 O F Landfill with control O measure  \$\forall \text{fror}\$	days / w n no Lan d O es n wareho or Gr or Gr Solid	mMMCF  reeks G d application  timated  use/storage ab (HRT>12h): ab (HRT>12h) sludge:	
Sludge with  A >1000 °C offs incineration  if supplier cans Sludge volume  □ Process Cher  Times of sampling (if applicable)	below control of the state of t	disposal path  B andfill with ignificant cor vide informatic atted:  O liqui  reated: ent rect) 1): ming: 2) ge (liquid):	reated nway*):  http://px.  d  1  1	Buildin proces way "F" O soli	client's requirements of the control	O D Land limit med. other unit granulate.	perating condition  Tank (EQT) pre  = Volume of ta sampling from  Offill with led control  t (specify):  /pieces)  4  4  4	on It is sent:  EQT is   From the first term of	f HRT > 1.7  // Flow ra allowed  ion / Build processed  oper f om runnin  3:00	2h, grab sam  te [m³/h])  age of sli ling 1<1000 °C  acility info g process  6  14:000 6  6	plpling from Incominudge: \$80 OF Landfill with control O measure \$ fror 7 151 or 7	days / w day	mMMCF  weeks G G d application  timated  use/storage ab (HRT>12h): ab (HRT>12h): sludge: 4,4,5	
without slud  Sludge with  A >1000 °C offs incineration  if supplier cans Sludge volume  Process Cher  Times of sampling (if applicable)	www dge below C C Sisiste L S S S S S S S S S S S S S S S S S S S	disposal path  B andfill with  ignificant con  vide informatic  ated:  O liqui  eated:  ent  rect) 1):  ming: 21  ge (liquid):  se p. 2  r tap water, r  Time / linter  UTW-1  UTW-1  EFF-1  EFF-5-1  Suldge-1	reated ways:    Article   Article	Buildin process of the first of	g products sed > 1000 % with Ec HRT: If HRT > 1 g products sed > 1000 % shall be assure to CL/sec Od (powder/2) 2	OD Land Land C limit med. other unit granulate, 3 literated rivs s of samp Lat.: (V: Lat.: \( \)	perating condition  Tank (EQT) pre  = Volume of ta  sampling from  Oifill with ed control  t (specify):  //pieces)  4  4  4  ver water withouting points:	on I seent: seent: seent: sk [m³] EQT is  From the properties of t	f HRT > 1:  // Flow ra allowed  // Flow ra allowed  // Flow ra allowed  // Plow ra all	2h, grab sam te [m³/h]) age of sli ing i <1000 °C acility info g process 6 6 6 6 6 water from	pling from Incominudge: 480 OF Landfill with control O measure of from 7 151000 7 7 7 151000 PEQT < 12h m	days / w day	mMMCF  reeks G G d application  timated  use/storage ab (HRT>12h): ab (HRT>12h): sludge: 4,4,5	



**TEST REPORT (TEXTILES)** 

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intertek Total Quality. Assured.	<b>ZDHC Monitoring</b>
Total Quality 1155 and a	

Composite	Sample		Grab Sample (enter data in o		from EQT of E raged Readings			Volume of aliq	quot(s):	100	O m
Time of discrete		10:30	11:30	12:30	4 13:30	14:30	6 15:30	16:30	Avera or Grab S	ged Read	
oH:		8.2	8.3	8.2	8.2	8.1	8.2	8.2		8.2	
emp. WW di	charge	320	32.0	33 °C	32.0	320	31 %	32 "	С	32	*(
f receiving	g water	°(	°C	*C	•c	°C	•0	: •	С	N/A	*(
low rate:		57.24 4	s 58.321/s	5751 L/s	56.43 L/s	58.05 L/s	55.89 L/s	57.24 4	s 49	15 m	n³/d avg
issolved Oxyg	en:	6.5mg/	6.6 mg/L	6.6mg/L	6.6 mg/L	6.5 mg/L	6.5 mg/L	6.5 mg/	LINIM CO	16.5	mg/l
otal Chlorine:		ND mg/	L ND mg/L	ND mg/L	N Dmg/L	ND mg/L	N Amg/L	N Drog	Okardi S	NO	mg/l
ersistent foar			O yes O no						Fan	N/A	
*) time when lote: 1.0 m³/l	discrete s n = 0.27 L/s	sample for co s ; 1.0 L/s = 86	mposite was take 5.4 m³/d; 1 m³/h =	n. Use commen : 0.042 m³/d; <i>mu</i>	t field if number ultiply the flow ra	of samples is gre te in m³/h by the	eater than sever e daily operation	n, or if above he n time of the E	to get flow	ote in m	fficient.
ampling pro	cedure:	O autom	ated sampling	with bea	aker/bowl (	O other:			NAPON	01/	0
Nastewate	r Flow	Data (Effi	uent/Dischar	rge)			With the		BANCIN	IFSI	Vas
ystem:		Flow	meter (in facil	ity)	☐ Pipe (O)		☐ Flume (	U)	VGFA	ner (V)	-
Diameter (c	m]										4.1
Vater Dept	n [cm]						777				
-			VCA MIERO								
low Speed	(cm/sec			Section 1							
CASE SCIENCE AND	ALC: STORY STORY STORY STORY	жаставительная	nd Sensory D	ata (enter as	far as applicabl	A COLUMN TO SERVICE STREET				Florida	
ype T a	mbient a	ir [°C] Od	lour			Colour		The second section is a second of the	yes O no	Floating O yes	
											/
ntreated							- Blue	-	yes <b>O</b> no	O yes	Ono
ffluent						Light	Brow	n	yes Qp6	O yes	Q AG
ludge							Gray		X		<
Field Testing	QA/QC										
arameter	December 1		Sample targe	et value	Lab Control	Sample mea	asured valu	e	Accur	acy [%]	
Н			.0			6.69	NAME OF TAXABLE PARTY.		95		-
otal Chlorin	ie		015 mg/L			0.51 n	18/4		102	_	
Other observ		unden gr boundan	ible to take	range was	nte waters location.	pripring ar	nd fan a	perunitent RWay Fro	Foam o	lue to	•

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**TEST REPORT (TEXTILES)** 

Number: BGDT24139454

# ntertek ZDHC Monitoring

ZDHC Wastewater Sampling - Facility Confirmation

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

Sampling person name & email address):

avinonmentalbb. softlines bad@ Intentex com

Sampler's ZDHC accreditation no.: 2DHC - A- 21-B Coolo68- R2280-609FB

Sampler's Signature:

Facility Name: Sister Denim Composite

Facility's Representative name:

Md. Rashedyl Islam

Facility's Representative Signature and Stamp:



**TEST REPORT (TEXTILES)** 

*********************	*****	*******

End of report

Number: BGDT24139454

This report is made solely on the basis of instructions and/or information and materials supplied by you (the Client), It is not intended to be a recommendation for any specific course of action. Intertek shall not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as that which is expressly contained in the terms and conditions governing the provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent, truthful and careful basis and we do not accept any liability to you for any direct or in-direct loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or willful misconduct.