

<b>Report Number</b>	<b>(6823)073-0227</b>
<b>Date of sampling</b>	13/03/2023
<b>Reporting Date</b>	29/03/2023

<b>Audit ID</b>	137025	<b>Audit firm</b>	BUREAU VERITAS – BANGLADESH
<b>Company name</b>	HAMID FABRICS LTD.		
<b>Contact person</b>	Mr. M.H Ferdous		
<b>Type of tax - tax ID no</b>	324435790914		
<b>Address</b>	Unit-2, Shilmandi, Narshingdi Sadar, Bangladesh.		
<b>Region state province</b>	Narshingdi		
<b>Town city / village</b>	Narshingdi		
<b>Zip/Post code</b>	1603		

<b>Type of wastewater discharge</b>	
Type of waste discharge	Direct Discharge
Description of the discharge	Discharge to Brahmaputra River
Ambient temperature of receiving water body (direct discharge only):	29.9 °C

<b>Sampler accreditation certification number (ZDHC):</b>	C74D106817431
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<b>Sample description</b>			
	<b>Simple</b>	<b>Composite</b>	<b>Comments</b>
(1) Wastewater before treatment	YES; Blue; Simple sample at 11.10	No	Simple sample has been collected, as there is a homogenization tank with water held at least 12 hours or more.
(2) Wastewater after treatment	YES; Reddish; Simple sample at 11.30	No	--
(3) Sludge	No	YES; Black; Solid	--



Report Number

**(6823)073-0227**

Local Legal Data	
Local Legal Standard name [a]	The Environment Conservation Rules, 1997 (Inland Surface Water, 4)
Parameters (ZDHC WWG V2.1, Table 2 & 3) exceeded local regulation:	No Exceeded
Discharge permit provided	NO
Discharge flow data	14 m <sup>3</sup> /hour
Internal description – Final Test Report	
Internal codification number	INDI-HFL-1303
Reference sample number	Sample 1 For Before treatment; Sample 2 For After treatment & Sample 3 For Sludge
Received on	13/03/2023
Analysis carried out from	13/03/2023 to 29/03/2023
Arrival Temperature at Lab	6 °C
Comments	Samples received within 03:50 hours
Reporting date	29/03/2023

If there are questions or concerns on this report, please contact the following persons:

For enquiry

Mr. Sharan Roy,  
Mail: sharan.roy@bureauveritas.com  
Phone No.:+8801755563425

Mr. Md. Robeul Awal,  
Mail: mdrobeul.awal@bureauveritas.com  
Phone No.:+8801755563437

This report shown the test result of the auxiliary chemical and/or raw material samples, which collected during particular factory audit. The results of this report shall not be used for any regulatory compliance purposes.

The sampling is agreed with client. Sampling procedure refers to ZDHC Wastewater and Sludge Laboratory Sampling and Analysis Plan.

**BUREAU VERITAS**  
CONSUMER PRODUCTS SERVICES (BANGLADESH) LTD.  
APPROVED BY:

**MR. MD. RASHEDUL HAQUE**  
DEPUTY SR. MANAGER, RSL OPERATIONS

Summary of test results				
Test items	Sample 1 (Before treatment)	Sample 2 (After treatment)	Sample 3 (Sludge)	Sample 4 (Leachate)
Global effluent parameters ZDHC	NA	D	ND	NA
Heavy metals	NA	ND	ND	NA
Alkylphenols (APs) & Alkylphenol ethoxylates (APEOs)	ND	NA	ND	NA
Chlorobenzenes & Chlorotoluenes	ND	NA	ND	NA
Chlorophenols	ND	NA	NA	NA
Azo dyes	ND	NA	NA	NA
Carcinogenic dyes	ND	NA	NA	NA
Disperse dyes	ND	NA	NA	NA
Flame retardants	ND	NA	NA	NA
Glycols	ND	NA	NA	NA
Chlorinated solvents	ND	NA	NA	NA
Organotin compounds	ND	NA	NA	NA
Phthalates	ND	NA	NA	NA
Perfluorinated and Polyfluorinated Chemicals (PFCs)	ND	NA	NA	NA
Polycyclic Aromatic Hydrocarbons (PAHs)	ND	NA	ND	NA
Volatile Organic Compounds (VOCs)	ND	NA	NA	NA
Anti-Microbials & Biocides	ND	NA	NA	NA
Chlorinated Parafins	ND	NA	NA	NA
N,N-di-methylformamide (DMFa)	ND	NA	NA	NA
Dyes – Navy Blue Colourant	ND	NA	NA	NA
Other / Miscellaneous Chemicals	ND	NA	NA	NA
UV Absorbers	ND	NA	NA	NA

**Remark (Indicated in each parameter)**

ND	=	Not detected	NA	=	Not applicable
D	=	Detected	-	=	Did not perform
*	=	See remark	(f)	=	Parameter tested in field
@	=	Maximum holding time exceeded, Red flag in the ZDHC Gateway – Wastewater Module. Probable error in results due to the holding time.	(T)	=	Handling temperature exceeded
#	=	Non accredited parameter	(S)	=	Analysis was subcontracted for testing - E. coli, AOX, T-Nitrogen, Fecal Coliform, Anti- Microbials & Biocides, UV Absorbers & Other/Miscellaneous Chemicals
[a]	=	The local legal standard name and legal standard number is referenced to discharge permit (or contractual agree by CETP) that provided by company.			

## Test Results

### 1. Global effluent parameters

Parameters	Test Method	Limit			Reporting limit	Result Sample 2 (After Treatment)	Unit
		Foundational	Progressive	Aspirational			
Temperature difference	Measurement by thermometer	Δ+15	Δ+10	Δ+5	N/A	Δ+5.7 (f)	°C
TSS	Reference to APHA 2540D, GB 11901, ISO 11923	50	15	5	5	49	mg/L
COD	Reference to APHA 5220 D	150	80	40	40	148	mg/L
Total-N	Reference to APHA 4500-N-C	20 mg/L	10 mg/L	5 mg/L	5	17.47 (S)	mg/L
pH	Reference to EPA 150.2, APHA 4500-H*	6-9	6-9	6-9	N/A	8.4 (f)	/
Colour [m-1]	Reference to ISO 7887: 2011(E), B	7;5;3	5;3;2	2;1;1	N/A	<b>20;14.3;8.8</b>	m <sup>-1</sup>
BOD <sub>5</sub>	Reference to APHA 5210B (5 days)	30	15	8	8	27	mg/L
Ammonium-N	Reference to APHA 4500-NH <sub>3</sub> - N	10	1	0.5	0.5	0.56	mg/L
Total-P	Reference to APHA 4500-P-J	3	0.5	0.1	0.1	0.52	mg/L
AOX	Reference to ISO 9562	3	0.5	0.1	0.1	0.78 (S)	mg/L
Oil and grease	Reference to EPA 1664	10	2	0.5	0.5	3	mg/L
Phenol	Reference to APHA 5530 C	0.5	0.01	0.001	0.001	0.002	mg/L
E.Coli	Reference to ISO 9308-1	126	126	126	126	8 (S)	[cfu/100 ml]
Foam	Visual	Not visible	Not visible	Not visible	N/A	Not Visible (f)	/
Cyanide	Reference to APHA 22 <sup>nd</sup> Edition-4500-CN. C&E (2012), EPA 9010C, 9013 & 9014	0.2	0.1	0.05	0.05	ND	mg/L
Sulfide	Reference to APHA 4500-S <sup>2</sup> -D	0.5	0.05	0.01	0.01	0.08	mg/L
Sulfite	Reference to EPA 377.1	2	0.5	0.2	0.2	2	mg/L
DO	Hach manual for LDO & In-house	Sample and report only			N/A	7.29 (f)	mg/L
Total Chlorine	APHA 4500-Cl G	Sample and report only			N/A	0.2 (f)	mg/L
TDS	APHA 22 <sup>nd</sup> Edition-2540C	Sample and report only			5	2052	mg/L
Chloride	APHA 4500-Cl B	Sample and report only			N/A	24.99	mg/L
Sulfate	APHA- 4500 SO <sub>4</sub> -E (2012)	Sample and report only			N/A	92.12	mg/L
Wastewater Flowrate	/	-			N/A	14 (f)	m <sup>3</sup> /h

**2. Heavy metals**

With reference to ISO 11885, ISO 18412, ISO 12846, ISO 17852, US EPA 200.7, US EPA 200.8, US EPA 6010c, US EPA 6020a, US EPA 218.6 and by Inductively Coupled Argon Plasma-Mass Spectrometry (ICP-MS) analysis.

Heavy metals	CAS no.	Limit			Reporting limit (mg/L)	Result Sample 2 (After Treatment)	Unit
		Foundational	Progressive	Aspirational			
Arsenic (As)	Various	0.05	0.01	0.005	0.005	ND	mg/L
Cadmium (Cd)	Various	0.1	0.05	0.01	0.01	ND	mg/L
Mercury (Hg)	Various	0.01	0.005	0.001	0.001	ND	mg/L
Lead (Pb)	Various	0.1	0.05	0.01	0.01	ND	mg/L
Antimony (Sb)	Various	0.1	0.05	0.01	0.01	ND	mg/L
Cobalt (Co)	Various	0.05	0.02	0.01	0.01	ND	mg/L
Nickel (Ni)	Various	0.2	0.1	0.05	0.05	ND	mg/L
Silver (Ag)	Various	0.1	0.05	0.005	0.005	ND	mg/L
Copper (Cu)	Various	1	0.5	0.25	0.25	ND	mg/L
Zinc (Zn)	Various	5.0	1.0	0.5	0.5	ND	mg/L
Total Chromium (Cr)	Various	0.2	0.1	0.05	0.05	ND	mg/L
Chromium VI (Cr VI)	Various	0.05	0.005	0.001	0.001	ND	mg/L
Barium (Ba)	Various	Sample and report only			1	ND	mg/L
Selenium (Se)	Various	Sample and report only			1	ND	mg/L
Tin (Sn)	Various	Sample and report only			1	ND	mg/L

**Remark**

- |     |   |  |     |   |   |
|-----|---|--|-----|---|---|
| ND  | = | Not detected   | NA  | = | Not applicable  |
| D   | = | Detected   | -   | = | Did not perform   |
| *   | = | See remark   | (f) | = | Parameter tested in field   |
| @   | = | Maximum holding time exceeded,<br>Red flag in the ZDHC Gateway – Wastewater Module.<br>Probable error in results due to the holding time.          | (T) | = | Handling temperature exceeded                                       |
| #   | = | Non accredited parameter   | (S) | = | Analysis was subcontracted for testing - E. coli, AOX & T-Nitrogen. |
| [a] | = | The local legal standard name and legal standard number is referenced to discharge permit (or contractual agree by CETP) that provided by company. |     |   |   |



Report Number

**(6823)073-0227**

### 3. Alkylphenols (APs) & AlkylphenolEthoxylates (APEOs)

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

Alkylphenols (APs) & Alkylphenoethoxylates (APEOs)	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Octylphenol (OP)	140-66-9/ 1806-26-4/ 27193-28-8	0.005	ND	ppm
Nonylphenol (NP)	104-40-5/ 11066-49-2/ 25154-52-3/ 84852-15-3	0.005	ND	ppm
Octylphenoethoxylates (OPEOs)	9002-93-1/ 9036-19-5/ 68987-90-6	0.005	ND	ppm
Nonylphenoethoxylates (NPEOs)	9016-45-9/ 26027-38-3/ 37205-87-1/ 68412-54-4/ 127087-87-0	0.005	ND	ppm

### 4. Chlorobenzenes & Chlorotoluenes

USEPA 8260D, 8270E, Purge and Trap, Head Space, Dichloromethane extraction followed by GC-MS

Chlorobenzenes & Chlorotoluenes	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
1,2-Dichlorobenzene	95-50-1	0.0002	ND	ppm
Other isomers of mono-, di-, tri-, tetra-, penta-, and hexa- chlorobenzene and mono-, di-, tri-, tetra-, and penta- chlorotoluene	Various	0.0002	ND	ppm

## 5. Chlorophenols

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

Chlorophenols	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
2-Chlorophenol	95-57-8	0.0005	ND	ppm
3-Chlorophenol	108-43-0	0.0005	ND	ppm
4-Chlorophenol	106-48-9	0.0005	ND	ppm
2,3-Dichlorophenol	576-24-9	0.0005	ND	ppm
2,4-Dichlorophenol	120-83-2	0.0005	ND	ppm
2,5-Dichlorophenol	583-78-8	0.0005	ND	ppm
2,6-Dichlorophenol	87-65-0	0.0005	ND	ppm
3,4-Dichlorophenol	95-77-2	0.0005	ND	ppm
3,5-Dichlorophenol	591-35-5	0.0005	ND	ppm
2,4,6-Trichlorophenol	88-06-2	0.0005	ND	ppm
2,3,5-Trichlorophenol	933-78-8	0.0005	ND	ppm
2,3,6-Trichlorophenol	933-75-5	0.0005	ND	ppm
2,4,5-Trichlorophenol	95-95-4	0.0005	ND	ppm
2,3,4-Trichlorophenol	15950-66-0	0.0005	ND	ppm
3,4,5-Trichlorophenol	609-19-8	0.0005	ND	ppm
2,3,4,5-Trichlorophenol	4901-51-3	0.0005	ND	ppm
2,3,4,6-Tetrachlorophenol	58-90-2	0.0005	ND	ppm
2,3,5,6-Tetrachlorophenol	935-95-5	0.0005	ND	ppm
Pentachlorophenol (PCP)	87-86-5	0.0005	ND	ppm

**6. Azo dyes**

Reduction step with sodium dithionite, solvent extraction EPA 8270E and ISO 14362-1 GC/MS and LC/MS/MS

Azo Dyes	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
4,4-Methylene-bis-(2-chloro-aniline)	101-14-4	0.0001	ND	ppm
4,4-methylenedianiline	101-77-9	0.0001	ND	ppm
4,4-Oxydianiline	101-80-4	0.0001	ND	ppm
4-Chloroaniline	106-47-8	0.0001	ND	ppm
3,3-Dimethoxybenzidine	119-90-4	0.0001	ND	ppm
3,3-Dimethylbenzidine	119-93-7	0.0001	ND	ppm
6-methoxy-m-toluidine	120-71-8	0.0001	ND	ppm
2,4,5-Trimethylaniline	137-17-7	0.0001	ND	ppm
4,4-Thiodianiline	139-65-1	0.0001	ND	ppm
4-Aminoazobenzene	60-09-3	0.0001	ND	ppm
4-methoxy-m-phenylenediamine	615-05-4	0.0001	ND	ppm
4,4-methylenedi-o-toluidine	838-88-0	0.0001	ND	ppm
2,6-Xylidine	87-62-7	0.0001	ND	ppm
o-Anisidine	90-04-0	0.0001	ND	ppm
2-Naphthylamine	91-59-8	0.0001	ND	ppm
3,3'-Dichlorobenzidine	91-94-1	0.0001	ND	ppm
4-Aminobiphenyl	92-67-1	0.0001	ND	ppm
Benzidine	92-87-5	0.0001	ND	ppm
o-Toluidine	95-53-4	0.0001	ND	ppm
2,4-Xylidine	95-68-1	0.0001	ND	ppm
4-Chloro-o-toluidine	95-69-2	0.0001	ND	ppm
4-Methyl-m-phenylenediamine	95-80-7	0.0001	ND	ppm
o-Aminoazotoluene	97-56-3	0.0001	ND	ppm
5-Nitro-o-toluidine	99-55-8	0.0001	ND	ppm
2-Naphthylammoniumacetate	553-00-4	0.0001	ND	ppm
2,4,5-trimethylaniline hydrochloride	21436-97-5	0.0001	ND	ppm
4-chloro-o-toluidinium chloride	3165-93-3	0.0001	ND	ppm
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisoole sulphate	39156-41-7	0.0001	ND	ppm





Report Number

**(6823)073-0227**

**7. Carcinogenic dyes**

By Liquid Chromatography Mass Spectrometry (LC-MS) analysis.

Carcinogenic dyes	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
C.I. Direct Black 38	1937-37-7	0.5	ND	ppm
C.I. Direct Blue 6	2602-46-2	0.5	ND	ppm
C.I. Acid Red 26	3761-53-3	0.5	ND	ppm
C.I. Basic Red 9	569-61-9	0.5	ND	ppm
C.I. Direct Red 28	573-58-0	0.5	ND	ppm
C.I. Basic Violet 14	632-99-5	0.5	ND	ppm
C.I. Disperse Blue 1	2475-45-8	0.5	ND	ppm
C.I. Disperse Blue 3	2475-46-9	0.5	ND	ppm
C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5	0.5	ND	ppm
C.I. Basic Green 4 (malachite green chloride)	569-64-2	0.5	ND	ppm
C.I. Basic Green 4 (malachite green oxalate)	2437-29-8	0.5	ND	ppm
C.I. Basic Green 4 (malachite green)	10309-95-2	0.5	ND	ppm
Disperse Orange 11	82-28-0	0.5	ND	ppm
Basic violet 3 with >0.1% of Michler's Ketone	548-62-9	0.5	ND	ppm
C.I. Acid Violet 49	1694-09-3	0.5	ND	ppm



Report Number

**(6823)073-0227**

**8. Disperse dyes**

By Liquid Chromatography Mass Spectrometry (LC-MS) analysis.

Disperse dyes	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Disperse Yellow 1	119-15-3	0.05	ND	ppm
Disperse Blue 102	12222-97-8	0.05	ND	ppm
Disperse Blue 106	12223-01-7	0.05	ND	ppm
Disperse Yellow 39	12236-29-2	0.05	ND	ppm
Disperse Orange 37/59/76	13301-61-6	0.05	ND	ppm
Disperse Brown 1	23355-64-8	0.05	ND	ppm
Disperse Orange 1	2581-69-3	0.05	ND	ppm
Disperse Yellow 3	2832-40-8	0.05	ND	ppm
Disperse Red 11	2872-48-2	0.05	ND	ppm
Disperse Red 1	2872-52-8	0.05	ND	ppm
Disperse Red 17	3179-89-3	0.05	ND	ppm
Disperse Blue 7	3179-90-6	0.05	ND	ppm
Disperse Blue 26	3860-63-7	0.05	ND	ppm
Disperse Yellow 49	54824-37-2	0.05	ND	ppm
Disperse Blue 35	12222-75-2	0.05	ND	ppm
Disperse Blue 124	61951-51-7	0.05	ND	ppm
Disperse Yellow 9	6373-73-5	0.05	ND	ppm
Disperse Orange 3	730-40-5	0.05	ND	ppm
Disperse Blue 35	56524-77-7	0.05	ND	ppm



**9. Flame retardants**

USEPA 8270E, ISO 22032, USEPA 527 and USEPA 8321B Dichloromethane extraction GC-MS or LC-MS(-MS)

Determined as total boron via ICP

Brominated flame retardants	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	0.025	ND	ppm
Decabromodiphenyl ether (DecaBDE)	1163-19-5	0.025	ND	ppm
Tris(2,3-dibromopropyl) phosphate (TRIS)	126-72-7	0.025	ND	ppm
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	0.025	ND	ppm
Octabromodiphenyl ether (OctaBDE)	32536-52-0	0.025	ND	ppm
Bis(2,3-dibromopropyl) phosphate	5412-25-9	0.025	ND	ppm
Tris(1-aziridinyl)phosphine oxide (TEPA)	545-55-1	0.025	ND	ppm
Polybromobiphenyls (PBBs)	59536-65-1	0.025	ND	ppm
Tetrabromobisphenol A (TBBPA)	79-94-7	0.025	ND	ppm
Hexabromocyclododecane (HBCDD)	3194-55-6	0.025	ND	ppm
2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	0.025	ND	ppm
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	0.025	ND	ppm
Tris-(2-chloro-1-methylethyl) phosphate (TCPP)	13674-84-5	0.025	ND	ppm
Decabromobiphenyl (DecaBB)	13654-09-6	0.025	ND	ppm
Dibromobiphenyls (DiBB)	Various	0.025	ND	ppm
Octabromobiphenyls (OctaBB)	Various	0.025	ND	ppm
Dibromopropylether	21850-44-2	0.025	ND	ppm
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3	0.025	ND	ppm
Hexabromodiphenyl ether (HexaBDE)	36483-60-0	0.025	ND	ppm
Monobromobiphenyls (MonoBB)	Various	0.025	ND	ppm
Monobromodiphenylethers (MonoBDEs)	Various	0.025	ND	ppm
Nonabromobiphenyls (NonaBB)	Various	0.025	ND	ppm
Nonabromodiphenyl ether (NonaBDE)	63936-56-1	0.025	ND	ppm
Tetrabromodiphenyl ether (TetraBDE)	40088-47-9	0.025	ND	ppm
Tribromodiphenylethers (TriBDEs)	Various	0.025	ND	ppm
Boric acid	10043-35-3/ 11113-50-1	0.1	ND	ppm
Diboron trioxide	1303-86-2	0.1	ND	ppm
Disodium octaborate	12008-41-2	0.1	ND	ppm
Disodium tetraborate anhydrous	1303-96-4/ 1330-43-4	0.1	ND	ppm
Tetraboron disodium heptaoxide, hydrate	12267-73-1	0.1	ND	ppm



Report Number

**(6823)073-0227**

#### 10. Glycols

USEPA 8270E Liquid extraction, LC-MS GC-MS

Glycols	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Bis(2-methoxyethyl)-ether	111-96-6	0.05	ND	ppm
2-ethoxyethanol	110-80-5	0.05	ND	ppm
2-ethoxyethyl acetate	111-15-9	0.05	ND	ppm
Ethylene glycol dimethyl ether	110-71-4	0.05	ND	ppm
2-methoxyethanol	109-86-4	0.05	ND	ppm
2-methoxyethylacetate	110-49-6	0.05	ND	ppm
2-methoxypropylacetate	70657-70-4	0.05	ND	ppm
Triethylene glycol dimethyl ether	112-49-2	0.05	ND	ppm

#### 11. Chlorinated solvents

USEPA 8260D Headspace GC-MS or Purge and trap GC-MS

Chlorinated solvents	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
1,2-Dichloroethane	107-06-2	0.001	ND	ppm
Methylene chloride	75-09-2	0.001	ND	ppm
Trichloroethene	79-01-6	0.001	ND	ppm
Tetrachloroethene	127-18-4	0.001	ND	ppm

#### 12. Organotin compounds

ISO 17353 derivatisation with NaB (C<sub>2</sub>H<sub>5</sub>)<sub>4</sub> GC-MS

Organotin compounds	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Mono-, di-and tri-methyltin derivatives	Various	0.00001	ND	ppm
Mono-, di-and tri-butyltin derivatives	Various	0.00001	ND	ppm
Mono-, di-and tri-phenyltin derivatives	Various	0.00001	ND	ppm
Mono-, di-and tri-octyltin derivatives	Various	0.00001	ND	ppm
Tricyclohexyltin (TCyHT)	Various	0.00001	ND	ppm
Dipropyltin compounds (DPT)	Various	0.00001	ND	ppm
Tetrabutyltin compounds (TeBT)	Various	0.00001	ND	ppm
Tripropyltin compounds (TPT)	Various	0.00001	ND	ppm
Tetraoctyltin compounds (TeOT)	Various	0.00001	ND	ppm
Tetraethyltin compounds (TeET)	Various	0.00001	ND	ppm

**13. Phthalates**

USEPA 8270E, ISO 18856 Dichloromethane extraction GC-MS

Phthalates	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Di-2-ethylhexyl phthalate (DEHP)	117-81-7	0.01	ND	ppm
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8	0.01	ND	ppm
Di-n-octyl phthalate (DNOP)	117-84-0	0.01	ND	ppm
Di-iso-decyl phthalate (DIDP)	26761-40-0	0.01	ND	ppm
Di-iso-nonyl phthalate (DINP)	28553-12-0	0.01	ND	ppm
Di-n-hexyl phthalate (DnHP)	84-75-3	0.01	ND	ppm
Dibutyl phthalate (DBP)	84-74-2	0.01	ND	ppm
Butyl benzyl phthalate (BBP)	85-68-7	0.01	ND	ppm
Diethyl phthalate (DEP)	84-66-2	0.01	ND	ppm
Di-n-propyl phthalate (DPRP)	131-16-8	0.01	ND	ppm
Di-iso-butyl phthalate (DIBP)	84-69-5	0.01	ND	ppm
Di-cyclohexyl phthalate (DCHP)	84-61-7	0.01	ND	ppm
Di-iso-octyl phthalate (DIOP)	27554-26-3	0.01	ND	ppm
1,2-benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4/ 68515-50-4	0.01	ND	ppm
1,2-benzenedicarboxylic acid, di-C6-11-branched alkyl esters, C7-rich (DIHP)	71888-89-6/ 84777-06-0	0.01	ND	ppm
Di-n-pentylphthalates	131-18-0	0.01	ND	ppm
Diisopentylphthalates	605-50-5	0.01	ND	ppm
Dinonyl phthalate (DNP)	84-76-4	0.01	ND	ppm

**14. Perfluorinated chemicals (PFCs)**

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

Perfluorinated chemicals (PFCs)	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Perfluorooctane sulfonic acid (PFOS) and related substances	Various	0.00001	ND	ppm
Perfluorooctanoic acid (PFOA) and related substances	Various	0.001	ND	ppm



Report Number

**(6823)073-0227**

**15. Polycyclic aromatic hydrocarbons (PAHs)**

USEPA 8270E DIN 38407-39 solvent extraction GC-MS

Polycyclic aromatic hydrocarbons (PAHs)	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Benzo(a)pyrene (BaP)	50-32-8	0.001	ND	ppm
Anthracene	120-12-7	0.001	ND	ppm
Pyrene	129-00-0	0.001	ND	ppm
Benzo(ghi)perylene	191-24-2	0.001	ND	ppm
Benzo(e)pyrene	192-97-2	0.001	ND	ppm
Indeno (1,2,3-cd)pyrene	193-39-5	0.001	ND	ppm
Benzo(j)fluoranthene	205-82-3	0.001	ND	ppm
Benzo(b)fluoranthene	205-99-2	0.001	ND	ppm
Fluoranthene	206-44-0	0.001	ND	ppm
Benzo(k)fluoranthene	207-08-09	0.001	ND	ppm
Acenaphthylene	208-96-8	0.001	ND	ppm
Chrysene	218-01-9	0.001	ND	ppm
Dibenz(a,h)anthracene	53-70-3	0.001	ND	ppm
Benzo(a)anthracene	56-55-3	0.001	ND	ppm
Acenaphthene	83-32-9	0.001	ND	ppm
Phenanthrene	85-01-8	0.001	ND	ppm
Fluorene	86-73-7	0.001	ND	ppm
Naphthalene	91-20-3	0.001	ND	ppm

**16. Volatile organic compounds (VOCs)**

ISO 11423-1 Headspace or Purge and trap GC-MS USEPA 8260D Add ISO 20595 Static headspace for determination of VOC in wastewater

ISO 11423-1 Headspace or Purge and trap GC-MS EPA 8270 BS EN 12673-1999

ISO 11423-1 Headspace or Purge and trap GC-MS USEPA 8260D

HJ 1067 or EPA 8260D or ISO 11423-1

Volatile organic compounds (VOCs)	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Benzene	71-43-2	0.001	ND	ppm
Xylene	1330-20-7	0.001	ND	ppm
o-cresol	95-48-7	0.001	ND	ppm
p-cresol	106-44-5	0.001	ND	ppm
m-cresol	108-39-4	0.001	ND	ppm
Toluene <sup>a</sup>	108-88-3	0.001	ND	ppm

a = report only for mock leather

**17. Anti-Microbials & Biocides**

USEPA 8270E Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC-MS BS EN 12673-1999  
USEPA 8270E Solvent extraction followed by GC-MS or ISO 14154:2005 and determination by LCMS/LCMSMS

Carcinogenic dyes	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
o-Phenylphenol (+salts)	90-43-7	0.1	ND	ppm
Triclosan	3380-34-5	0.1	ND	ppm
Permethrin	Various	0.5	ND	ppm

**18. Chlorinated Paraffins**

EPA 3510 and analyzed by ISO18219-2:2021 Method for MCCP with GC-MS(NCI) or LC-MS/MS  
EPA 3510 and analyzed by ISO18219-1:2021, ISO 12010:2019 Methods for SCCP with GC-MS(NCI) or LC-MS/MS

Chlorinated Paraffins	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Medium-chain chlorinated paraffins (MCCPs) (C14-C17)	85535-85-9	0.5	ND	ppm
Short-chain chlorinated paraffins (C10-C13)	85535-84-8	0.025	ND	ppm

**19. N,N-di-methylformamide (DMFa)**

EPA 8015, EPA 8270E

N,N-di-methylformamide (DMFa)	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Dimethyl formamide; N,N-dimethylformamide (DMFa) <sup>a</sup>	68-12-2	1	ND	ppm

a= report only for mock leather

**20. Dyes – Navy Blue Colourant**

By Liquid Chromatography Mass Spectrometry (LC-MS) analysis.

Dyes – Navy Blue Colourant	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
Component 1: C39H23Cl-CrN7O12S 2Na	118685-33-9	0.5	ND	ppm
Component 2: C46H-30CrN10O20S2 3Na	Not allocated	0.5	ND	ppm



Report Number

**(6823)073-0227**

**21. Other /Miscellaneous Chemicals**

By Liquid Chromatography Mass Spectrometry (LC-MS or LC-MS-MS) analysis.  
Determine as total boron and total zinc via ICP

Other /Miscellaneous Chemicals	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
AEEA [2-(2-aminoethylamino)ethanol]	111-41-1	0.5	ND	ppm
Bisphenol A	80-05-7	0.01	ND	ppm
Thiourea	62-56-6	0.05	ND	ppm
Quinoline	91-22-5	0.05	ND	ppm
Borate, zinc salt	12767-90-7	0.1	ND	ppm
Silica (used in sand blasting)	14464-46-1	/	NA	ppm

**22. UV Absorbers**

USEPA 8270 ISO 22032, USEPA 527 and USEPA 8321B.  
Dichloromethane extraction GC-MS or LC-MS(-MS)

UV Absorbers	CAS no.	Reporting limit (ppm)	Result Sample 1 (Before treatment)	Unit
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	36437-37-3	0.1	ND	ppm
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	0.1	ND	ppm
2-benzotriazol-2-yl-4,6-di-tertbutylphenol (UV-320)	3846-71-7	0.1	ND	ppm
2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)	3864-99-1	0.1	ND	ppm





Report Number

**(6823)073-0227**

**23. Sludge Parameters – Step 1 – Metals (Sludge Disposal Pathways = C)**

With reference to EPA 3015A, 6020A, 200.8, 6020B, 3051A and ISO 17294-2 and analyzed by ICP-MS

Sludge Parameters - Metals	CAS no.	Reporting limit (ppm)	Result Sample 3 (Sludge)	Unit
Arsenic	-	5	ND	ppm
Barium	-	200	ND	ppm
Cadmium	-	1	ND	ppm
Cobalt	-	400	ND	ppm
Copper	-	50	151	ppm
Lead	-	5	ND	ppm
Nickel	-	20	ND	ppm
Selenium	-	5	ND	ppm
Silver	-	50	ND	ppm
Total Chromium	-	50	ND	ppm
Zinc	-	400	ND	ppm
Chromium (VI)	-	20	ND	ppm
Mercury	-	1	ND	ppm
Antimony	-	5	ND	ppm



Report Number

**(6823)073-0227**

**24. Sludge Parameters – Step 1 - Anions**

ISO 6703-1 & 2, ISO 14403-1 & 2, USEPA 335.2, APAH 4500-CN or HJ 484

Sludge Parameters - Anions	CAS no.	Reporting limit (ppm)	Result Sample 3 (Sludge)	Unit
Cyanide	-	20	ND	ppm

**25. Sludge Parameters – Step 1 - Conventional**

With reference to ISO 10523, EPA 150.2, APHA 4500-H+  
USEPA 160.3  
EPA SW-846 or EPA 9095B  
EPA 1681

Sludge Parameters - Conventional	CAS no.	Reporting limit (ppm)	Result Sample 3 (Sludge)	Unit
pH	-	/	8.5	-
% Solids	-	/	42.06	%
Paint Filter Test	-	/	PASS	-
Fecal Coliform	-	/	>1600	MPN/100 ml

**26. Sludge Parameters – Step 1 – MRSL – Alkylphenols (APs) and Alkylphenol Ethoxylates (APEOs): including all isomers**

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

Sludge Parameters – APs and APEOs	CAS no.	Reporting limit (ppm)	Result Sample 3 (Sludge)	Unit
Nonylphenol ethoxylates (NPEO)	Various	0.4	ND	ppm
Nonylphenol (NP), mixed isomers	Various	0.4	ND	ppm
Octylphenol ethoxylates (OPEO)	Various	0.4	ND	ppm
Octylphenol (OP), mixed isomers	Various	0.4	ND	ppm



Report Number

**(6823)073-0227**

**27. Sludge Parameters – Step 1 – MRSL – Polycyclic Aromatic Hydrocarbons (PAHs)**

USEPA 8270E DIN 38407-39 Solvent extraction GC-MS

Sludge Parameters – PAHs	CAS no.	Reporting limit (ppm)	Result Sample 3 (Sludge)	Unit
Acenaphthene	83-32-9	0.2	ND	ppm
Acenaphthylene	208-96-8	0.2	ND	ppm
Anthracene	120-12-7	0.2	ND	ppm
Benzo[a]anthracene	56-55-3	0.2	ND	ppm
Benzo[a]pyrene (BaP)	50-32-8	0.2	ND	ppm
Benzo[b]fluoranthene	205-99-2	0.2	ND	ppm
Benzo[e]pyrene	192-97-2	0.2	ND	ppm
Benzo[ghi]perylene	181-24-2	0.2	ND	ppm
Benzo[j]fluoranthene	205-82-3	0.2	ND	ppm
Benzo[k]fluoranthene	207-08-9	0.2	ND	ppm
Chrysene	218-01-9	0.2	ND	ppm
Dibenz[a,h]anthracene	53-70-3	0.2	ND	ppm
Fluoranthene	206-44-0	0.2	ND	ppm
Fluorene	86-73-7	0.2	ND	ppm
Indeno[1,2,3-cd]pyrene	193-39-5	0.2	ND	ppm
Naphthalene	91-20-3	0.2	ND	ppm
Phenanthrene	85-01-8	0.2	ND	ppm
Pyrene	129-00-0	0.2	ND	ppm

**28. Sludge Parameters – Step 1 – MRSL – Chlorotoluenes**

USEPA 8260D, 8270E, Purge and Trap, Head Space, Dichloromethane extraction followed by GC-MS

Sludge Parameters – Chlorotoluenes	CAS no.	Reporting limit (ppm)	Result Sample 3 (Sludge)	Unit
Isomers of mono-, di-, tri-, tetra- and penta chlorotoluene	Various	0.2	ND	ppm



Report Number

**(6823)073-0227**

**29. Sludge Parameters – Step 2 – Metals**

With reference to EPA 3015A, 6020A, 200.8, 6020B, 3051A and ISO 17294-2 and analyzed by ICP-MS

Sludge Parameters – Step 2 - Metals	CAS no.	Reporting limit (ppm)	Result Sample 4 (Leachate)	Unit
Antimony	-	/	NA	ppm
Arsenic	-	/	NA	ppm
Barium	-	/	NA	ppm
Cadmium	-	/	NA	ppm
Cobalt	-	/	NA	ppm
Copper	-	/	NA	ppm
Lead	-	/	NA	ppm
Nickel	-	/	NA	ppm
Selenium	-	/	NA	ppm
Silver	-	/	NA	ppm
Total Chromium	-	/	NA	ppm
Zinc	-	/	NA	ppm
Chromium (VI)	-	/	NA	ppm
Mercury	-	/	NA	ppm

**Remark**

ND = Not detected	NA = Not applicable
D = Detected	- = Did not perform
* = See remark	(f) = Parameter tested in field
@ = Maximum holding time exceeded, Red flag in the ZDHC Gateway – Wastewater Module. Probable error in results due to the holding time.	(T) = Handling temperature exceeded
	(S) = Analysis was subcontracted for testing -Fecal Coliform, Anti- Microbials & Biocides, UV Absorbers & Other/Miscellaneous Chemicals

**Annex A: Sampling photos & Sampling locations**

Sample 1 – Sampling Point  
(GPS Location: N 23° 53' 60"; E 90° 39' 0")



Sample 1 – Labelled Sample Bottles



Sample 1 – Sample Packaging



Sample 1 – Sampling Point Surrounding Environment  
(GPS Location: N 23° 53' 60"; E 90° 39' 0")



Sample 1 – Sample for Phthalate Test





**Annex A: Sampling photos & Sampling locations (continued)**

Sample 2 – Sampling Point  
(GPS Location: N 23° 53' 60"; E 90° 39' 0")



Sample 2 – Sampling Point Surrounding Environment  
(GPS Location: N 23° 53' 60"; E 90° 39' 0")



Sample 2 – Labelled Sample Bottles



Sample 2 – pH Measurement



Sample 2 – Sample Packaging



**Annex A: Sampling photos & Sampling locations (continued)**

Sample 3 – Sampling Point  
(GPS Location: N 23° 53' 60"; E 90° 39' 0")



Sample 3 – Labelled Sample Bottles



Sample 3 – Sampling Point Surrounding Environment  
(GPS Location: N 23° 53' 60"; E 90° 39' 0")



Sample 3 – Sample Packaging





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Report Number

**(6823)073-0227**

**Annex B: On-site Field Data Record Sheet:**

	<b>FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)</b>	CPSD-AN-00613-DATA 04
		Issue Date:
		Version No.: 18 Business Line: Analytical

**(6823) 073-0227**

**General Data**

Laboratory Sample Number: \_\_\_\_\_

Client Name: \_\_\_\_\_

Field Contact Person: M.H. Ferdous Phone No: 01714693322

Project (Facility Name and Address): Hamid Fabrics Ltd, Shilmandi, Pachona, Narsingdi

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: 13.03.23

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

\*Note: It would be selected more than one

**Sampling Collection Information**

Sampling Location / Description: ETP Inlet

Sampling Device Description/ Owner: \_\_\_\_\_

Sampling mode: Autosampler/ Manual

**Sampler Information**

Sampler Name/ Email: mazudran27496@gmail.com

Sampler ZDHC Accredited no.: C74D106817431

ZDHC Composite Sample Code: \_\_\_\_\_

**Field Data for Wastewater**

Arrival Time:	<u>10.20</u>	Departure Time:	<u>13.10</u>	
Field Parameters	pH: <u>12.4</u>	Temp: <u>41.7</u> °C	Color: <u>Blue</u>	Flow rate: (volume/min)
Control No. of field equipment				
Factory with effluent treatment plant:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Sample matrix:	<input type="checkbox"/>	Incoming water (if required)		
	<input checked="" type="checkbox"/>	Wastewater before treatment		
	<input type="checkbox"/>	Wastewater after treatment – water at discharge point		
Sampler container number	<u>18</u>			

ZDHC Wastewater Flow Device Dimensions				
Measurement (cm)	Meter	Pipe (O)	Flume (U)	Wier (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									
Recording time	ID	Sampling Time (Hours)							Average (Report with lab data)
		0	1	2	3	4	5	6	
Temp (°C):	Wastewater Discharge	<u>41.7</u>							
	Receiving Water	<u>—</u>							
pH:		<u>12.4</u>							
Dissolved Oxygen (mg/L):		<u>—</u>							
Total Chlorine (mg/L):		<u>—</u>							
Persistent Foam (Yes/ No):		<u>—</u>							
Wastewater Flow meter(L/min):	<u>m<sup>3</sup>/h</u>	<u>108</u>							
Alternate measured Flow	Depth (cm)	<u>/</u>							
	Velocity (cm/sec)	<u>/</u>							
Color (visual estimation):		<u>Blue</u>							
Volume collected, mL		<u>18 x 1000</u>							
Total volume collected		<u>18000</u>	Remark: Total volume collected must be greater than total of sample size required						





**BUREAU  
VERITAS**

Report Number

**(6823)073-0227**

**Annex B: On-site Field Data Record Sheet (continued)**

	<b>FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)</b>		<b>CPSD-AN-00613-DATA 04</b>
			<b>Issue Date:</b>
			<b>Version No.: 18</b>
			<b>Business Line: Analytical</b>

Analysis Required and Preservation Method				
Tests (ZDHC MRSL 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)	1. Phthalate	✓	1000 mL total or 1000 mL each	Amber Glass, washed with nitric acid, Without adding acid
	2. Chlorobenzenes, Chlorotoluene & PAH	✓		
	3. SCCPs	✓		
	4. APS	✓		
5. APEOs	✓	100 mL		
6. Chlorophenols & Cresols	✓	100 mL		
7. Flame retardant	✓	500 mL		
8. Dyes	✓	10 mL		
9. Glycol	✓	50 mL		
10. *Pesticides	✗	1000 mL		
11. *Nitrosamine	✗	10 mL		
12. Banned Azodyes	✓	2000 mL		
13. *Free primary aromatic amines	✗	500 mL		
14. Organotin Compounds	✓	500 mL		
15. UV absorbers	✓	100		
16. BPA	✓	2		
17. Preservatives	✓	52		
18. VOC & Halogenated Solvents (Remark 6)	✓	10 mL		
19. PFCs (Remark 6)	✓	2 mL	PE, washed with pesticide grade Acetone	

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)	2000 mL total or 2000 mL each	Amber Glass, washed with nitric acid,	Without adding acid
	21. Total dissolved solids (TDS)			
22. 5-day Biochemical Oxygen Demand (BOD5)		1000 mL		
23. Colour		100 mL		
24. Heavy Metals except Cr(VI) & Total-P (Remark 6)		9 mL	PE, washed with nitric acid	Acidify to pH 2 with HNO <sub>3</sub>
25. Cyanide		500 mL	Amber Glass, washed with pesticide grade acetone	Adjust pH 12 with 50% NaOH, add 0.05 ml of 10% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>
26. Cr(VI)		95 mL	Amber Glass, washed with nitric acid	Filter by 0.45µm filter in field, fill to full container without air gap; adjust pH to 9.0-9.5 by adding ammonium buffer
27. Chemical oxygen demand (COD)		150 mL		Acidify to pH 2 with H <sub>2</sub> SO <sub>4</sub>
28. Phenols		500 mL		Fill to full container without air gap; acidify to pH 2 with H <sub>2</sub> SO <sub>4</sub>
29. Oil and Grease & Total Hydrocarbon		1000 mL		
30. *Formaldehyde		25 mL	PE, washed with pesticide grade Acetone;	Fill to full container without air gap; add 2 drops of 2M zinc acetate, adjust pH to 9 with 6M NaOH
31. Sulfide (Remark 5)		50 mL		
32. E.coli (Remark 6)		125 mL	PE, clean, sterile, non-reactive	Add 0.1 ml of 10% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 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		
35. Ammonium-N		500 mL	Amber Glass, washed with nitric acid,	Acidify to pH 2 with H <sub>2</sub> SO <sub>4</sub>
36. Adsorbable organically bound halogens (AOX)		100 mL		Acidify to pH 2 with HNO <sub>3</sub>
37. Acute aquatic toxicity: Luminus Bacteria; Fish Egg; Daphne; Algae;		1000 mL		
38. Sulphate		100 mL		Without adding acid

ID-AN-00613-DATA 04 FIELD DATA RECORD SHEET




BUREAU VERITAS

Report Number

(6823)073-0227

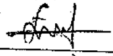
Annex B: On-site Field Data Record Sheet (continued)

	<b>FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)</b>			CPSD-AN-00613-DATA 04	
				Issue Date:	
				Version No.: 18	
				Business Line: Analytical	
39. Chloride	1	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 1-9, 12, 14-20, 31-36, 39, 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, 26-29, 31, 34-37
- Free primary aromatic amine, pesticides, nitrosamine and formaldehyde are not in the scope of ZDHC Guideline, they are tested upon request.
- Refer to CPSD-AN-G00019-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:

  
Full name: Md. Masud Rana

Date: 13.03.23

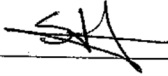
Comment from factory

Acknowledgement by factory

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

Signatory of Factory Representative:

Full Name:



Date: 13.03.23




BUREAU VERITAS

Report Number

(6823)073-0227

Annex B: On-site Field Data Record Sheet (continued)

	<b>FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)</b>	CPD-AN-00613-DATA 04 Issue Date: _____ Version No.: 18 Business Line: Analytical
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**General Data**

Laboratory Sample Number: \_\_\_\_\_

Client Name: (6823) 073-0227

Field Contact Person: M.H Ferdous Phone No: 01714693322

Project (Facility Name and Address): Hamid Fabrics Ltd. Shimandi, PachDona, NawrSingdi

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 (Brahmaputra River)

Date of collection: 13.08.23

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

**Sampling Collection Information**

Sampling Location / Description: ETP Outlet

Sampling Device Description / Owner: \_\_\_\_\_

Sampling mode: Autosampler/ Manual

**Sampler Information**

Sampler Name/ Email: masudrcvna27496@gmail.com

Sampler ZDHC Accredited no.: 674D106817431

ZDHC Composite Sample Code: \_\_\_\_\_

**Field Data for Wastewater**

Arrival Time:	<u>10.20</u>	Departure Time:	<u>13.10</u>
Field Parameters	pH: <u>8.4</u>	Temp: <u>35.6</u> °C	Color: <u>Reddish</u>
Control No. of field equipment		Flow rate: (volume/min)	
Factory with effluent treatment plant:	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> 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	<u>12</u>		

**ZDHC Wastewater Flow Device Dimensions**

Measurement (cm)	Meter	Pipe (O)	Plume (U)	Wier (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)	0								Average (Report with lab data)
	ID	1	2	3	4	5	6		
Recording time	Time	<u>11.30</u>							
Temp (°C):	Wastewater Discharge	<u>35.6</u>							
	Receiving Water	<u>29.9</u>							
pH:		<u>8.4</u>							
Dissolved Oxygen (mg/L):		<u>7.29</u>							
Total Chlorine (mg/L):		<u>0.2</u>							
Persistent Foam (Yes/ No):		<u>NO</u>							
Wastewater Flow meter (L/min):	<u>m<sup>3</sup>/h</u>	<u>14</u>							
Alternate measured Flow	Depth (cm)	<u>/</u>							
	Velocity (cm/sec)	<u>/</u>							
Color (visual estimation):		<u>Reddish</u>							
Volume collected, mL		<u>1271000</u>							
Total volume collected		<u>12000</u>							

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



BUREAU  
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Report Number

(6823)073-0227

Annex B: On-site Field Data Record Sheet (continued)

	<b>FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)</b>		<b>CPSD-AN-00613-DATA 04</b>
			<b>Issue Date:</b>
			<b>Version No.: 18</b>
			<b>Business Line: Analytical</b>

**Analysis Required and Preservation Method**

Tests (ZDHC MRSL 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) 1. Phthalate 2. Chlorobenzenes, Chlorotoluene & PAH 3. SCCPs 4. APS	✓	1000 mL total or 1000 mL each	Amber Glass, washed with nitric acid,	Without adding acid		
5. APEOs	✓	100 mL				
6. Chlorophenols & Cresols	✓	100 mL				
7. Flame retardant	✓	500 mL				
8. Dyes	✓	10 mL				
9. Glycol	✓	50 mL				
10. *Pesticides	✓	1000 mL				
11. *Nitrosamine	✓	10 mL				
12. Banned Azodyes	✓	2000 mL				
13. *Free primary aromatic amines	✓	500 mL				
14. Organotin Compounds	✓	500 mL				
15. UV absorbers	✓	100				
16. BPA	✓	2				
17. Preservatives	✓	52				
18. VOC & Halogenated Solvents (Remark 6)	✓	10 mL				Fill to full container without air gap; acidify to pH 2 with HCl
19. PFCs (Remark 6)	✓	2 mL			PE, washed with pesticide grade Acetone	Without adding acid

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)	✓	9 mL	PE, washed with nitric acid	Acidify to pH 2 with HNO <sub>3</sub>
25. Cyanide	✓	500 mL	Amber Glass, washed with pesticide grade acetone	Adjust pH 12 with 50% NaOH, add 0.05 ml of 10% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>
26. Cr(VI)	✓	95 mL	Amber Glass; washed with nitric acid	Filter by 0.45µm filter in field, fill to full container without air gap; adjust pH to 8.0-9.5 by adding ammonium buffer
27. Chemical oxygen demand (COD)	✓	150 mL		Acidify to pH 2 with H <sub>2</sub> SO <sub>4</sub>
28. Phenols	✓	500 mL		
29. Oil and Grease & Total Hydrocarbon	✓	1000 mL		
30. *Formaldehyde	✗	25 mL		
31. Sulfide (Remark 5)	✓	50 mL	PE, washed with pesticide grade Acetone;	Fill to full container without air gap; add 2 drops of 2M zinc acetate, adjust pH to 9 with 6M NaOH
32. E.coli (Remark 6)	✓	125 mL	PE, clean, sterile, non-reactive	Add 0.1 ml of 10% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , 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 <sub>2</sub> SO <sub>4</sub>
35. Ammonium-N	✓	500 mL		
36. Adsorbable organically bound halogens (AOX)	✓	100 mL		Acidify to pH 2 with HNO <sub>3</sub>
37. Acute aquatic toxicity: Luminus Bacteria; Fish Egg; Daphne; Algae;	✗	1000 mL		
38. Sulphate	✓	100 mL		



BUREAU VERITAS

Report Number

(6823)073-0227

Annex B: On-site Field Data Record Sheet (continued)

		<b>FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)</b>		CPSD-AN-00613-DATA 04	
				Issue Date:	
				Version No.: 18	
				Business Line: Analytical	
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 1-9, 12, 14-29, 31-36, 38, 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, 26-29, 31, 34-37  
Free primary aromatic amine, pesticides, nitrosamine and formaldehyde are not in the scope of ZDHC Guideline, they are tested upon request.
- Refer to CPSD-AN-G00019-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:

Full name: Md. Masud Rana

Date: 13.03.23

Comment from factory

Acknowledgement by factory

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

Signatory of Factory Representative:

Full Name:

Date: 13.03.23



BUREAU  
VERITAS

Report Number

(6823)073-0227

Annex B: On-site Field Data Record Sheet (continued)

	<b>FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)</b>		<b>CPSD-AN-00613-DATA 04</b>
	Issue Date:		
	Version No.: 18		
	Business Line: Analytical		

Field Data for Sludge									
Arrival Time:	16:20			Departure Time:	13:16				
Field Parameters	pH:	Temp: °C			Flow rate (volume/time) / sludge flux (weight/time):				
Control No. of field equipment	color: Black, Solid								
Sampling Time (Hours)	0	1	2	3	4	5	6	Average (Report with lab data)	
Recording time	ID								
	Time	11:50							
pH:									
Temp (°C):									
Flow rate (volume/time) / sludge flux (weight/time)									
Volume collected, mL									
Total volume collected	Remark: Total volume collected must be greater than total of sample size required								

Analysis Required and Preservation Method					
Factory with effluent treatment plant	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Sample matrix	Sludge in clarifier (sedimentation tank)			No	
Sampler container number	6				
Recording time	11:50				
Tests (MRSL Parameter)	Test required (✓)	Total of sample size	Type of container	Preservation method (Store sample at 2-8°C)	
Combined test or Individual test (Remark 3)	1. Phthalate	10g total or 10g each	Amber Glass, washed with nitric acid	Add 0.2 mL of 10% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (0.008% W/V)	
	2. Chlorobenzenes, Chlorotoluene & PAHs				
	3. SCCPs				
	4. APS				
5. APEOs	✓	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 <sub>2</sub> SO <sub>4</sub> . Add 0.02 mL of 10% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (0.008% W/V)
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. PFCs (Remark 5)		10 g			PE, wash with pesticide grade acetone


Tests (Conventional Parameters)	Test required (✓)	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 <sub>3</sub>
17. Cr(VI)	✓	2.5 g	Amber Glass, wash with nitric acid	Fill to full container without any air gap and acid add
18. Adsorbable organically bound halogens (AOX)	✗	1 g		
19. Extractable organohalides (EOX)	✗	20 g		
20. Total organic carbon (TOC)	✗	20 g	Amber Glass, wash with pesticide grade acetone	Adjust pH to 12-13 with 50% NaOH
21. Cyanide	✓	50 g		
22. Faecal Coliform	✓	20 g	PE, clean, sterile, non-reactive	Add 0.1 ml of 10% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , keep in dark



Report Number

(6823)073-0227

Annex B: On-site Field Data Record Sheet (continued)


			<b>FIELD DATA RECORD ON ZERO DISCHARGE SAMPLE (COMPOSITE / INDIVIDUAL SAMPLING)</b>		CPSD-AN-00613-DATA 04 Issue Date: _____ Version No.: 18 Business Line: Analytical
23. % Solids	✓	20 g	Amber Glass, wash with nitric acid	Acidify to -pH 2 with HNO3	
24. Paint Filter Test	✓	20 g			
25. Others	✗				
Observation/ Remark:					

\*Remarks:

1. Individual sampling can be performed upon request
2. 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.
3. Scope of ZDHC guideline: Parameter 1, 2, 4, 5, 16-17, 21-24  
 Scope of synthetic leather industry: Parameter 1-8, 10, 12-17  
 Scope of MMCF: Parameter 16, 18-20  
 Free primary aromatic amine and pesticides are not in the scope of ZDHC Guideline, they are tested upon request.
4. Refer to CPSD-AN-G00019-STIP01, locations with those CPSD test capability inside TCD matrix can perform the combined test.
5. Refer to CPSD-AN-00613-MTHD for preparation of field blank for specific parameters.

ZDHC Wastewater Sampling - Facility Confirmation

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>Hamid Fabrics Ltd</u>	Samplers Name:	<u>md. Masud Rana</u>
Facility Representative Name:	<u>Shauquzzaman</u>	Sampler's ZDHC Accreditation:	<u>0740106817431</u>
Facility Representative Signature and stamp:		Sampler's Signature:	





**Annex C: Limit according to regulation: The Environment Conservation Rules, 1997, (Inland Surface Water, 4)**

Sl No.	Test Parameters	Type	unit	Limitation Value of Legal Requirements
1	Temperature	Conventional	°C	40
2	TSS	Conventional	mg/L	150
3	COD	Conventional	mg/L	200
4	Total-N	Conventional	mg/L	NA
5	pH	Conventional	Range	6-9
6	Colour [m-1] (436nm; 525; 620nm)	Conventional	m <sup>-1</sup>	NA
7	BOD5	Conventional	mg/L	50
8	Ammonium-N	Conventional	mg/L	50
9	Total Phosphorus	Conventional	mg/L	8
10	AOX	Conventional	mg/L	NA
11	Oil and Grease	Conventional	mg/L	10
12	Phenol / Phenol Index	Conventional	mg/L	1
13	Coliform	Conventional	bacteria/100 ml	NA
14	Chloride	Conventional	mg/L	600
15	Persistent Foam	Conventional	--	NA
16	Cyanide	Conventional	mg/L	0.1
17	DO(Dissolved Oxygen)	Conventional	mg/L	4.5-8
18	Sulfide	Conventional	mg/L	1
19	Total Dissolved Solids	Conventional	mg/L	2100
20	Electrical Conductivity	Conventional	µmhos/cm	1200
21	Fluoride	Conventional	mg/L	2
22	Sulfite	Conventional	mg/L	NA
23	Antimony	Metals	mg/L	NA
24	Chromium, total	Metals	mg/L	0.5
25	Cobalt	Metals	mg/L	NA
26	Copper	Metals	mg/L	0.5
27	Boron	Metals	mg/L	2
28	Nickel	Metals	mg/L	1
29	Silver	Metals	mg/L	NA
30	Zinc	Metals	mg/L	5
31	Arsenic	Metals	mg/L	0.2
32	Cadmium	Metals	mg/L	0.5
33	Chromium (VI)	Metals	mg/L	0.1
34	Lead	Metals	mg/L	0.1
35	Mercury	Metals	mg/L	0.01
37	Selenium	Metals	mg/L	0.05

\*\*\*\*\*

**END**