



Test
TS EN ISO/IEC 17025
AB-0342-T

AB-0342-T
144404001a
08/24

TÜV Rheinland
Uluslararası Standartlar Sertifikasyon ve Denetim A.Ş.
Saniye Ermutlu Sokak Çolakoğlu Plaza B Blok No:12 Kozyatağı-İSTANBUL

Test Report No.: 144404001a

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Client: **Nuryıldız Tekstil San. ve Tic. A.Ş.**
Velimeşe Sanayi Bölgesi İstasyon Mah. Akbayır Mevkii Kümesi No:62 Ergene/, Velimeşe Mahallesi, 59850 Çorlu/Tekirdağ, Türkiye
Contact Person: Gülay ELİTAŞ

Buyer's Name :-

Factory Details

Factory Name : **Nuryıldız Tekstil San. ve Tic. A.Ş.**
Factory Address : Velimeşe Sanayi Bölgesi İstasyon Mah. Akbayır Mevkii Kümesi No:62 Ergene/, Velimeşe Mahallesi, 59850 Çorlu/Tekirdağ, Türkiye
On-site ETP : Yes
Discharge Type of Wastewater : Direct Discharge

For Indirect discharge

Name of public wastewater treatment plants(CETP) : /
Address of public wastewater treatment plants(CETP) : /

Sampling Details

Sampler Information : Cihan Gökeri , C74D106819694
Sampling Date : 2024-07-17
Sampling Receiving Date : 2024-07-17
Temperature of receipt sample : 7.1 °C
Testing Period : 2024-07-17- 2024-08-07
Max. Holding Time : max. holding time was not exceeded
Reporting Date : 2024-08-19
Remark :Revise of test report 144404001 dated 2024-08-07, evaluation for Discharged wastewater according to legal requirements has been corrected on cover page table.Preceding test report is no longer valid.

Sample Type	Total Volume	1	2	3	4	5	6	7
Discharged Wastewater	20L	09:00	10:00	11:00	12:00	13:00	14:00	15:00
Raw Wastewater	20L	09:00	10:00	11:00	12:00	13:00	14:00	15:00
Incoming Water	-	-	-	-	-	-	-	-
Sludge	2 KG	-	14:00	-	-	-	-	-
Overall Rating		Discharged Wastewater		Raw Wastewater		Sludge		
Conventional Parameters / Anion / Metals		Not Comply		Not Tested		Comply		
MRSL Parameters		Not Tested		Comply		Comply		
Legal Compliance		Comply		Not Tested		Not Tested		
Legal Fail Item		-						
Specifications		ZDHC Wastewater Guidelines Version 2.1 (November 2022) Legal permit: SKKY ve Ergene Nehrinde Deşarj Standartlarında Kısıtlama Genelgesi ; Tablo 10.1-10.3-10.5-10.7						

TÜV Rheinland Uluslararası Standartlar Sertifikasyon ve Denetim A.Ş. accredited by TÜRKAK under registration number AB-0342-T for ISO/IEC 17025-2018 as test laboratory.

TÜV Rheinland Uluslararası Standartlar Sertifikasyon ve Denetim A.Ş.

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MS-0010698/6_en

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The Turkish Accreditation Agency (TÜRKAK) is signatory to the multilateral agreements of the European co-operation for the Accreditation (EA) and of the International Laboratory Accreditation (ILAC) for the Mutual recognition of the test reports.

The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following, pages which are part of this report.

For and on behalf of
TÜV Rheinland Uluslararası Standartlar Sertifikasyon ve Denetim A.Ş.

2024-08-19

Date

Nalan Kılıç Aslantaş / Customer Relations Ass. Manager

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Result Summary:

Conventional Parameters**	Discharge Waste Water		Sludge
	Legal	ZDHC	
pH value	Comply	Comply	Comply
Temperature(#)	-	Comply	-
E.coli*	-	Not Comply	-
Colour*	-	Comply	-
Persistent Foam (#)	-	Comply	-
Wastewater Flowrate(#)	-	Report Only	-
Ammonium Nitrogen*	Comply	Comply	-
Adsorbable Organic Halogens (AOX)*	-	Comply	-
Biochemical Oxygen Demand (BOD5) – 5 Days*	-	Comply	-
Chemical Oxygen Demand (COD)*	Comply	Comply	-
Dissolved Oxygen (DO)(#)	-	Report Only	-
Oil and Grease*	Comply	Comply	-
Phenol*	Comply	Comply	-
Total Chlorine*	-	Report Only	-
Total Dissolved Solids (TDS)*	-	Report Only	-
Total Nitrogen*	-	Not Comply	-
Total Phosphorous(#)	-	Comply	-
Total Suspended Solids (TSS)	Comply	Comply	-
Anion – Chloride*	-	Report Only	-
Anion – Cyanide*	-	Comply	Comply
Anion – Sulphate*	-	Report Only	-
Anion – Sulfide*	Comply	Comply	-
Anion – Sulfite*	Comply	Comply	-
Heavy Metals	Comply(Cr, Total)	Not Comply	Comply
Leachate Heavy Metals(#)	-	-	-
%Solid*	-	-	Report Only
Paint Filter Test	-	-	Comply
Fecal Coliform*	-	-	Report Only

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Manufacturing Restricted Substances List (MRSL)	Raw Wastewater	Sludge
Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs) (#)	O	O
Anti-Microbials & Biocides(#)	O	-
Chlorinated Paraffins(#)	O	-
Chlorobenzenes and Chlorotoluenes (#)	O	O
Chlorophenols (#)	O	-
Dimethyl formamide (DMFa)(#)	O	-
Dyes – Carcinogenic or Equivalent Concern (#)	O	-
Dyes – Disperse (Sensitizing) (#)	O	-
Dyes – Navy Blue Colorant(#)	O	-
Flame Retardants (##)	O	-
Glycols/Glycol Ethers	O	-
Halogenated Solvents	O	-
Organotin Compounds (#)	O	-
Perfluorinated and Polyfluorinated Chemicals (PFCs) (#)	O	-
Other / Miscellaneous Chemicals	O	-
Phthalates	O	-
Polycyclic Aromatic Hydrocarbons (PAHs)	O	O
Dyes – Azo (Forming Restricted Amines) (#)	O	-
UV Absorbers(#)	O	-
Volatile Organic Compounds (VOC)	O	-

Note: *These tests have been carried out by a contracted laboratory (Çevre Endüstriyel Analiz Laboratuvarları Hiz. Tic. A.Ş.)
These tests is not covered by TURKAK accreditation.
PBD and PBDE parameters are not covered by TURKAK accreditation.

Aspirational = Fullfill Aspirational Limit
Progressive = Fullfill Progressive Limit
Foundational = Fullfill Foundational Limit
Exceed = Exceed Foundational Limit
O = Comply with ZDHC Limit
X = Not Comply with ZDHC Limit
- = Not Tested

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Material List:

Field ID	Sample Type	Sample Description
D001	Discharge	Discharge Wastewater (Treated Wastewater)
R001	Raw	Raw Wastewater
S001	Sludge	Sludge

Sludge Disposal Pathway:

Field ID	Sample Type	Type
S001	Sludge	Type D

Notes:

- * **Discharge Wastewater:** Wastewater that is released from a supplier, either directly to the environment (including but not limited to: water bodies, land application/irrigation), or to a wastewater treatment system beyond the supplier's property boundaries.
 - * **Direct Discharge:** A point source that discharges wastewater to stream, lakes, oceans, or other receiving bodies. Distribution of wastewater onto land is also considered a type of direct discharge. Municipal bodies and suppliers that introduce pollution through a defined conveyance or system such as outlet pipes are direct dischargers.
 - * **Indirect Discharge:** The discharge of wastewater through a sanitary or industrial wastewater sewer system to a central or common effluent treatment plant (CETP) not owned and/ or operated by the supplier discharging the pollutants.
 - * **Raw Wastewater:** Wastewater that has not yet been treated prior to direct or indirect discharge, or recycling efforts. This wastewater therefore does not meet the quality standards for beneficial use.
(Untreated Wastewater)
 - * **Incoming Water:** Water that is supplied to a manufacturing process, usually withdrawn from surface water bodies, groundwater, collected from rainfall, supplied by municipalities, etc.
 - * **Sludge:** The solid or semi-solid material separated during the wastewater treatment process, including septic and Zero Liquid Discharge (ZLD) systems.
- Type A:** Offsite Incineration at > 1000°C.
 - Type B:** Landfill with Significant Control Measures.
 - Type C:** Building Products Processed at > 1000°C.
 - Type D:** Landfill with Limited Control Measures.
 - Type E:** Offsite Incineration and Building Products Processed at < 1000°C.
 - Type F:** Landfill with No Control Measures.
 - Type G:** Land Application.

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Test Results:

1. pH Value

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal Limit
				RL	Result	
pH Value	pH	ISO 10523	NONE	NA	7,14	6-9

NA = Not Applicable

Parameter	Parameter Code	Test Method	Unit	Sample No.	S001	Legal Limit
				RL	Result	
pH Value	pH	ISO 10390	NONE	NA	7,39	6-9

Abbreviation:

NA = Not Applicable

Remark:

The limits according to ZDHC limit (Table 3 & 4C of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Wastewater Limit		
	Foundational	Progressive	Aspirational
pH Value	6-9		

Parameter	ZDHC Sludge Limit						
	A	B	C	D	E	F	G
Sludge Type							
pH Value	Report Only	Report Only	5-11 s.u	5-11 s.u	5-11 s.u	6.5-9 s.u	6.5-9 s.u

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2. Temperature

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal Limit (°C)
				RL	Result	
Temperature of the receiving body of water	Temp-Receiving Water	EPA 170.1 SM 2550 B	C	NA	25,42	-
Temperature of the water in the discharge pipe	Temp-Discharge Pipe	EPA 170.1 SM 2550 B	C	NA	30,4	
The difference between the discharge pipe temp and the receiving body of water	Temp-Difference	EPA 170.1 SM 2550 B	C	NA	4,98	

Abbreviation: °C = Degrees Celsius
NA = Not Applicable

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (°C)		
	Foundational	Progressive	Aspirational
Temperature	Δ +15	Δ +10	Δ +5

Δ is the degree above ambient temperature of receiving water body.

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3. E.Coli

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001
				RL	Result
E.Coli	E.Coli	SM 9222:H	mpn/100mL	0	3,1*10 ⁴

Abbreviation:
 < = less than
 RL = reporting limit
 MPN/100ml = Most Probable Number per 100 millilitre

Remark:
 The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (MPN/100ml)		
	Foundational	Progressive	Aspirational
E.Coli	126		

4. Colour

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal Limit (pt-co)
				RL	Result	
Colour 436 NM	COLOUR-436	TS EN ISO 7887	m ⁻¹	NA	5,18	280
Colour 525 NM	COLOUR-525	TS EN ISO 7887	m ⁻¹	NA	3,12	
Colour 620 NM	COLOUR-620	TS EN ISO 7887	m ⁻¹	NA	1,2	

Abbreviation:
 NM = nanometer
 NA = Not Applicable

Remark:
 The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (m ⁻¹)		
	Foundational	Progressive	Aspirational
Colour	7;5;3	5;3;2	2;1;1

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5. Persistent Foam

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal Limit
				RL	Result	
Persistent Foam	FOAM	Visual	Absent/ Present	NA	Absent	-

Abbreviation: NA = Not Applicable

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit		
	Foundational	Progressive	Aspirational
Persistent Foam	No indication of persistent foam in receiving water The presence of foam is no thicker than 45 centimetres (by visual estimation), and is contained within the aeration basin.		

6. Wastewater Flowrate

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001
				RL	Result
Wastewater Flowrate	Flowrate	NA	m ³ / day	NONE	1800

Abbreviation: m³/ day = cubic metre per day
NA = Not Applicable

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7. Ammonium Nitrogen

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal limit (mg/L)
				RL	Result	
Ammonium Nitrogen	AMMONIUM-N	SM 4500-NH3 B,F	mg/L	0.02	0,4	5

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Ammonium Nitrogen	10	1	0.5

8. Adsorbable Organic Halogens (AOX)

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal Limit (mg/L)
				RL	Result	
Adsorbable Organic Halogens	AOX	ISO 9562	mg/L	0.01	1,16	-

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Adsorbable Organic Halogens (AOX)	3	0.5	0.1

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9. Biochemical Oxygen Demand (BOD₅) – 5 Days

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal Limit (mg/L)
				RL	Result	
Biochemical Oxygen Demand	BOD5	TS 4957-1 EN 1899-1	mg/L	5	16,89	-

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:
 The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Biochemical Oxygen Demand (BOD ₅)	30	15	8

10. Chemical Oxygen Demand (COD)

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal Limit (mg/L)
				RL	Result	
Chemical Oxygen Demand	COD	ISO 6060	mg/L	10	70	200

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:
 The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Chemical Oxygen Demand (COD)	150	80	40

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11. Dissolved Oxygen (DO)

				Sample No.	D001
Parameter	Parameter Code	Test Method	Unit	RL	Result
Dissolved Oxygen	DO	-	mg/L	NA	5,8
Conclusion					Report Only

Abbreviation:

< = less than
 RL = reporting limit
 NA = Not Applicable
 mg/L = milligram per liter

Remark:
 The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Dissolved Oxygen (DO)	Sample and report only		

12. Oil and Grease

				Sample No.	D001	Legal Limit (mg/L)
Parameter	Parameter Code	Test Method	Unit	RL	Result	
Oil and Grease	OG	CZ_SOP_D06_02_059	mg/L	0.2	<0.20	10

Abbreviation:

< = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:
 The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Oil and Grease	10	2	0.5

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13. Phenol

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal Limit (mg/L)
				RL	Result	
Phenol	108-95-2	EPA 3510 C EPA 8270 E (GC-MS)	mg/L	0.002	<0.002	1

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Phenol	0.5	0.01	0.001

14. Total Chlorine

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001
				RL	Result
Total Chlorine	Total Chlorine	SM 4110 B	mg/L	0.01	0.3
Conclusion					Report Only

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Total Chlorine	Sample and report only		

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15. Total Dissolved Solids(TDS)

				Sample No.	D001
Parameter	Parameter Code	Test Method	Unit	RL	Result
Total Dissolved Solids	TDS	SM 2540:C	mg/L	10	5092
Conclusion					Report Only

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Total Dissolved Solids	Sample and report only		

16. Total Nitrogen

				Sample No.	D001	Legal Limit (mg/L)
Parameter	Parameter Code	Test Method	Unit	RL	Result	
Total Nitrogen	TOTAL-N	SM 4500-Norg B SM 4500-NO3:E SM 4500-NO2:B SM 4500-NH3:F:	mg/L	1	30,02	-

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Total Nitrogen	20	10	5

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17. Total Phosphorous

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal Limit (mg/L)
				RL	Result	
Total Phosphorous	TOTAL-P	ISO 6878	mg/L	0.2	1,46	-

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Total Phosphorous	3	0.5	0.1

18. Total Suspended Solids (TSS)

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal Limit (mg/L)
				RL	Result	
Total Suspended Solids	TSS	SM 2540:D	mg/L	4	35	160

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Total Suspended Solids (TSS)	50	15	5

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19. Anions-Chloride

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001
				RL	Result
Anion - Chloride	Chloride	SM 4500-Cl:C	mg/L	1	1733,5

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Anion - Chloride	Sample and report only		

20. Anion - Cyanide

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal Limit (mg/L)
				RL	Result	
Anion - Cyanide	57-12-5	EPA 9010C EPA 9014	mg/L	0.005	<0.005	-

Parameter	Parameter Code	Test Method	Unit	Sample No.	S001
				RL	Result
Anion - Cyanide	57-12-5	EPA 9010C EPA 9014	mg/kg	0.05	<0.05

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter
 mg/kg = milligram per kilogram

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Remark:

The limits according to ZDHC limit (Table 3 & 4A of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit for Wastewater (mg/L)			ZDHC Limit (mg/kg)
	Foundational	Progressive	Aspirational	Sludge
Cyanide	0.2	0.1	0.05	20

21. Anion - Sulphate

				Sample No.	D001
Parameter	Parameter Code	Test Method	Unit	RL	Result
Anion - Sulfate	Sulfate	SM 4500 SO ₄ ⁻² E	mg/L	5	3668,9

Abbreviation:

< = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Anion - Sulfate	Sample and report only		

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22. Anion – Sulfide

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal Limit (mg/L)
				RL	Result	
Anion – Sulfide	18496-25-8	SM 4500 S ²⁻ :D	mg/L	0.1	<0,1	0.1

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Anion – Sulfide	0.5	0.05	0.01

23. Anion – Sulfite

Parameter	Parameter Code	Test Method	Unit	Sample No.	D001	Legal Limit (mg/L)
				RL	Result	
Anion – Sulfite	14265-45-3	SM 4500 S03 ²⁻ C	mg/L	0.2	<0.2	1

Abbreviation:
 < = less than
 RL = reporting limit
 mg/L = milligram per liter

Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit (mg/L)		
	Foundational	Progressive	Aspirational
Anion – Sulfite	2	0.5	0.2

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24. Heavy Metals

Test Method: Wastewater: EPA 3015A & EPA 6020B with ICP-MS; Cr (VI) : ISO 18412

Parameter	Parameter Code	Unit	Sample No.	
			RL	Result D001
Antimony (Sb)	Antimony	mg/L	0.005	0,3
Chromium (Cr, total)	Chromium Total	mg/L	0.01	<RL
Cobalt (Co)	Cobalt	mg/L	0.01	<RL
Copper (Cu)	Copper	mg/L	0.05	<RL
Nickel (Ni)	Nickel	mg/L	0.01	<RL
Silver (Ag)	Silver	mg/L	0.005	<RL
Zinc (Zn)	Zinc	mg/L	0.05	<RL
Arsenic (As)	Arsenic	mg/L	0.003	<RL
Cadmium (Cd)	Cadmium	mg/L	0.01	<RL
Chromium (Cr VI)	Chromium VI	mg/L	0.001	<RL
Lead (Pb)	Lead	mg/L	0.01	<RL
Mercury (Hg)	Mercury	mg/L	0.0005	<RL
Barium (Ba)	Barium	mg/L	0.05	<RL
Selenium (Se)	Selenium	mg/L	0.05	<RL
Tin (Sn)	Tin	mg/L	0.05	<RL
Conclusion				Not Comply

Abbreviation:

- < = less than
- RL = reporting limit
- mg/L = milligram per liter
- mg/kg = milligram per kilogram

Test Method: Wastewater: Acid/ peroxide digestion ,ICP-MS
Cr(VI): Alkaline digestion, UV-VIS

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			Sample No.	S001
Parameter	Parameter Code	Unit	RL	Result
Antimony (Sb)	Antimony	mg/kg	1	8,1
Chromium (Cr, total)	Chromium Total	mg/kg	1	17,1
Cobalt (Co)	Cobalt	mg/kg	0.5	< RL
Copper (Cu)	Copper	mg/kg	0.5	< RL
Nickel (Ni)	Nickel	mg/kg	1	< RL
Silver (Ag)	Silver	mg/kg	1	< RL
Zinc (Zn)	Zinc	mg/kg	1	< RL
Arsenic (As)	Arsenic	mg/kg	1	< RL
Cadmium (Cd)	Cadmium	mg/kg	0.5	< RL
Chromium (Cr VI)	Chromium VI	mg/kg	1	< RL
Lead (Pb)	Lead	mg/kg	1	< RL
Mercury (Hg)	Mercury	mg/kg	0.1	< RL
Barium (Ba)	Barium	mg/kg	1	< RL
Selenium (Se)	Selenium	mg/kg	1	< RL
Conclusion				Comply

Abbreviation:

< = less than
 RL = reporting limit
 mg/L = milligram per liter
 mg/kg = milligram per kilogram

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Remark:

The limits according to ZDHC limit (Table 3 of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Limit for Wastewater (mg/L)			ZDHC Limit for Sludge (mg/kg)	
	Foundational	Progressive	Aspirational	Reporting Limit	Total Metals Threshold Values**
Antimony (Sb)	0.1	0.05	0.01	Textile only: 5	12
Chromium (Cr, total)	0.2	0.1	0.05	Textile only: 50	100
Cobalt (Co)	0.05	0.02	0.01	Textile only: 400	1600
Copper (Cu)	1	0.5	0.25	Textile only: 50	200
Nickel (Ni)	0.2	0.1	0.05	Textile only: 20	70
Silver (Ag)	0.1	0.05	0.005	Textile only: 50	100
Zinc (Zn)	5.0	1.0	0.5	Textile only: 400	1000
Arsenic (As)	0.05	0.01	0.005	Textile: 5 Leather: 2	10
Cadmium (Cd)	0.1	0.05	0.01	Textile: 1 Leather: 2	3
Chromium (Cr VI)	0.05	0.005	0.001	Textile: 20 Leather: 2	50
Lead (Pb)	0.1	0.05	0.01	Textile: 5 Leather: 2	10
Mercury (Hg)	0.01	0.005	0.001	Textile: 1 Leather: 0.2	1
Barium (Ba)	Sample and report only			Textile only: 200	700
Selenium (Se)	Sample and report only			Textile only: 5	10
Tin (Sn)	Sample and report only			NA	NA

* For polyester wet processing facilities Foundational, Progressive and Aspirational limits do not yet apply (unless required by law or voluntarily adopted).

** if the Total Metals for Sludge exceeded the Total Metals Threshold Values (mg/kg) given in this table, proceed with Leachate Heavy Metal.
See result leached heavy metal test on page 22.

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The limits according to Legal Compliance:

Parameter	Legal Compliance
	Requirement (mg/L)
Antimony (Sb)	-
Chromium (Cr, total)	2
Cobalt (Co)	-
Copper (Cu)	-
Nickel (Ni)	-
Silver (Ag)	-
Zinc (Zn)	12
Arsenic (As)	-
Cadmium (Cd)	-
Chromium (Cr VI)	-
Lead (Pb)	-
Mercury (Hg)	-

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25. %Solids

				Sample No.		S001
Parameter	Parameter Code	Test Method	Unit	RL	Result	
%Solids	%Solids	TS 9546 EN 12880	%	NA	15,75	
Conclusion					Report Only	

Abbreviation: % = percentage
NA = Not Applicable

Remark:

The limits according to ZDHC limit (Table 4C of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Sludge Limit						
	A	B	C	D	E	F	G
Sludge Type							
%Solids	Sample and Report Only						

26. Paint Filter Test

				Sample No.		S001
Parameter	Parameter Code	Test Method	Unit	RL	Result	
Paint Filter Test	Free Liquid	EPA 9095B	NA	NA	Does not contain free liquid	
Conclusion					Comply	

Abbreviation: NA = Not Applicable

Remark:

The limits according to ZDHC limit (Table 4C of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Sludge Limit						
	A	B	C	D	E	F	G
Sludge Type							
Paint Filter Test	Sample and Report Only			Pass Paint Filter Test			Sample and Report Only

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27. Fecal Coliform

				Sample No.	S001
Parameter	Parameter Code	Test Method	Unit	RL	Result
Fecal Coliform	Fecal Coliform	ACSESS DL	MPN/g	1	0
Conclusion					Report Only

Abbreviation: MPN/g = Most Probable Number per gram

Remark:

The limits according to ZDHC limit (Table 4C of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Sludge Limit (MPN/g)						
	A	B	C	D	E	F	G
Fecal Coliform	Sample and Report Only					1000	1000

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28. Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): Including All Isomers

Test method: ISO 18857-2 (modified dichloromethane extraction); ASTM D7065-06, ISO 18254-1, GC-MS and LC-MS/MS

Test method: ISO 18254-1, GC-MS and LC-MS/MS

Parameter	Parameter Code	Unit	Sample No.		R001
			RL	ZDHC Limit	Result
Nonylphenol (NP), mixed isomers	104-40-5	µg/L	1	5	< RL
	25154-52-3				
	11066-49-2				
	84852-15-3				
Octylphenol (OP), mixed isomers	140-66-9	µg/L	1	5	< RL
	1806-26-4				
	27193-28-8				
Nonylphenol ethoxylates (NPEO)	9016-45-9	µg/L	1	5	< RL
	26027-38-3				
	37205-87-1				
	68412-54-4				
Octylphenol ethoxylates (OPEO)	9002-93-1	µg/L	1	5	< RL
	9036-19-5				
	68987-90-6				
Conclusion				--	Comply

Parameter	Parameter Code	Unit	Sample No.		S001
			RL	Result	
Nonylphenol (NP), mixed isomers	104-40-5	mg/kg	0.2		<RL
	25154-52-3				
	11066-49-2				
	84852-15-3				
Octylphenol (OP), mixed isomers	140-66-9	mg/kg	0.2		< RL
	1806-26-4				
	27193-28-8				
Nonylphenol ethoxylates (NPEO)	9016-45-9	mg/kg	0.2		< RL
	26027-38-3				
	37205-87-1				
	68412-54-4				
Octylphenol ethoxylates (OPEO)	9002-93-1	mg/kg	0.2		< RL
	9036-19-5				
	68987-90-6				
Conclusion					Comply

Abbreviation:
 < = less than
 RL = reporting limit
 µg/L = microgram per liter
 mg/kg = milligram per kilogram

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29. Anti-Microbials & Biocides

					Sample No.	R001
Parameter	Parameter Code	Test Method	Unit	RL	ZDHC Limit	Result
o-Phenylphenol (+Salts)	90-43-7	Solvent extraction, derivatisation with KOH , aceticanhydride followed by GC-MS	µg/L	50	100	< RL
Triclosan	3380-34-5		µg/L	50	100	< RL
Permethrin	Multiple	Solvent extraction with GC-MS	µg/L	50	500	< RL
Conclusion						Comply

Abbreviation:
 < = less than
 RL = reporting limit
 µg/L = microgram per liter

30. Chlorinated Paraffins

					Sample No.	R001
Parameter	Parameter Code	Test Method	Unit	RL	ZDHC Limit	Result
Medium-chain Chlorinated paraffins (MCCPs) (C14-C17)	85535-85-9	US EPA 3510, ISO 18219-2	µg/L	5	5	< RL
Short-chain Chlorinated paraffins (SCCPs) (C10-C13)	85535-84-8	US EPA 3510, ISO 18219-1 ISO 12010	µg/L	5	5	< RL
Conclusion						Comply

Abbreviation:
 < = less than
 RL = reporting limit
 µg/L = microgram per liter

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31. Chlorobenzenes and Chlorotoluenes

Test method: US EPA 8260B, US EPA 8260D, Dichloromethane extraction followed by GC-MS

				Sample No.	R001
Parameter	Parameter Code	Unit	RL	ZDHC Limit	Result
1,2-Dichlorobenzene	95-50-1	µg/L	0.1	0.2	< RL
Other isomers of mono, di-, tri-, tetra-, penta- and hexa- Chlorobenzene and mono, di- tri-, tetra- and penta-Chlorotoluene	Multiple	µg/L	0.1	0.2	< RL

				Sample No.	S001
Parameter	Parameter Code	Unit	RL	ZDHC Limit	Result
Chlorotoluenes (mono, di- tri-, tetra- and penta-Chlorotoluene)	Multiple	µg/L	0.1	0.2	< RL

Abbreviation:

- < = less than
- RL = reporting limit
- µg/L = microgram per liter
- mg/kg = milligram per kilogram

Remark:

The limits according to ZDHC limit (Table 4C of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Sludge Limit (mg/kg)						
	A	B	C	D	E	F	G
Chlorotoluenes(mono, di- tri-, tetra- and penta-Chlorotoluene)	Sample and Report only			0.2	0.2	0.2	0.2

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32. Chlorophenols

Test method: USEPA 8270 D, Solvent extraction, derivatisation with KOH, acetic anhydride followed by GC/MS ISO 14154:2005

Parameter	Parameter Code	Unit	RL	Sample No.		R001
				ZDHC Limit	Result	
2-Chlorophenol	95-57-8	µg/L	0.35	0.5		< RL
3-chlorophenol	108-43-0	µg/L	0.35	0.5		< RL
4-chlorophenol	106-48-9	µg/L	0.35	0.5		< RL
2,3-Dichlorophenol	576-24-9	µg/L	0.35	0.5		< RL
2,4-Dichlorophenol	120-83-2	µg/L	0.35	0.5		< RL
2,5-Dichlorophenol	583-78-8	µg/L	0.35	0.5		< RL
2,6-Dichlorophenol	87-65-0	µg/L	0.35	0.5		< RL
3,4-Dichlorophenol	95-77-2	µg/L	0.35	0.5		< RL
3,5-Dichlorophenol	591-35-5	µg/L	0.35	0.5		< RL
2,3,4-Trichlorophenol	15950-66-0	µg/L	0.35	0.5		< RL
2,3,5-Trichlorophenol	933-78-8	µg/L	0.35	0.5		< RL
2,3,6-Trichlorophenol	933-75-5	µg/L	0.35	0.5		< RL
2,4,5-Trichlorophenol	95-95-4	µg/L	0.35	0.5		< RL
2,4,6-Trichlorophenol	88-06-2	µg/L	0.35	0.5		< RL
3,4,5-Trichlorophenol	609-19-8	µg/L	0.35	0.5		< RL
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/L	0.35	0.5		< RL
2,3,4,6-Tetrachlorophenol	58-90-2	µg/L	0.35	0.5		< RL
2,3,5,6-Tetrachlorophenol	935-95-5	µg/L	0.35	0.5		< RL
Pentachlorophenol	87-86-5	µg/L	0.35	0.5		< RL
Conclusion				--		Comply

Abbreviation:

- < = less than
- RL = reporting limit
- µg/L = microgram per liter
- mg/kg = milligram per kilogram

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33.Dimethyl Formamide (DMFa)

Parameter	Parameter Code	Test Method	Unit	Sample No.		R001
				RL	ZDHC Limit	Result
Dimethyl formamide (DMFa) *	68-12-2	USEPA 8215, USEPA8270E	µg/L	100	1000	< RL
Conclusion						Comply

Abbreviation:
< = less than
RL = reporting limit
µg/L = microgram per liter

Remark:
* Sample and Report only for mock leather

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34.Dyes-Carcinogenic or Equivalent Concern

Test method: with reference to DIN 54231 Liquid extraction, LC/MSMS

Parameter	Parameter Code	Unit	RL	Sample No.	
				ZDHC Limit	R001 Result
C.I. Direct Black 38	1937-37-7	µg/L	30	500	< RL
C.I. Direct Blue 6	2602-46-2	µg/L	30	500	< RL
C.I. Acid Red 26	3761-53-3	µg/L	30	500	< RL
C.I. Basic Red 9	569-61-9	µg/L	30	500	< RL
C.I. Direct Red 28	573-58-0	µg/L	30	500	< RL
C.I. Basic Violet 14	632-99-5	µg/L	30	500	< RL
C.I. Disperse Blue 1	2475-45-8	µg/L	30	500	< RL
C.I. Disperse Blue 3	2475-46-9	µg/L	30	500	< RL
C.I. Basic Blue 26 (with Michler's Ketone >0.1%)	2580-56-5	µg/L	30	500	< RL
C.I Basic Green 4 (malachite green chloride)	569-64-2	µg/L	30	500	< RL
C.I Basic Green 4 (malachite green oxalate)	2437-29-8	µg/L	30	500	< RL
C.I Basic Green 4 (malachite green)	10309-95-2	µg/L	30	500	< RL
Disperse Orange 11	82-28-0	µg/L	30	500	< RL
Basic violet 3 with >0.1% of Michler's Ketone	548-62-9	µg/L	30	500	< RL
C.I. Acid Violet 49	1694-09-3	µg/L	30	500	< RL
Conclusion					Comply

Abbreviation:
 < = less than
 RL = reporting limit
 µg/L = microgram per liter

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35.Dyes – Disperse (Sensitizing)

Test method: : with reference to DIN 54231 Liquid extraction, LC/MSMS

Parameter	Parameter Code	Unit	Sample No.		R001
			RL	ZDHC Limit	Result
Disperse Yellow 1	119-15-3	µg/L	30	50	< RL
Disperse Blue 102	12222-97-8	µg/L	30	50	< RL
Disperse Blue 106	12223-01-7	µg/L	30	50	< RL
Disperse Yellow 39	12236-29-2	µg/L	30	50	< RL
Disperse Orange 37/59/76	13301-61-6	µg/L	30	50	< RL
Disperse Brown 1	23355-64-8	µg/L	30	50	< RL
Disperse Orange 1	2581-69-3	µg/L	30	50	< RL
Disperse Yellow 3	2832-40-8	µg/L	30	50	< RL
Disperse Red 11	2872-48-2	µg/L	30	50	< RL
Disperse Red 1	2872-52-8	µg/L	30	50	< RL
Disperse Red 17	3179-89-3	µg/L	30	50	< RL
Disperse Blue 7	3179-90-6	µg/L	30	50	< RL
Disperse Blue 26	3860-63-7	µg/L	30	50	< RL
Disperse Yellow 49	54824-37-2	µg/L	30	50	< RL
Disperse Blue 35	12222-75-2	µg/L	30	50	< RL
Disperse Blue 124	61951-51-7	µg/L	30	50	< RL
Disperse Yellow 9	6373-73-5	µg/L	30	50	< RL
Disperse Orange 3	730-40-5	µg/L	30	50	< RL
Disperse Blue 35	56524-77-7	µg/L	30	50	< RL
Conclusion				--	Comply

Abbreviation:
 < = less than
 RL = reporting limit
 µg/L = microgram per liter

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36.Dyes – Navy Blue Colorant

Test method: with reference to DIN 54231, Liquid extraction, LC/MSMS

Parameter	Parameter Code	Unit	RL	Sample No.	
				ZDHC Limit	R001
Component 1: C39H23Cl-CrN7O12S 2Na	118685-33-9	µg/L	30	500	< RL
Component 2: C46H-30CrN10O20S2 3Na	Not Allocated	µg/L	30	500	< RL
Conclusion					Comply

Abbreviation:
< = less than
RL = reporting limit
µg/L = microgram per liter

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37.Flame Retardants

Test method: US EPA 8270; ISO 22032; US EPA 527 and US EPA 8321B. Dichloromethane extraction, GC-MS, GC-MS/MS and LC-MS/MS

Boric acid, Diboron trioxide, Disodium octaborate, Disodium tetraborate anhydrous, Tetraboron disodium heptaoxide, hydrate : determined as total Boron via ICP-MS, ISO 17294

Parameter	Parameter Code	Unit	Sample No.		R001
			RL	ZDHC Limit	Result
Tris-(2-chloro-ethyl)-phosphate (TCEP)	115-96-8	µg/L	5	25	< RL
Decabromodiphenyl ether (DecaBDE)	1163-19-5	µg/L	5	25	< RL
Tri-(2,3-di-bromo-propyl)-phosphate (TRIS)	126-72-7	µg/L	5	25	< RL
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	µg/L	5	25	< RL
Octabromodiphenyl ether (OctaBDE)	32536-52-0	µg/L	5	25	< RL
Bis-(2,3-di-bromo-propyl)-phosphate (BIS)	5412-25-9	µg/L	5	25	< RL
Tris(1-aziridinyl)phosphine oxide (TEPA)	545-55-1	µg/L	5	25	< RL
Polybromobiphenyls (PBB)	59536-65-1	µg/L	5	25	< RL
Tetra-bromo-bisphenol-A (TBBPA)	79-94-7	µg/L	5	25	< RL
Hexabromocyclododecan (HBCDD)	3194-55-6	µg/L	5	25	< RL
2,2-bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	µg/L	5	25	< RL
Tris-(1,3-di-chloro-iso-propyl)-phosphate (TDCP)	13674-87-8	µg/L	5	25	< RL
Tris-(2-chloro-1-methylethyl) phosphate (TCPP)	13674-84-5	µg/L	5	25	< RL
Decabromobiphenyl (DecaBB)	13654-09-6	µg/L	5	25	< RL
Dibromobiphenyls (DiBB)	Multiple	µg/L	5	25	< RL
Octabromobiphenyls (OctaBB)	Multiple	µg/L	5	25	< RL
Tetrabromobisphenol A bis(dibromopropyl ether)	21850-44-2	µg/L	5	25	< RL
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3	µg/L	5	25	< RL
Hexabromodiphenyl ether (HexaBDE)	36483-60-0	µg/L	5	25	< RL
Monobromobiphenyls (MonoBB)	Multiple	µg/L	5	25	< RL
Monobromodiphenylethers Multiple (MonoBDEs)	Multiple	µg/L	5	25	< RL
Nonabromobiphenyls (NonaBB)	Multiple	µg/L	5	25	< RL
Nonabromodiphenyl ether (NonaBDE)	63936-56-1	µg/L	5	25	< RL
Tetrabromodiphenyl ether (TetraBDE)	40088-47-9	µg/L	5	25	< RL
Tribromodiphenylethers (TriBDEs)	Multiple	µg/L	5	25	< RL
Boric acid	10043-35-3; 11113-50-1	µg/L	50	100	< RL
Diboron trioxide	1303-86-2	µg/L	50	100	< RL
Disodium octaborate	12008-41-2	µg/L	50	100	< RL
Disodium tetraborate anhydrous	1303-96-4; 1330-43-4	µg/L	50	100	< RL
Tetraboron disodium heptaoxide, hydrate	12267-73-1	µg/L	50	100	< RL
Conclusion					Comply

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38. Glycols/Glycol Ethers

Test Method: US EPA 8270E, Liquid Extraction, GCMS

Parameter	Parameter Code	Unit	RL	Sample No.	
				ZDHC Limit	R001 Result
Bis(2-methylethyl)ether	111-96-6	µg/L	30	50	< RL
2-Ethoxyethanol	110-80-5	µg/L	30	50	< RL
2-Ethoxyethyl acetate	111-15-9	µg/L	30	50	< RL
Ethylene glycol dimethyl ether	110-71-4	µg/L	30	50	< RL
2-Methoxyethanol	109-86-4	µg/L	30	50	< RL
2-Methoxyethyl acetate	110-49-6	µg/L	30	50	< RL
2-Methoxypropyl acetate	70657-70-4	µg/L	30	50	< RL
Triethylene Glycol Dimethyl Ether	112-49-2	µg/L	30	50	< RL
Conclusion				--	Comply

Abbreviation:
 < = less than
 RL = reporting limit
 µg/L = microgram per liter

39. Halogenated Solvents

Test method: USEPA 5030 C, USEPA 8260 D, Purge and-Trap GC-MS

Parameter	Parameter Code	Unit	RL	Sample No.	
				ZDHC Limit	R001 Result
1,2-dichloroethane	107-06-2	µg/L	0.5	1	< RL
Methylene chloride	75-09-2	µg/L	0.5	1	< RL
Trichloroethylene	79-01-6	µg/L	0.5	1	< RL
Tetrachloroethylene	127-18-4	µg/L	0.5	1	< RL
Conclusion				--	Comply

Abbreviation:
 < = less than
 RL = reporting limit
 µg/L = microgram per liter

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40. Organotin Compounds

Test Method: ISO 17353, Derivatisation with Sodium tetraethylborate, GC/MS

Parameter	Parameter Code	Unit	RL	Sample No.	R001
				ZDHC Limit	Result
Mono-,di-and tri-methyltin derivatives	Multiple	µg/L	0.005	0.01	< RL
Mono-,di-and tri-butyltin derivatives	Multiple	µg/L	0.005	0.01	< RL
Mono-,di-and tri-phenyltin derivatives	Multiple	µg/L	0.005	0.01	< RL
Mono-,di-and tri-octyltin derivatives	Multiple	µg/L	0.005	0.01	< RL
Dipropyltin compounds (DPT)	Multiple	µg/L	0.005	0.01	< RL
Tetrabutyltin compounds (TeBT)	Multiple	µg/L	0.005	0.01	< RL
Tripropyltin Compounds (TPT)	Multiple	µg/L	0.005	0.01	< RL
Tetraoctyltin compounds (TeOT)	Multiple	µg/L	0.005	0.01	< RL
Tricyclohexyltin (TCyHT)	Multiple	µg/L	0.005	0.01	< RL
Tetraethyltin Compounds (TeET)	Multiple	µg/L	0.005	0.01	< RL
Conclusion				--	Comply

Abbreviation:

< = less than
 RL = reporting limit
 µg/L = microgram per liter

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41. Other / Miscellaneous Chemicals

Test Method: Liquid extraction with LC-MSMS

Borate,zinc salt: determined as total Boron and Total Zinc via ICP-MS, DIN EN ISO 17294-2

Parameter	Parameter Code	Unit	RL	Sample No.	
				ZDHC Limit	Result
AEEA [2-(2-aminoethylamino) ethanol]	111-41-1	µg/L	100	500	< RL
Bisphenol A	80-05-7	µg/L	5	10	< RL
Thiourea	62-56-6	µg/L	30	50	< RL
Quinoline	91-22-5	µg/L	0.1	50	< RL
Borate, zinc salt	12767-90-7	µg/L	50	100	< RL
Conclusion					Comply

Abbreviation:
< = less than
RL = reporting limit
µg/L = microgram per liter

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42. Perfluorinated and Polyfluorinated Chemicals (PFCs)

Parameter	Parameter Code	Test Method	Unit	Sample No.		R001
				RL	ZDHC Limit	Result
Perfluorooctane sulfonate (PFOS) and related substances	Multiple	USEPA 8270 DIN 38407-42 (modified), Ionic PFC: Concentration or direct injection, LC/MS (-MS); Non-ionic PFC	µg/L	0.007	0.01	< RL
Perfluorooctanoic acid (PFOA) and related substances	Multiple	(FTOH): derivatisation with acetic anhydride followed by GC/MS	µg/L	0.007	1	< RL
Conclusion						Comply

Abbreviation:
 < = less than
 RL = reporting limit
 µg/L = microgram per liter

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43. Phthalates – Including all other esters of phthalic acid

Test Method: EPA 8270E EPA 3510C ISO 18856 with GC-MS

Parameter	Parameter Code	Unit	RL	Sample No.	
				ZDHC Limit	R001 Result
Di(ethylhexyl)phthalate (DEHP)	117-81-7	µg/L	5	10	< RL
Bis (2-methoxyethyl) phthalate (DMEP)	117-82-8	µg/L	5	10	< RL
Di-n-octyl phthalate (DNOP)	117-84-0	µg/L	5	10	< RL
Di-iso-decyl phthalate (DIDP)	26761-40-0	µg/L	5	10	< RL
Di-isononyl phthalate (DINP)	28553-12-0	µg/L	5	10	< RL
Di-n-hexyl phthalate (DnHP)	84-75-3	µg/L	5	10	< RL
Di-n-butyl phthalate (DBP)	84-74-2	µg/L	5	10	< RL
Butyl benzyl phthalate (BBP)	85-68-7	µg/L	5	10	< RL
Dinonyl phthalate (DNP)	84-76-4	µg/L	5	10	< RL
Diethyl phthalate (DEP)	84-66-2	µg/L	5	10	< RL
Di-n-propyl phthalate (DPRP)	131-16-8	µg/L	5	10	< RL
Di-isobutyl phthalate (DIBP)	84-69-5	µg/L	5	10	< RL
Di-cyclohexyl phthalate (DCHP)	84-61-7	µg/L	5	10	< RL
Di-iso-octyl phthalate (DIOP)	27554-26-3	µg/L	5	10	< RL
1,2-benzenedicarboxylic acid, di-C7-11-branched and linearalkyl esters (DHNUP)	68515-42-4	µg/L	5	10	< RL
1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	µg/L	5	10	< RL
Di-n-pentylphthalates	131-18-0	µg/L	5	10	< RL
Diisopentylphthalates	605-50-5	µg/L	5	10	< RL
Conclusion				--	Comply

Abbreviation:
 < = less than
 RL = reporting limit
 µg/L = microgram per liter

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44. Polycyclic Aromatic Hydrocarbons (PAHs)

Test Method: EPA 610 EPA 3510C DIN 38407-39 Solvent extraction GC-MS

Parameter	Parameter Code	Unit	RL	Sample No.		R001
				ZDHC Limit	Result	
Benzo(a)pyrene	50-32-8	µg/L	0.1	1	1	< RL
Anthracene	120-12-7	µg/L	0.1	1	1	< RL
Pyrene	129-00-0	µg/L	0.1	1	1	< RL
Benzo[ghi]perylene	191-24-2	µg/L	0.1	1	1	< RL
Benzo(e)pyrene	192-97-2	µg/L	0.1	1	1	< RL
Indeno[1,2,3-cd]pyrene	193-39-5	µg/L	0.1	1	1	< RL
Benzo(j)fluoranthene	205-82-3	µg/L	0.1	1	1	< RL
Benzo[b]fluoranthene	205-99-2	µg/L	0.1	1	1	< RL
Fluoranthene	206-44-0	µg/L	0.1	1	1	< RL
Benzo[k]fluoranthene	207-08-9	µg/L	0.1	1	1	< RL
Acenaphthylene	208-96-8	µg/L	0.1	1	1	< RL
Chrysene	218-01-9	µg/L	0.1	1	1	< RL
Dibenz(a,h)anthracene	53-70-3	µg/L	0.1	1	1	< RL
Benzo[a]anthracene	56-55-3	µg/L	0.1	1	1	< RL
Acenaphthene	83-32-9	µg/L	0.1	1	1	< RL
Phenanthrene	85-01-8	µg/L	0.1	1	1	< RL
Fluorene	86-73-7	µg/L	0.1	1	1	< RL
Naphthalene	91-20-3	µg/L	0.1	1	1	< RL
Conclusion				--		Comply

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			Sample No:	S001
Parameter	Parameter Code	Unit	RL	Result
Benzo(a)pyrene	50-32-8	mg/kg	0.1	< RL
Anthracene	120-12-7	mg/kg	0.1	< RL
Pyrene	129-00-0	mg/kg	0.1	< RL
Benzo[ghi]perylene	191-24-2	mg/kg	0.1	< RL
Benzo(e)pyrene	192-97-2	mg/kg	0.1	< RL
Indeno[1,2,3-cd]pyrene	193-39-5	mg/kg	0.1	< RL
Benzo(j)fluoranthene	205-82-3	mg/kg	0.1	< RL
Benzo[b]fluoranthene	205-99-2	mg/kg	0.1	< RL
Fluoranthene	206-44-0	mg/kg	0.1	< RL
Benzo[k]fluoranthene	207-08-9	mg/kg	0.1	< RL
Acenaphthylene	208-96-8	mg/kg	0.1	< RL
Chrysene	218-01-9	mg/kg	0.1	< RL
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.1	< RL
Benzo[a]anthracene	56-55-3	mg/kg	0.1	< RL
Acenaphthene	83-32-9	mg/kg	0.1	< RL
Phenanthrene	85-01-8	mg/kg	0.1	< RL
Fluorene	86-73-7	mg/kg	0.1	< RL
Naphthalene	91-20-3	mg/kg	0.1	< RL
Conclusion				Comply

Abbreviation:
 < = less than
 RL = reporting limit
 µg/L = microgram per liter
 mg/kg = milligram per kilogram

Remark:

The limits according to ZDHC limit (Table 4C of ZDHC Wastewater Guidelines Version 2.1 issued in November 2022):

Parameter	ZDHC Sludge Limit (mg/kg)						
	A	B	C	D	E	F	G
Sludge Type							
PAHs	Sample and Report only			0.2	0.2	0.2	0.2

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45. Restricted Aromatic Amines(Cleavable from Azo)

Test method: with reference to ISO EN 14362-1, ISO EN 14362-3, Reduction step with Sodiumdithionite, solvent extraction, GC/MS or LC-MS/MS

Parameter	Parameter Code	Unit	RL	Sample No.	R001
				ZDHC Limit	Result
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	µg/L	0.05	0.1	< RL
4,4'-Diaminodiphenylmethane	101-77-9	µg/L	0.05	0.1	< RL
4,4'-Oxydianiline	101-80-4	µg/L	0.05	0.1	< RL
4-Chloroaniline	106-47-8	µg/L	0.05	0.1	< RL
3,3'-Dimethoxybenzidine	119-90-4	µg/L	0.05	0.1	< RL
3,3'-Dimethylbenzidine	119-93-7	µg/L	0.05	0.1	< RL
6-methoxy-m-toluidine	120-71-8	µg/L	0.05	0.1	< RL
2,4,5-Trimethylaniline	137-17-7	µg/L	0.05	0.1	< RL
4,4'-Thiodianiline	139-65-1	µg/L	0.05	0.1	< RL
4-Aminoazobenzene	60-09-3	µg/L	0.05	0.1	< RL
4-Methoxy-m-phenylenediamine	615-05-4	µg/L	0.05	0.1	< RL
4,4'-methylenedi-o-toluidine	838-88-0	µg/L	0.05	0.1	< RL
2,6-Xylidine	87-62-7	µg/L	0.05	0.1	< RL
o-Anisidine	90-04-0	µg/L	0.05	0.1	< RL
2-Naphthylamine	91-59-8	µg/L	0.05	0.1	< RL
3,3'-Dichlorobenzidine	91-94-1	µg/L	0.05	0.1	< RL
4-Aminobiphenyl	92-67-1	µg/L	0.05	0.1	< RL
Benzidine	92-87-5	µg/L	0.05	0.1	< RL
o-Toluidine	95-53-4	µg/L	0.05	0.1	< RL
2,4-Xylidine	95-68-1	µg/L	0.05	0.1	< RL
4-Chloro-o-toluidine	95-69-2	µg/L	0.05	0.1	< RL
4-methyl-m-phenylenediamine	95-80-7	µg/L	0.05	0.1	< RL
o-Aminoazotoluene	97-56-3	µg/L	0.05	0.1	< RL
5-Nitro-o-toluidine	99-55-8	µg/L	0.05	0.1	< RL
4-chloro-o-toluidinium chloride	3165-93-3	µg/L	0.05	0.1	< RL
2-Naphthylammonium acetate	553-00-4	µg/L	0.05	0.1	< RL
4-methoxy-m-phenylene diammonium sulphate	39156-41-7	µg/L	0.05	0.1	< RL
2,4,5-trimethylaniline hydrochloride	21436-97-5	µg/L	0.05	0.1	< RL
Conclusion				--	Comply

Abbreviation:
 < = less than
 RL = reporting limit
 µg/L = microgram per liter

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46. UV Absorbers

Parameter	Parameter Code	Test Method	Unit	Sample No.		R001
				RL	ZDHC Limit	Result
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	36437-37-3	Liquid extraction, LC-MS-MS	µg/L	100	100	< RL
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	Liquid extraction, LC-MS-MS	µg/L	100	100	< RL
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	Liquid extraction, LC-MS-MS	µg/L	100	100	< RL
2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)	3864-99-1	Liquid extraction, LC-MS-MS	µg/L	100	100	< RL
Conclusion						Comply

Abbreviation:

< = less than
 RL = reporting limit
 µg/L = microgram per liter

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47. Volatile Organic Compounds (VOC)

Test method: Wastewater: : EPA 5030 C, USEPA 8260D Purge and Trap GC-MS

Parameter	Parameter Code	Unit	RL	Sample No.	R001
				ZDHC Limit	Result
Benzene	71-43-2	µg/L	0.5	1	< RL
Xylene	1330-20-7	µg/L	0.5	1	< RL
o-cresol	95-48-7	µg/L	0.5	1	< RL
p-cresol	106-44-5	µg/L	0.5	1	< RL
m-cresol	108-39-4	µg/L	0.5	1	< RL
Toluene*	108-88-3	µg/L	0.5	1	< RL
Conclusion				--	Comply

Abbreviation:
< = less than
RL = reporting limit
µg/L = microgram per liter

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Sampling Photo



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Sampling Photo



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APPENDIX A Legal Requirement

Tablo 10.1: Sektör: Tekstil Sanayii (Açık Elyaf, İplik Üretimi ve Terbiye)

PARAMETRE	BİRİM	KOMPOZİT NUMUNE 2 SAATLİK	KOMPOZİT NUMUNE 24 SAATLİK
KİMYASAL OKSİJEN İHTİYACI (KOİ)	(mg/L)	350	240
AMONYUM AZOTU (NH ₄ -N)	(mg/L)	5	
SERBEST KLOR	(mg/L)	0.3	
TOPLAM KROM	(mg/L)	2	1
SÜLFÜR (S ⁻²)	(mg/L)	0.1	-
SÜLFİT	(mg/L)	1	-
YAĞ VE GRES	(mg/L)	10	-
BALIK BİYODENEYİ (ZSF)	-	4	3
pH	-	6-9	6-9
(Ek satır:RG-24/4/2011-27914)	(Pt-Co)	280	260
Renk			

Tablo 10.3: Sektör: Tekstil Sanayii (Pamuklu Tekstil ve Benzerleri)

PARAMETRE	BİRİM	KOMPOZİT NUMUNE 2 SAATLİK	KOMPOZİT NUMUNE 24 SAATLİK
KİMYASAL OKSİJEN İHTİYACI (KOİ)	(mg/L)	250	200
ASKIDA KATI MADDE(AKM)	(mg/L)	160	120
AMONYUM AZOTU (NH ₄ -N)	(mg/L)	5	-
SERBEST KLOR	(mg/L)	0.3	-
TOPLAM KROM	(mg/L)	2	1
SÜLFÜR (S ⁻²)	(mg/L)	0.1	-
SÜLFİT	(mg/L)	1	-
YAĞ VE GRES	(mg/L)	10	-
BALIK BİYODENEYİ (ZSF)	-	4	3
pH	-	6-9	6-9
(Ek satır:RG-24/4/2011-27914)	(Pt-Co)	280	260
Renk			

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Tablo 10.5: Sektör: Tekstil Sanayii (Örgü Kumaş Terbiyesi ve Benzerleri)

PARAMETRE	BİRİM	KOMPOZİT NUMUNE 2 SAATLİK	KOMPOZİT NUMUNE 24 SAATLİK
KİMYASAL OKSİJEN İHTİYACI (KOİ)	(mg/L)	300	200
AMONYUM AZOTU (NH ₄ -N)	(mg/L)	5	-
SERBEST KLOR	(mg/L)	0.3	-
YAĞ VE GRES	(mg/L)	10	-
TOPLAM KROM	(mg/L)	2	1
SÜLFÜR (S ⁻²)	(mg/L)	0.1	-
SÜLFİT	(mg/L)	1	-
FENOL	(mg/L)	1	0.5
BALIK BİYODENEYİ (ZSF)	-	4	3
pH	-	6-9	6-9
(Ek satır:RG-24/4/2011-27914)	(Pt-Co)	280	260
Renk			


Tablo 10.7: Sektör: Tekstil Sanayii (Sentetik Tekstil Terbiyesi ve Benzerleri)


PARAMETRE	BİRİM	KOMPOZİT NUMUNE 2 SAATLİK	KOMPOZİT NUMUNE 24 SAATLİK
KİMYASAL OKSİJEN İHTİYACI (KOİ)	(mg/L)	400	300
SÜLFÜR (S ⁻²)	(mg/L)	0.1	-
FENOL	(mg/L)	1	0.5
ÇİNKO (Zn)	(mg/L)	12	10
BALIK BİYODENEYİ (ZSF)	-	3	2
pH	-	6-9	6-9
(Ek satır:RG-24/4/2011-27914)	(Pt-Co)	280	260
Renk			

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Quality Management Procedure		Version: 2.0
		Page: 1 of 2
Atık Su/Çamur Numune Alma Planı		Valid from: 2018-10-26
Appendix 1		Created by: Duygu Özlük
		Approved by: Neval Kaner
Müşteri / Client	Nuryıldız Tekstil	
Rapor No./ Report No.	144404001	
Fabrika Adı/ Factory Name	Nuryıldız Tekstil	
Fabrika Adresi / Factory Address	Çarlı	
Numune Alma Tarihi / Sampling Date	17.07.2024	
Personel/ Sampling Person	Cihan Gökçeri	
Atık Su Tahliye Tipi / Discharged Type	<input checked="" type="checkbox"/> Direkt / Direct <input type="checkbox"/> Endirekt / Indirect with pre-treatment <input type="checkbox"/> Endirekt / Indirect without pre-treatment	
Sampling Point	<input checked="" type="checkbox"/> Wastewater <input type="checkbox"/> Sludge	
Numune Tipi / Sample Type	<input checked="" type="checkbox"/> Giriş Suyu / Incoming water <input type="checkbox"/> Ham Atık Su / Raw Wastewater <input checked="" type="checkbox"/> Deşarj Suyu-Çıkış / Discharged Water <input type="checkbox"/> Çamur / Sludge Tip / Facility Type	
Müşteri Tesis Sorumlusu / Sampling Field Contact	Gölay ELİTAŞ	
Hava Durumu / Weather Condition	30°	
Sıcaklık / Temperature	30°	

		Number: MS-0036830					
Quality Management Procedure		Version: 2.0					
		Page: 2 of 2					
Atık Su/Çamur Numune Alma Planı		Valid from: 2018-10-26					
Appendix 1		Created by: Duygu Özlük					
		Approved by: Neval Kaner					
Numune Toplama Bilgileri / Sample Collection Information							

Örneklem Tipi / Sampling mode:	<input type="checkbox"/> Manuel / Manual <input type="checkbox"/> Otomatik / Automatic						
Örneklem Başlama Zamanı / Sampling Start Time:	03:00						
Sampling Stop Time/ Örneklem Bitiş Zamanı:	15:00						
ZDHC Wastewater Flow Measurement							
Measurement(cm)	Meter	Pipe(O)	Flume(U)	Wier(V)			
Diameter	NA	—	—	—			
Depth	NA	NA	NA	—			
ZDHC Wastewater Sample Collection Field Test Measurements							
Sampling Time	Temperature °C	pH	DO mg/L	Total Chlorine mg/L	Persistent Foam (Y/N)	Wastewater Flow Rate (L/min)	Alternate measured flow
hrs	Wastewater Discharge	Receiving Water				Depth cm	Velocity (cm/sec)
0	30	22	7.4	5.2	0.2	N	1800
1	30	25	7.8	5.3	0.5		
2	28	25	7.6	5.4	0.2		
3	31	23	7.5	6.1	0.4		
4	31	27	7.3	6.1	0.3		
5	30	28	7.4	6.0	0.2		
6	32	27	7.1	5.3	0.2		
Avg	30.4	25.42	7.14	5.8	0.3		

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		SKKY Mevcut KOI Standartları	Ergene Havzası için Uygulanacak KOI Standartları
		2 Saatlik Kompozit Numune	2 Saatlik Kompozit Numune
Tablo 10: Tekstil Sanayi	10.1: Açık Elyaf, İplik Üretimi ve Terbiye	350	200
	10.2: Dokunmuş Kumaş Terbiyesi ve Benzerleri	400	240
	10.3: Pamuklu Tekstil ve Benzerleri	250	200
	10.4: Yün Yıkama, Terbiye, Dokuma ve Benzerleri	400	240
	10.5: Örgü Kumaş Terbiyesi ve Benzerleri	300	200
	10.6: Halı Terbiyesi ve Benzerleri	300	200
	10.7: Sentetik Tekstil Terbiyesi ve Benzerleri	400	240
Tablo 11: Petrol Sanayi	11.2: Petrol Dolum Tesisleri ve Benzerleri	400	200
	11.3: Hidrokarbon Üretim Tesisleri	300	150
Tablo 12: Deri Sanayi	12: Deri Deri Mamulleri ve Benzer Sanayiler	300	200
Tablo 13: Kağıt Sanayi	13.1: Yarı Seltüloz Üretimi	-	600
	13.2: Hurda Kağıt, Saman ve Kağıttan Ağartılmamış Seltüloz Üretimi	-	600
	13.3: Ağartılmış Seltüloz Üretimi	-	600
	13.4: Saf Seltüloz Üretimi	-	600
	13.5: Nişasta Katkısız Kağıt	-	100
	13.6: Nişasta Katkılı Kağıt	-	100
	13.7: Saf Seltülozdan Elde Edilen Çok İnce Dokulu Kağıt	-	120

- END -