



# LAB REPORT

|                  |                |
|------------------|----------------|
| Report Number    | (6624)207-0101 |
| Date of sampling | 25/07/2024     |
| Reporting Date   | 01/08/2024     |

|                         |  |            |                           |
|-------------------------|--|------------|---------------------------|
| Audit ID                | 177172   | Audit firm | Bureau Veritas – SHANGHAI |
| Company name            | Hangzhou Xinyuan Printing & Dyeing Co., Ltd  |            |                           |
| Contact person          | Zhang Yang / Li Fang   |            |                           |
| Type of tax - tax ID no | 913301097368681449   |            |                           |
| Address                 | No. 158 Zhenzhong Road, Dangwan Town, Xiaoshan District, Hangzhou City, Zhejiang Province, China |            |                           |
| Region state province   | Zhejiang   |            |                           |
| Town city / village     | Hangzhou   |            |                           |
| Zip/Post code           | 311221   |            |                           |

| Type of wastewater discharge  |   |   |  |
|---|---|---|--|
| Type of waste discharge   | Indirect Discharge without Pre-treatment                          |   |  |
| Description of the discharge  | Hangzhou Dangwan Sewage Treatment Co., Ltd                        |   |  |
| Ambient temperature of receiving water body (direct discharge only) | Not Applicable  |   |  |
| Type of treatment   |   |   |  |
| PRELIMINARY   | PRIMARY   | SECONDARY / BIOLOGICAL  | TERTIARY   |
| <input type="checkbox"/> Screening/Sieving/Grit remover             | <input type="checkbox"/> Coagulation/Flocculation                 | <input type="checkbox"/> Activated sludge process/Aerobic reactor       | <input type="checkbox"/> Absorption with activated carbon  |
| <input type="checkbox"/> Homogenization tank                        | <input type="checkbox"/> Dissolved air flotation (DAF)            | <input type="checkbox"/> Biological Biofilm reactor (MBBR, SAF, RBC...) | <input type="checkbox"/> High rate filtration  |
| <input type="checkbox"/> pH correction                              | <input type="checkbox"/> Sedimentation tanks or Settler/Clarifier | <input type="checkbox"/> Sequencing batch reactor (SBR)                 | <input type="checkbox"/> Techniques (ozonation, Fenton reaction, photo catalytic degradation...) |
| <input type="checkbox"/> Other                                      | <input type="checkbox"/> Other                                    | <input type="checkbox"/> Other  | <input type="checkbox"/> Other   |

Bureau Veritas Consumer Products Services (Shanghai) Co., Ltd.  
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|  |               |
|--|---------------|
| Sampler accreditation certification number (ZDHC): | C74D106818121 |
|--|---------------|

### Sample description

|                                 | Simple                                  | Composite | Comments |
|---------------------------------|---|-----------|----------|
| (1) Wastewater before treatment | YES, light blue, simple sample at 10:10 | NO        | /        |
| (2) Wastewater after treatment  | NO                                      | NO        | /        |
| (3) Sludge                      | NO                                      | NO        | /        |

### Local Legal Data

|  |                         |
|--|-------------------------|
| Local Legal Standard name [a]                                      | GB 4287-2012            |
| Parameters (ZDHC WWG V2.1, Table 2 & 3) exceeded local regulation: | No exceeded             |
| Discharge permit provided  | yes                     |
| Discharge flow data  | > 15m <sup>3</sup> /Day |

### Internal description – Final Test Report

|  |   |
|--|---|
| Internal codification number               | (6624)207-0101                                |
| Reference sample number                    | Sample 1 For Before treatment                 |
| Received on                                | 26/07/2024                                    |
| Analysis carried out from                  | 26/07/2024 to 01/08/2024                      |
| Arrival Temperature at Lab                 | 4.95 °C                                       |
| Comments                                   | Samples received within maximum holding time. |
| Reporting date                             | 01/08/2024                                    |
| Date and time of the beginning of sampling | 25/07/2024, 9:30                              |
| Date and time of the end of sampling       | 25/07/2024, 11:00                             |
| Sample holding time exceeded               | NO  |



Report Number

**(6624)207-0101**

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

General enquiry and invoicing

Mr. Henry Chen  
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Technical enquiry-Chemical

Mr. Steven Han  
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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.

BUREAU VERITAS

CONSUMER PRODUCTS SERVICES DIVISION (SHANGHAI)

必维申美商品检测（上海）有限公司

Laboratory Test Location 实验室检测地址:

No.368, Guangzhong Road, Zhuanqiao Town, Minhang, Shanghai.

上海市闵行区光中路368号

No.168, Guanghua Road, Zhuanqiao Town, Minhang, Shanghai.

上海市闵行区光华路168号

Reviewed by:

Amy Feng

Approved by:

Aten Wu  
Technical Support

| <b>Summary of test results</b>                             |  |                                       |                              |                                |
|--|--|---------------------------------------|------------------------------|--------------------------------|
| <b>Test items</b>  | <b>Sample 1<br/>(Before treatment)</b> | <b>Sample 2<br/>(After treatment)</b> | <b>Sample 3<br/>(Sludge)</b> | <b>Sample 4<br/>(Leachate)</b> |
| Global effluent parameters ZDHC                            | NA                                     | NA                                    | NA                           | NA                             |
| Heavy metals   | Fulfill Aspirational limit             | NA                                    | NA                           | NA                             |
| Alkylphenols (APs) & Alkylphenol ethoxylates (APEOs)       | ND                                     | NA                                    | NA                           | NA                             |
| Chlorobenzenes & Chlorotoluenes                            | ND                                     | NA                                    | NA                           | NA                             |
| Chlorophenols  | ND                                     | NA                                    | NA                           | NA                             |
| Restricted Aromatic Amines (Cleavable from Azo-colourants) | ND                                     | NA                                    | NA                           | NA                             |
| Dyes – Carcinogenic or Equivalent Concern                  | ND                                     | NA                                    | NA                           | NA                             |
| Dyes – Disperse (Sensitising)                              | ND                                     | NA                                    | NA                           | NA                             |
| Flame retardants   | ND                                     | NA                                    | NA                           | NA                             |
| Glycols  | ND                                     | NA                                    | NA                           | NA                             |
| Halogenated 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                                    | NA                           | 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 (below reporting limit)   | NA  | = | Not applicable  |
| D   | = | Detected (equal or above reporting limit)  | -   | = | 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 - Bureau Veritas Science and Technology Service (Xi'an) Co., Ltd |
| [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 & LOQ | Result<br>Sample 2<br>(After Treatment) | Unit                |
|------------------------|-----------------------------|------------------------|-------------|--------------|-----------------------|---|---------------------|
|                        |                             | Foundational           | Progressive | Aspirational |                       |   |                     |
| Temperature difference | GB/T 13195-1991             | Δ+15                   | Δ+10        | Δ+5          | N/A                   | NA                                      | °C                  |
| TSS                    | GB/T 11901-1989             | 50                     | 15          | 5            | 5                     | NA                                      | mg/L                |
| COD                    | HJ 828-2017                 | 150                    | 80          | 40           | 40                    | NA                                      | mg/L                |
| Total-N                | HJ 636-2012                 | 20 mg/L                | 10 mg/L     | 5 mg/L       | 5                     | NA                                      | mg/L                |
| pH                     | HJ 1147-2020                | 6-9                    | 6-9         | 6-9          | N/A                   | NA                                      | /                   |
| Colour [m-1]           | ISO 7887-B:2011             | 7;5;3                  | 5;3;2       | 2;1;1        | N/A                   | NA                                      | m <sup>-1</sup>     |
| BOD <sub>5</sub>       | HJ 505-2009                 | 30                     | 15          | 8            | 8                     | NA                                      | mg/L                |
| Ammonium-N             | HJ 535-2009                 | 10                     | 1           | 0.5          | 0.5                   | NA                                      | mg/L                |
| Total-P                | GB/T 11893-1989             | 3                      | 0.5         | 0.1          | 0.1                   | NA                                      | mg/L                |
| AOX                    | HJ/T 83-2001                | 3                      | 0.5         | 0.1          | 0.1                   | NA                                      | mg/L                |
| Oil and grease         | HJ 637-2018                 | 10                     | 2           | 0.5          | 0.5                   | NA                                      | mg/L                |
| Phenol                 | HJ 503-2009                 | 0.5                    | 0.01        | 0.001        | 0.001                 | NA                                      | mg/L                |
| E.Coli                 | SM 9221B, SM 9221F          | 126                    | 126         | 126          | 126                   | NA                                      | [MPN/100 ml]        |
| Foam                   | Visual                      | Not visible            | Not visible | Not visible  | N/A                   | NA                                      | /                   |
| Cyanide                | HJ 484-2009                 | 0.2                    | 0.1         | 0.05         | 0.05                  | NA                                      | mg/L                |
| Sulfide                | HJ 1226-2021                | 0.5                    | 0.05        | 0.01         | 0.01                  | NA                                      | mg/L                |
| Sulfite                | HJ 84-2016                  | 2                      | 0.5         | 0.2          | 0.2                   | NA                                      | mg/L                |
| DO                     | HJ 506-2009                 | Sample and report only |             |              | N/A                   | NA                                      | mg/L                |
| Total Chlorine         | HJ 585-2010,<br>HJ 586-2010 | Sample and report only |             |              | N/A                   | NA                                      | mg/L                |
| TDS                    | GB/T 5750.4-2006            | Sample and report only |             |              | 5                     | NA                                      | mg/L                |
| Chloride               | HJ 84-2016                  | Sample and report only |             |              | N/A                   | NA                                      | mg/L                |
| Sulfate                | HJ 84-2016                  | Sample and report only |             |              | N/A                   | NA                                      | mg/L                |
| Wastewater Flowrate    | -                           | -                      |             |              | N/A                   | NA                                      | m <sup>3</sup> /day |



**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 & LOQ | Result<br>Sample 1<br>(Before 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                  | NA                                       | mg/L |
| Cobalt (Co)         | Various | 0.05                   | 0.02        | 0.01         | 0.01                  | NA                                       | mg/L |
| Nickel (Ni)         | Various | 0.2                    | 0.1         | 0.05         | 0.05                  | NA                                       | mg/L |
| Silver (Ag)         | Various | 0.1                    | 0.05        | 0.005        | 0.005                 | NA                                       | mg/L |
| Copper (Cu)         | Various | 1                      | 0.5         | 0.25         | 0.25                  | NA                                       | mg/L |
| Zinc (Zn)           | Various | 5.0                    | 1.0         | 0.5          | 0.5                   | NA                                       | mg/L |
| Total Chromium (Cr) | Various | 0.2                    | 0.1         | 0.05         | 0.05                  | NA                                       | 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                     | NA                                       | mg/L |
| Selenium (Se)       | Various | Sample and report only |             |              | 1                     | NA                                       | mg/L |
| Tin (Sn)            | Various | Sample and report only |             |              | 1                     | NA                                       | mg/L |

**Remark**

- |     |   |  |     |   |  |
|-----|---|--|-----|---|--|
| ND  | = | Not detected (below reporting limit)   | NA  | = | Not applicable   |
| D   | = | Detected (equal or above reporting limit)  | -   | = | Did not perform  |
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| #   | = | Non accredited parameter   | (S) | = | Analysis was subcontracted for testing- Bureau Veritas Science and Technology Service (Xi'an) Co., Ltd |
| [a] | = | The local legal standard name and legal standard number is referenced to discharge permit (or contractual agree by CETP) that provided by company. |     |   |  |



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### 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 & LOQ | Result Sample 1 (Before treatment) | Unit |
|--|--|-----------------------|------------------------------------|------|
| Octylphenol (OP)                                   | 140-66-9/ 1806-26-4/ 27193-28-8                            | 5                     | ND                                 | µg/L |
| Nonylphenol (NP)                                   | 104-40-5/ 11066-49-2/ 25154-52-3/ 84852-15-3               | 5                     | ND                                 | µg/L |
| Octylphenoethoxylates (OPEOs)                      | 9002-93-1/ 9036-19-5/ 68987-90-6                           | 5                     | ND                                 | µg/L |
| Nonylphenoethoxylates (NPEOs)                      | 9016-45-9/ 26027-38-3/ 37205-87-1/ 68412-54-4/ 127087-87-0 | 5                     | ND                                 | µg/L |

### 4. Chlorobenzenes & Chlorotoluenes

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

| Chlorobenzenes & Chlorotoluenes   | CAS no. | Reporting limit & LOQ | Result Sample 1 (Before treatment) | Unit |
|---|---------|-----------------------|------------------------------------|------|
| 1,2-Dichlorobenzene   | 95-50-1 | 0.2                   | ND                                 | µg/L |
| Other isomers of mono-, di-, tri-, tetra-, penta-, and hexa- chlorobenzene and mono-, di-, tri-, tetra-, and penta- chlorotoluene | Various | 0.2                   | ND                                 | µg/L |

### 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 & LOQ | Result Sample 1 (Before treatment) | Unit |
|-----------------------|----------|-----------------------|------------------------------------|------|
| 2-Chlorophenol        | 95-57-8  | 0.5                   | ND                                 | µg/L |
| 3-Chlorophenol        | 108-43-0 | 0.5                   | ND                                 | µg/L |
| 4-Chlorophenol        | 106-48-9 | 0.5                   | ND                                 | µg/L |
| 2,3-Dichlorophenol    | 576-24-9 | 0.5                   | ND                                 | µg/L |
| 2,4-Dichlorophenol    | 120-83-2 | 0.5                   | ND                                 | µg/L |
| 2,5-Dichlorophenol    | 583-78-8 | 0.5                   | ND                                 | µg/L |
| 2,6-Dichlorophenol    | 87-65-0  | 0.5                   | ND                                 | µg/L |
| 3,4-Dichlorophenol    | 95-77-2  | 0.5                   | ND                                 | µg/L |
| 3,5-Dichlorophenol    | 591-35-5 | 0.5                   | ND                                 | µg/L |
| 2,4,6-Trichlorophenol | 88-06-2  | 0.5                   | ND                                 | µg/L |
| 2,3,5-Trichlorophenol | 933-78-8 | 0.5                   | ND                                 | µg/L |

|                           |            |     |    |      |
|---------------------------|------------|-----|----|------|
| 2,3,6-Trichlorophenol     | 933-75-5   | 0.5 | ND | µg/L |
| 2,4,5-Trichlorophenol     | 95-95-4    | 0.5 | ND | µg/L |
| 2,3,4-Trichlorophenol     | 15950-66-0 | 0.5 | ND | µg/L |
| 3,4,5-Trichlorophenol     | 609-19-8   | 0.5 | ND | µg/L |
| 2,3,4,5-Trichlorophenol   | 4901-51-3  | 0.5 | ND | µg/L |
| 2,3,4,6-Tetrachlorophenol | 58-90-2    | 0.5 | ND | µg/L |
| 2,3,5,6-Tetrachlorophenol | 935-95-5   | 0.5 | ND | µg/L |
| Pentachlorophenol (PCP)   | 87-86-5    | 0.5 | ND | µg/L |

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

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 & LOQ | Result Sample 1<br>(Before treatment) | Unit |
|--------------------------------------|----------|-----------------------|---------------------------------------|------|
| 4,4-Methylene-bis-(2-chloro-aniline) | 101-14-4 | 0.1                   | ND                                    | µg/L |
| 4,4-methylenedianiline               | 101-77-9 | 0.1                   | ND                                    | µg/L |
| 4,4-Oxydianiline                     | 101-80-4 | 0.1                   | ND                                    | µg/L |
| 4-Chloroaniline                      | 106-47-8 | 0.1                   | ND                                    | µg/L |
| 3,3-Dimethoxybenzidine               | 119-90-4 | 0.1                   | ND                                    | µg/L |
| 3,3-Dimethylbenzidine                | 119-93-7 | 0.1                   | ND                                    | µg/L |
| 6-methoxy-m-toluidine                | 120-71-8 | 0.1                   | ND                                    | µg/L |
| 2,4,5-Trimethylaniline               | 137-17-7 | 0.1                   | ND                                    | µg/L |
| 4,4-Thiodianiline                    | 139-65-1 | 0.1                   | ND                                    | µg/L |
| 4-Aminoazobenzene                    | 60-09-3  | 0.1                   | ND                                    | µg/L |
| 4-methoxy-m-phenylenediamine         | 615-05-4 | 0.1                   | ND                                    | µg/L |
| 4,4-methylenedi-o-toluidine          | 838-88-0 | 0.1                   | ND                                    | µg/L |
| 2,6-Xylidine                         | 87-62-7  | 0.1                   | ND                                    | µg/L |
| o-Anisidine                          | 90-04-0  | 0.1                   | ND                                    | µg/L |
| 2-Naphthylamine                      | 91-59-8  | 0.1                   | ND                                    | µg/L |
| 3,3'-Dichlorobenzidine               | 91-94-1  | 0.1                   | ND                                    | µg/L |
| 4-Aminobiphenyl                      | 92-67-1  | 0.1                   | ND                                    | µg/L |
| Benzidine                            | 92-87-5  | 0.1                   | ND                                    | µg/L |
| o-Toluidine                          | 95-53-4  | 0.1                   | ND                                    | µg/L |
| 2,4-Xylidine                         | 95-68-1  | 0.1                   | ND                                    | µg/L |
| 4-Chloro-o-toluidine                 | 95-69-2  | 0.1                   | ND                                    | µg/L |





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|   |            |     |    |      |
|---|------------|-----|----|------|
| 4-Methyl-m-phenylenediamine   | 95-80-7    | 0.1 | ND | µg/L |
| o-Aminoazotoluene   | 97-56-3    | 0.1 | ND | µg/L |
| 5-Nitro-o-toluidine   | 99-55-8    | 0.1 | ND | µg/L |
| 2-Naphthylammoniumacetate   | 553-00-4   | 0.1 | ND | µg/L |
| 2,4,5-trimethylaniline hydrochloride                                    | 21436-97-5 | 0.1 | ND | µg/L |
| 4-chloro-o-toluidinium chloride   | 3165-93-3  | 0.1 | ND | µg/L |
| 4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisoole sulphate | 39156-41-7 | 0.1 | ND | µg/L |

### 7. Dyes – Carcinogenic or Equivalent Concern

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

| Carcinogenic dyes                                 | CAS no.    | Reporting limit & LOQ | Result Sample 1<br>(Before treatment) | Unit |
|---|------------|-----------------------|---------------------------------------|------|
| C.I. Direct Black 38                              | 1937-37-7  | 500                   | ND                                    | µg/L |
| C.I. Direct Blue 6                                | 2602-46-2  | 500                   | ND                                    | µg/L |
| C.I. Acid Red 26                                  | 3761-53-3  | 500                   | ND                                    | µg/L |
| C.I. Basic Red 9                                  | 569-61-9   | 500                   | ND                                    | µg/L |
| C.I. Direct Red 28                                | 573-58-0   | 500                   | ND                                    | µg/L |
| C.I. Basic Violet 14                              | 632-99-5   | 500                   | ND                                    | µg/L |
| C.I. Disperse Blue 1                              | 2475-45-8  | 500                   | ND                                    | µg/L |
| C.I. Disperse Blue 3                              | 2475-46-9  | 500                   | ND                                    | µg/L |
| C.I. Basic Blue 26 (with Michler's Ketone > 0.1%) | 2580-56-5  | 500                   | ND                                    | µg/L |
| C.I. Basic Green 4 (malachite green chloride)     | 569-64-2   | 500                   | ND                                    | µg/L |
| C.I. Basic Green 4 (malachite green oxalate)      | 2437-29-8  | 500                   | ND                                    | µg/L |
| C.I. Basic Green 4 (malachite green)              | 10309-95-2 | 500                   | ND                                    | µg/L |
| Disperse Orange 11                                | 82-28-0    | 500                   | ND                                    | µg/L |
| Basic violet 3 with >0.1% of Michler's Ketone     | 548-62-9   | 500                   | ND                                    | µg/L |
| C.I. Acid Violet 49                               | 1694-09-3  | 500                   | ND                                    | µg/L |

**8. Dyes – Disperse (Sensitising)**

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

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

**9. Flame retardants**

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

| Brominated flame retardants              | CAS no.    | Reporting limit & LOQ | Result Sample 1<br>(Before treatment) | Unit |
|--|------------|-----------------------|---------------------------------------|------|
| Tris(2-chloroethyl) phosphate (TCEP)     | 115-96-8   | 25                    | ND                                    | µg/L |
| Decabromodiphenyl ether (DecaBDE)        | 1163-19-5  | 25                    | ND                                    | µg/L |
| Tris(2,3-dibromopropyl) phosphate (TRIS) | 126-72-7   | 25                    | ND                                    | µg/L |
| Pentabromodiphenyl ether (PentaBDE)      | 32534-81-9 | 25                    | ND                                    | µg/L |
| Octabromodiphenyl ether (OctaBDE)        | 32536-52-0 | 25                    | ND                                    | µg/L |
| Bis(2,3-dibromopropyl) phosphate         | 5412-25-9  | 25                    | ND                                    | µg/L |



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|--|------------------------|------------------|----|------|
| Tris(1-aziridinyl)phosphine oxide (TEPA)       | 545-55-1               | 25               | ND | µg/L |
| Polybromobiphenyls (PBBs)                      | 59536-65-1             | 25               | ND | µg/L |
| Tetrabromobisphenol A (TBBPA)                  | 79-94-7                | 25               | ND | µg/L |
| Hexabromocyclododecane (HBCDD)                 | 3194-55-6              | 25               | ND | µg/L |
| 2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)    | 3296-90-0              | 25               | ND | µg/L |
| Tris(1,3-dichloro-isopropyl) phosphate (TDCP)  | 13674-87-8             | 25               | ND | µg/L |
| Tris-(2-chloro-1-methylethyl) phosphate (TCPP) | 13674-84-5             | 25               | ND | µg/L |
| Decabromobiphenyl (DecaBB)                     | 13654-09-6             | 25               | ND | µg/L |
| Dibromobiphenyls (DiBB)                        | Various                | 25               | ND | µg/L |
| Octabromobiphenyls (OctaBB)                    | Various                | 25               | ND | µg/L |
| Dibromopropylether                             | 21850-44-2             | 25               | ND | µg/L |
| Heptabromodiphenyl ether (HeptaBDE)            | 68928-80-3             | 25               | ND | µg/L |
| Hexabromodiphenyl ether (HexaBDE)              | 36483-60-0             | 25               | ND | µg/L |
| Monobromobiphenyls (MonoBB)                    | Various                | 25               | ND | µg/L |
| Monobromodiphenylethers (MonoBDEs)             | Various                | 25               | ND | µg/L |
| Nonabromobiphenyls (NonaBB)                    | Various                | 25               | ND | µg/L |
| Nonabromodiphenyl ether (NonaBDE)              | 63936-56-1             | 25               | ND | µg/L |
| Tetrabromodiphenyl ether (TetraBDE)            | 40088-47-9             | 25               | ND | µg/L |
| Tribromodiphenylethers (TriBDEs)               | Various                | 25               | ND | µg/L |
| Boric acid                                     | 10043-35-3/ 11113-50-1 | 100 <sup>d</sup> | ND | µg/L |
| Diboron trioxide                               | 1303-86-2              | 100 <sup>d</sup> | ND | µg/L |
| Disodium octaborate                            | 12008-41-2             | 100 <sup>d</sup> | ND | µg/L |
| Disodium tetraborate anhydrous                 | 1303-96-4/ 1330-43-4   | 100 <sup>d</sup> | ND | µg/L |
| Tetraboron disodium heptaoxide, hydrate        | 12267-73-1             | 100 <sup>d</sup> | ND | µg/L |

d = Limit refers to elemental boron, not the salt

**10. Glycols**

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

| Glycols                           | CAS no.    | Reporting limit & LOQ | Result Sample 1<br>(Before treatment) | Unit |
|-----------------------------------|------------|-----------------------|---------------------------------------|------|
| Bis(2-methoxyethyl)-ether         | 111-96-6   | 50                    | ND                                    | µg/L |
| 2-ethoxyethanol                   | 110-80-5   | 50                    | ND                                    | µg/L |
| 2-ethoxyethyl acetate             | 111-15-9   | 50                    | ND                                    | µg/L |
| Ethylene glycol dimethyl ether    | 110-71-4   | 50                    | ND                                    | µg/L |
| 2-methoxyethanol                  | 109-86-4   | 50                    | ND                                    | µg/L |
| 2-methoxyethylacetate             | 110-49-6   | 50                    | ND                                    | µg/L |
| 2-methoxypropylacetate            | 70657-70-4 | 50                    | ND                                    | µg/L |
| Triethylene glycol dimethyl ether | 112-49-2   | 50                    | ND                                    | µg/L |

**11. Halogenated Solvents**

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

| Chlorinated solvents | CAS no.  | Reporting limit & LOQ | Result Sample 1<br>(Before treatment) | Unit |
|----------------------|----------|-----------------------|---------------------------------------|------|
| 1,2-Dichloroethane   | 107-06-2 | 1                     | ND                                    | µg/L |
| Methylene chloride   | 75-09-2  | 1                     | ND                                    | µg/L |
| Trichloroethene      | 79-01-6  | 1                     | ND                                    | µg/L |
| Tetrachloroethene    | 127-18-4 | 1                     | ND                                    | µg/L |

**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 & LOQ | Result Sample 1<br>(Before treatment) | Unit |
|---|---------|-----------------------|---------------------------------------|------|
| Mono-, di-and tri-methyltin derivatives | Various | 0.01                  | ND                                    | µg/L |
| Mono-, di-and tri-butyltin derivatives  | Various | 0.01                  | ND                                    | µg/L |
| Mono-, di-and tri-phenyltin derivatives | Various | 0.01                  | ND                                    | µg/L |
| Mono-, di-and tri-octyltin derivatives  | Various | 0.01                  | ND                                    | µg/L |
| Tricyclohexyltin (TCyHT)                | Various | 0.01                  | ND                                    | µg/L |
| Dipropyltin compounds (DPT)             | Various | 0.01                  | ND                                    | µg/L |
| Tetrabutyltin compounds (TeBT)          | Various | 0.01                  | ND                                    | µg/L |
| Tripropyltin compounds (TPT)            | Various | 0.01                  | ND                                    | µg/L |

|                                |         |      |    |      |
|--------------------------------|---------|------|----|------|
| Tetraoctyltin compounds (TeOT) | Various | 0.01 | ND | µg/L |
| Tetraethyltin compounds (TeET) | Various | 0.01 | ND | µg/L |

### 13. Phthalates

USEPA 8270E, ISO 18856 Dichloromethane extraction GC-MS

| Phthalates  | CAS no.                | Reporting limit & LOQ | Result Sample 1<br>(Before treatment) | Unit |
|---|------------------------|-----------------------|---------------------------------------|------|
| Di-2-ethylhexyl phthalate (DEHP)  | 117-81-7               | 10                    | ND                                    | µg/L |
| Bis(2-methoxyethyl) phthalate (DMEP)  | 117-82-8               | 10                    | ND                                    | µg/L |
| Di-n-octyl phthalate (DNOP)   | 117-84-0               | 10                    | ND                                    | µg/L |
| Di-iso-decyl phthalate (DIDP)   | 26761-40-0             | 10                    | ND                                    | µg/L |
| Di-iso-nonyl phthalate (DINP)   | 28553-12-0             | 10                    | ND                                    | µg/L |
| Di-n-hexyl phthalate (DnHP)   | 84-75-3                | 10                    | ND                                    | µg/L |
| Dibutyl phthalate (DBP)   | 84-74-2                | 10                    | ND                                    | µg/L |
| Butyl benzyl phthalate (BBP)  | 85-68-7                | 10                    | ND                                    | µg/L |
| Diethyl phthalate (DEP)   | 84-66-2                | 10                    | ND                                    | µg/L |
| Di-n-propyl phthalate (DPRP)  | 131-16-8               | 10                    | ND                                    | µg/L |
| Di-iso-butyl phthalate (DIBP)   | 84-69-5                | 10                    | ND                                    | µg/L |
| Di-cyclohexyl phthalate (DCHP)  | 84-61-7                | 10                    | ND                                    | µg/L |
| Di-iso-octyl phthalate (DIOP)   | 27554-26-3             | 10                    | ND                                    | µg/L |
| 1,2-benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) | 68515-42-4/ 68515-50-4 | 10                    | ND                                    | µg/L |
| 1,2-benzenedicarboxylic acid, di-C6-11-branched alkyl esters, C7-rich (DIHP)    | 71888-89-6/ 84777-06-0 | 10                    | ND                                    | µg/L |
| Di-n-pentylphthalates   | 131-18-0               | 10                    | ND                                    | µg/L |
| Diisopentylphthalates   | 605-50-5               | 10                    | ND                                    | µg/L |
| Dinonyl phthalate (DNP)   | 84-76-4                | 10                    | ND                                    | µg/L |

### 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 & LOQ | Result Sample 1<br>(Before treatment) | Unit |
|--|---------|-----------------------|---------------------------------------|------|
| Perfluorooctane sulfonic acid (PFOS) and related substances, Perfluorooctanoic acid (PFOA) | Various | 0.01                  | ND                                    | µg/L |
| Perfluorooctanoic acid (PFOA) related substances   | Various | 1                     | ND                                    | µg/L |



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

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

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

**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 & LOQ | Result Sample 1 (Before treatment) | Unit |
|-----------------------------------|-----------|-----------------------|------------------------------------|------|
| Benzene                           | 71-43-2   | 1                     | ND                                 | µg/L |
| Xylene                            | 1330-20-7 | 1                     | ND                                 | µg/L |
| o-cresol                          | 95-48-7   | 1                     | ND                                 | µg/L |
| p-cresol                          | 106-44-5  | 1                     | ND                                 | µg/L |

|                      |          |   |    |      |
|----------------------|----------|---|----|------|
| m-cresol             | 108-39-4 | 1 | ND | µg/L |
| Toluene <sup>a</sup> | 108-88-3 | 1 | ND | µg/L |

a = report only for mock leather, reporting limit does not apply 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

| Anti-Microbials & Biocides | CAS no.   | Reporting limit & LOQ | Result Sample 1 (Before treatment) | Unit |
|----------------------------|-----------|-----------------------|------------------------------------|------|
| o-Phenylphenol (+salts)    | 90-43-7   | 100                   | ND                                 | µg/L |
| Triclosan                  | 3380-34-5 | 100                   | ND                                 | µg/L |
| Permethrin                 | Various   | 500                   | ND                                 | µg/L |

#### 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 & LOQ | Result Sample 1 (Before treatment) | Unit |
|--|------------|-----------------------|------------------------------------|------|
| Medium-chain chlorinated paraffins (MCCPs) (C14-C17) | 85535-85-9 | 500                   | ND                                 | µg/L |
| Short-chain chlorinated paraffins (C10-C13)          | 85535-84-8 | 25                    | ND                                 | µg/L |

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

EPA 8015, EPA 8270E

| N,N-di-methylformamide (DMFa)                                 | CAS no. | Reporting limit & LOQ | Result Sample 1 (Before treatment) | Unit |
|---|---------|-----------------------|------------------------------------|------|
| Dimethyl formamide; N,N-dimethylformamide (DMFa) <sup>a</sup> | 68-12-2 | 1000                  | ND                                 | µg/L |

a = report only for mock leather, reporting limit does not apply for mock leather

#### 20. Dyes – Navy Blue Colourant

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

| Dyes – Navy Blue Colourant         | CAS no.       | Reporting limit & LOQ | Result Sample 1 (Before treatment) | Unit |
|------------------------------------|---------------|-----------------------|------------------------------------|------|
| Component 1: C39H23Cl-CrN7O12S 2Na | 118685-33-9   | 500                   | ND                                 | µg/L |
| Component 2: C46H-30CrN10O20S2 3Na | Not allocated | 500                   | ND                                 | µg/L |



**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 & LOQ | Result Sample 1 (Before treatment) | Unit |
|---|------------|-----------------------|------------------------------------|------|
| AEEA [2-(2-aminoethylamino)ethanol]         | 111-41-1   | 500                   | ND                                 | µg/L |
| Bisphenol A                                 | 80-05-7    | 10                    | ND                                 | µg/L |
| Thiourea                                    | 62-56-6    | 50                    | ND                                 | µg/L |
| Quinoline                                   | 91-22-5    | 50                    | ND                                 | µg/L |
| Borate – borate, zinc salt                  | 12767-90-7 | 100 <sup>b</sup>      | ND                                 | µg/L |
| Zinc salt – borate, zinc salt               |            |                       | ND                                 | µg/L |
| Silica (used in sand blasting) <sup>c</sup> | 14464-46-1 | N/A                   | NA                                 | µg/L |

b = Limit refers to boron and zinc individually, not the salt

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

**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 & LOQ | Result Sample 1 (Before treatment) | Unit |
|---|------------|-----------------------|------------------------------------|------|
| 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350) | 36437-37-3 | 100                   | ND                                 | µg/L |
| 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)              | 25973-55-1 | 100                   | ND                                 | µg/L |
| 2-benzotriazol-2-yl-4,6-di-tertbutylphenol (UV-320)                   | 3846-71-7  | 100                   | ND                                 | µg/L |
| 2,4-Di-tert-butyl-6-(5-chlorobenzotriazole-2-yl) phenol (UV-327)      | 3864-99-1  | 100                   | ND                                 | µg/L |





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**23. Sludge Parameters – Step 1 – Metals (Sludge Disposal Pathway = \*)**

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 & LOQ | Result Sample 3 (Sludge) | Unit  |
|----------------------------|---------|-----------------------|--------------------------|-------|
| Arsenic                    | -       | 5                     | NA                       | mg/kg |
| Barium                     | -       | 200                   | NA                       | mg/kg |
| Cadmium                    | -       | 1                     | NA                       | mg/kg |
| Cobalt                     | -       | 400                   | NA                       | mg/kg |
| Copper                     | -       | 50                    | NA                       | mg/kg |
| Lead                       | -       | 5                     | NA                       | mg/kg |
| Nickel                     | -       | 20                    | NA                       | mg/kg |
| Selenium                   | -       | 5                     | NA                       | mg/kg |
| Silver                     | -       | 50                    | NA                       | mg/kg |
| Total Chromium             | -       | 50                    | NA                       | mg/kg |
| Zinc                       | -       | 400                   | NA                       | mg/kg |
| Chromium (VI)              | -       | 20                    | NA                       | mg/kg |
| Mercury                    | -       | 1                     | NA                       | mg/kg |
| Antimony                   | -       | 5                     | NA                       | mg/kg |

**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 & LOQ | Result Sample 3 (Sludge) | Unit  |
|----------------------------|---------|-----------------------|--------------------------|-------|
| Cyanide                    | -       | 20                    | NA                       | mg/kg |

**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 & LOQ | Result Sample 3 (Sludge) | Unit  |
|----------------------------------|---------|-----------------------|--------------------------|-------|
| pH                               | -       | /                     | NA                       | -     |
| % Solids                         | -       | /                     | NA                       | %     |
| Paint Filter Test                | -       | /                     | NA                       | -     |
| Fecal Coliform                   | -       | /                     | NA                       | MPN/g |



**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 & LOQ | Result Sample 3 (Sludge) | Unit  |
|-----------------------------------|---------|-----------------------|--------------------------|-------|
| Nonylphenol ethoxylates (NPEO)    | Various | 0.4                   | NA                       | mg/kg |
| Nonylphenol (NP), mixed isomers   | Various | 0.4                   | NA                       | mg/kg |
| Octylphenol ethoxylates (OPEO)    | Various | 0.4                   | NA                       | mg/kg |
| Octylphenol (OP), mixed isomers   | Various | 0.4                   | NA                       | mg/kg |

**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 & LOQ | Result Sample 3 (Sludge) | Unit  |
|--------------------------|----------|-----------------------|--------------------------|-------|
| Acenaphthene             | 83-32-9  | 0.2                   | NA                       | mg/kg |
| Acenaphthylene           | 208-96-8 | 0.2                   | NA                       | mg/kg |
| Anthracene               | 120-12-7 | 0.2                   | NA                       | mg/kg |
| Benzo[a]anthracene       | 56-55-3  | 0.2                   | NA                       | mg/kg |
| Benzo[a]pyrene (BaP)     | 50-32-8  | 0.2                   | NA                       | mg/kg |
| Benzo[b]fluoranthene     | 205-99-2 | 0.2                   | NA                       | mg/kg |
| Benzo[e]pyrene           | 192-97-2 | 0.2                   | NA                       | mg/kg |
| Benzo[ghi]perylene       | 181-24-2 | 0.2                   | NA                       | mg/kg |
| Benzo[j]fluoranthene     | 205-82-3 | 0.2                   | NA                       | mg/kg |
| Benzo[k]fluoranthene     | 207-08-9 | 0.2                   | NA                       | mg/kg |
| Chrysene                 | 218-01-9 | 0.2                   | NA                       | mg/kg |
| Dibenz[a,h]anthracene    | 53-70-3  | 0.2                   | NA                       | mg/kg |
| Fluoranthene             | 206-44-0 | 0.2                   | NA                       | mg/kg |
| Fluorene                 | 86-73-7  | 0.2                   | NA                       | mg/kg |
| Indeno[1,2,3-cd]pyrene   | 193-39-5 | 0.2                   | NA                       | mg/kg |
| Naphthalene              | 91-20-3  | 0.2                   | NA                       | mg/kg |
| Phenanthrene             | 85-01-8  | 0.2                   | NA                       | mg/kg |
| Pyrene                   | 129-00-0 | 0.2                   | NA                       | mg/kg |



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**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 & LOQ | Result Sample 3 (Sludge) | Unit  |
|---|---------|-----------------------|--------------------------|-------|
| Isomers of mono-, di-, tri-, tetra- and penta chlorotoluene | Various | 0.2                   | NA                       | mg/kg |

**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. | LOQ  | Reporting limit | Result Sample 4 (Leachate) | Unit |
|-------------------------------------|---------|------|-----------------|----------------------------|------|
| Antimony                            | -       | 0.6  | /               | NA                         | mg/L |
| Arsenic                             | -       | 0.5  | /               | NA                         | mg/L |
| Barium                              | -       | 35   | /               | NA                         | mg/L |
| Cadmium                             | -       | 0.15 | /               | NA                         | mg/L |
| Cobalt                              | -       | 80   | /               | NA                         | mg/L |
| Copper                              | -       | 10   | /               | NA                         | mg/L |
| Lead                                | -       | 0.5  | /               | NA                         | mg/L |
| Nickel                              | -       | 3.5  | /               | NA                         | mg/L |
| Selenium                            | -       | 0.5  | /               | NA                         | mg/L |
| Silver                              | -       | 5    | /               | NA                         | mg/L |
| Total Chromium                      | -       | 5    | /               | NA                         | mg/L |
| Zinc                                | -       | 50   | /               | NA                         | mg/L |
| Chromium (VI)                       | -       | 2.5  | /               | NA                         | mg/L |
| Mercury                             | -       | 0.05 | /               | NA                         | mg/L |

**Remark**

|    |   |   |     |   |  |
|----|---|---|-----|---|--|
| ND | = | Not detected (below reporting limit)  | NA  | = | Not applicable   |
| D  | = | Detected (equal or above reporting limit)   | -   | = | 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  |
|    |   |   | (S) | = | Analysis was subcontracted for testing- Bureau Veritas Science and Technology Service (Xi'an) Co., Ltd |

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

Sample 1 – Sampling Point  
[25/07/2024 & 10:10]



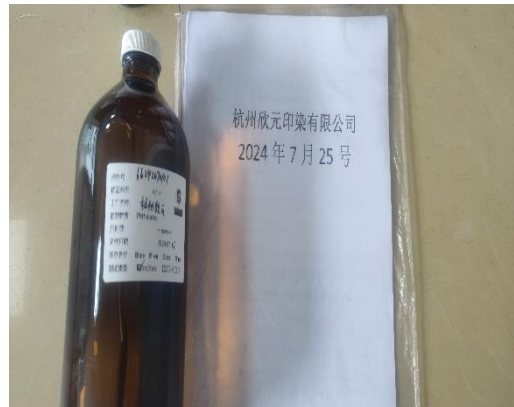
Sample 1 – Sampling Point Surrounding Environment  
[25/07/2024 & 10:10]



Sample 1 – Labelled Sample Bottles  
[25/07/2024 & 10:10]




Sample 1 – Sample for Phthalate Test  
[25/07/2024 & 10:10]



Sample 1 – Sample Packaging  
[25/07/2024 & 11:00]



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

|   |   |                              |
|---|---|------------------------------|
|  | <b>ZDHC Wastewater Sampling Field Data Form and Representative Sample Declaration</b> | <b>CPSD-AN-00613-DATA 07</b> |
|   |   | Issue Date:                  |
|   |   | Version No.: 1               |
|   |   | Business Line: Analytical    |

Attach the completed field data form in the test report.

| Facility Information  |   |
|---|---|
| Date of Sampling:<br>采样日期   | 2024.7.25   |
| Sample Number / Test Report Number (ZDHC Composite Sample Code):<br>报告号 | 66242070101   |
| Facility Name:<br>工厂名称  | 杭州欣元印染有限公司  |
| Facility Address:<br>工厂地址   | 杭州滨江区钱江158号   |
| Facility Type (tick all applicable):<br>工厂类型                            | <input checked="" type="checkbox"/> Dyeing and Finishing 染整 <input type="checkbox"/> Fabric Mill 面料厂<br><input type="checkbox"/> Laundry, Washing and Finishing 洗衣、水洗、整理 <input type="checkbox"/> Natural Leather processing 天然皮革加工<br><input type="checkbox"/> Printing 印花 <input type="checkbox"/> Synthetic Leather processing 合成革加工<br><input type="checkbox"/> Other (please specify) 其他 (请注明) |
| Discharge Type (tick applicable):<br>排放类型                               | <input type="checkbox"/> Direct discharge 直接排放 <input type="checkbox"/> with pre-treatment 有预处理 <input type="checkbox"/> Other Notes: 另注<br><input checked="" type="checkbox"/> Indirect discharge 间接排放 <input checked="" type="checkbox"/> without pre-treatment 没有预处理<br><input type="checkbox"/> Zero liquid discharge (ZLD) 零液体排放 <input type="checkbox"/> with own ETP 拥有自己的污水处理厂              |
| Discharge Description:<br>排放说明  | <input type="checkbox"/> Discharge to environment (e.g. river/河, stream/溪流, sea/海洋) <input type="checkbox"/> Other (please specify) 其他 (请注明)<br><input checked="" type="checkbox"/> Sewage treatment plant 污水处理厂  |
| Discharge Volume:<br>排放量  | $\geq 15\text{m}^3$ per day $>$ 与 $< 15\text{m}^3$ $< 15\text{m}^3$ per day $<$ 与 $< 15\text{m}^3$  |

| Sample Type and Details 样品类型和详细信息          |  |
|--|--|
| Sample Type                                | Sample Details   |
| <input type="checkbox"/> Incoming Water 进水 |  |
| <input type="checkbox"/> Untreated WW 未处理  | <input checked="" type="checkbox"/> with equalisation tank (EQT) present 存在均衡池 (EQT)<br>Hydraulic Retention Time (HRT) (Hours): 水力停留时间 (HRT) (小时) 7/2h<br><small>= volume of tank (m<sup>3</sup>) / flow rate (m<sup>3</sup>/h) if HRT &gt; 12 h, grab sampling from EQT is allowed.</small>   |
| <input type="checkbox"/> Effluent 排放物      | <input type="checkbox"/> Direct 直接排放 <input type="checkbox"/> Indirect 间接排放 <input type="checkbox"/> with equalisation tank (EQT) present 存在均衡池 (EQT)<br><small>Enter sampling time(s) in page 2 and take field test measurements 在现场采样时，请记录采样时间，并记录现场测试数据。</small> <small>Enter sampling time(s) in page 2. No field test measurements required except on client's request. 记录采样时间，除客户要求外，无需进行现场测试数据。</small> <small>Facility has WWTP (工厂自有污水处理)</small> <small>Plant is in operating condition (工厂处于运行状态)</small><br><small>Hydraulic Retention Time (HRT) (Hours): 水力停留时间 (HRT) (小时)</small><br><small>= volume of tank (m<sup>3</sup>) / flow rate (m<sup>3</sup>/h) - 储罐容积 (m<sup>3</sup>) / 流速 (m<sup>3</sup>/h)</small><br><small>if HRT &gt; 12 h, grab sampling from EQT is allowed. 如果 HRT &gt; 12 h, 则允许从 EQT 中取样。</small> |
| <input type="checkbox"/> Sludge 污泥         | <small>Disposal Pathway 处置途径 (The pathway must be defined by the facility. If the facility cannot provide information, pathway "F" shall be assumed)</small><br><input type="checkbox"/> A >1000°C 场外焚烧 <input type="checkbox"/> B 有重大控制措施的填埋 <input type="checkbox"/> C 建筑材料加工温度 >1000°C <input type="checkbox"/> D 有限制控制的填埋 <input type="checkbox"/> E 焚烧/建筑材料堆 1 <1000°C<br><small>&gt;1000°C offsite incineration      Landfill with significant control      Building products processed &gt;1000°C      Landfill with limited control      Incineration/ Building products processed &lt;1000°C</small><br><input type="checkbox"/> F 无控制措施的填埋 <input type="checkbox"/> G 土地施用<br><small>Landfill with no control      Land application</small><br><small>Sludge flux (weight/time) if applicable: 污泥流量 (重量/时间) (如适用)</small>    |

| ZDHC Wastewater Sampling - Facility Confirmation ZDHC 废水取样-设施确认   |   |  |           |
|---|---|--|-----------|
| <small>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. Sampling protocol for wastewater and sludge samples are in accordance with ZDHC SAP including appendix E. 废水样本是在工厂的正常生产规模和废水流速下采集的。下面列出的采样师在现场采集了样本。废水和污泥样品的取样方案符合 ZDHC SAP，包括附录 E。</small><br><small>In no circumstances shall samples be taken during times when the production process is not running or the wastewater is diluted, for example due to heavy rainfall. 在任何情况下，当生产过程未运行或废水被稀释时，例如由于强降雨，都不要取样。</small> |   |  |           |
| Facility Confirmation   |   | Sampler Information                              |           |
| Facility Name:<br>工厂名   | 杭州欣元印染有限公司  | Sampler's Name/ Email:<br>采样员姓名/电子邮件             |           |
| Facility Representative Name:<br>工厂负责人  | 张楠  | Sampler's ZDHC Accredited No.:<br>采样员的 ZDHC 证书编号 |           |
| Facility Representative Signature and Stamp:<br>工厂代表签名及盖章   |  | Sampler's Signature:<br>采样员签名                    | 杨林        |
| Date: 日期  | 2024.7.25   | Date: 日期   | 2024.7.25 |



BUREAU VERITAS

Report Number

(6624)207-0101

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

| ZDHC Wastewater Sampling Field Data Form and Representative Sample Declaration |  | ZDHC废水取样现场数据表和代表性样品声明                              |                  |
|--|--|--|------------------|
| CPSD-AN-00613-DATA 07  |  | Issue Date: / /                                    |                  |
| Version No.: 1   |  | Business Line: Analytical                          |                  |
| ZDHC Wastewater Flow Device Dimensions ZDHC废水流量设备参数                            |  |  |                  |
| Measurement (cm) 测量 (cm)   | Meter 仪器   | Pipe (Ø) 管道  | Flume (U) 槽渠     |
| Diameter 直径  | --   | --   | --               |
| Depth 深度   | --   | --   | --               |
| ZDHC Wastewater Sampling Field Testing QA/QC ZDHC废水取样现场测试QA/QC                 |  |  |                  |
| Parameter 参数   | Lab Control Sample (LCS) Known 实验室控制样本   | Lab Control Sample (LCS) Measured 实验室控制样本 (LCS) 测量 | Accuracy (%) 准确度 |
| pH   |  |  |                  |
| Total Chlorine 总氯  |  |  |                  |
| ZDHC Wastewater Sample Collection Field Test Measurements ZDHC废水样本收集现场测试测量     |  |  |                  |
| Incoming Sample Point 进水采样点  |  |  |                  |
| <input type="radio"/> Composite Sample 混合采样                                    |  | <input type="radio"/> Grab Sample 瞬时采样             |                  |
| Sampling Locations: 采样位置   | GPS coordinates: GPS坐标   | Lat.: N / S  | Long.: E / W     |
| Sampling Mode: 采样方式  | <input type="radio"/> Manual 手动  | <input type="radio"/> Autosampler 自动采样器            |                  |
| Sampling Time (Hours) 采样时间 (小时)  | 0  | 1  | 2                |
| Recording time of discrete sample 记录离散样本的时间                                    |  |  |                  |
| Colour (visual estimation): 颜色 (视觉估计)  |  |  |                  |
| Untreated Sample Point 未处理的采样点   |  |  |                  |
| <input type="radio"/> Composite Sample 混合样品                                    |  | <input checked="" type="radio"/> Grab Sample 瞬时采样  |                  |
| Sampling Locations: 采样位置   | GPS coordinates: GPS坐标   | Lat.: N / S  | Long.: E / W     |
| Sampling Mode: 采样方式  | <input checked="" type="radio"/> Manual 手动   | <input type="radio"/> Autosampler 自动采样器            |                  |
| Sampling Time (Hours) 采样时间 (小时)  | 0  | 1  | 2                |
| Recording time of discrete sample 记录离散样本的时间                                    | 10:30  |  |                  |
| Colour (visual estimation): 颜色 (视觉估计)  | 10:30  |  |                  |
| Effluent Sample Point 排放废水采样点  |  |  |                  |
| <input type="radio"/> Composite Sample 混合样品                                    |  | <input type="radio"/> Grab Sample 瞬时采样             |                  |
| Sampling Locations: 采样位置   | GPS coordinates: GPS坐标   | Lat.: N / S  | Long.: E / W     |
| Sampling Mode: 采样方式  | <input type="radio"/> Manual 手动  | <input type="radio"/> Autosampler 自动采样器            |                  |
| Sampling Time (Hours) 采样时间 (小时)  | 0  | 1  | 2                |
| Recording time of discrete sample 记录离散样本的时间                                    |  |  |                  |
| Temperature (°C): 温度   | WW Discharge 排放废水  |  |                  |
|  | Receiving Water 接收水  |  |                  |
| pH:  |  |  |                  |
| Dissolved Oxygen (mg/L): 溶解氧   |  |  |                  |
| Total Chlorine (mg/L): 总氯  |  |  |                  |
| Persistent Foam (Yes/ No): 持久泡沫  | Yes / No   | Yes / No   | Yes / No         |
| Wastewater Flow Meter (L/min): 流速  |  |  |                  |
| Alternate Measured Flow: 替代测量流量  | Depth (cm) 深度 (厘米)   | Velocity (cm/sec) 流速 (厘米/秒)                        |                  |
| Colour (visual estimation): 颜色 (视觉估计)  |  |  |                  |
| Volume collected (L): 收集的体积 (L)  |  |  |                  |
| Total volume collected (L): 收集的总体积 (L)   | Collect 3-33-litres each hour for a total minimum volume of 20-litres 每小时收集3-33L, 以确保最低收集量为20L |  |                  |
| Sludge Sample Point 污泥采样点  |  |  |                  |
| <input type="radio"/> Composite Sample 混合采样                                    |  | <input type="radio"/> Grab Sample 瞬时采样             |                  |
| Sampling Locations: 采样位置   | GPS coordinates: GPS坐标   | Lat.: N / S  | Long.: E / W     |
| Sampling Mode: 采样方式  | <input type="radio"/> Manual 手动  | <input type="radio"/> Autosampler 自动采样器            |                  |
| Sampling Time (Hours) 采样时间 (小时)  | 0  | 1  | 2                |
| Recording time of discrete sample 记录离散样本的时间                                    |  |  |                  |
| Colour (visual estimation): 颜色 (视觉估计)  |  |  |                  |
| Comments/ Other Observations 其他备注  |  |  |                  |



Annex C: Limit according to regulation / Contract limit with centralized ETP (if proceed)

当前位置: 水污染物排放信息审核

1、废水污染物排放许可限值

(1) 主要排放口

| 排放口编号   | 排放口名称          | 污染物种类      | 许可排放浓度限值 (mg/L) |
|---------|----------------|------------|-----------------|
| DW001   | 三元集团污水预处理中心排放口 | 化学需氧量      | 200mg/L         |
| DW001   | 三元集团污水预处理中心排放口 | 五日生化需氧量    | 50mg/L          |
| DW001   | 三元集团污水预处理中心排放口 | 氨氮 (NH3-N) | 20mg/L          |
| DW001   | 三元集团污水预处理中心排放口 | 悬浮物        | 100mg/L         |
| DW001   | 三元集团污水预处理中心排放口 | 色度         | 80              |
| DW001   | 三元集团污水预处理中心排放口 | 总镉         | 0.1mg/L         |
| DW001   | 三元集团污水预处理中心排放口 | 苯胺类        | 1.0mg/L         |
| DW001   | 三元集团污水预处理中心排放口 | 硫化物        | 1.0mg/L         |
| DW001   | 三元集团污水预处理中心排放口 | pH值        | 6-9             |
| DW001   | 三元集团污水预处理中心排放口 | 可吸附有机卤化物   | 12mg/L          |
| DW001   | 三元集团污水预处理中心排放口 | 总氮 (以N计)   | 30mg/L          |
| DW001   | 三元集团污水预处理中心排放口 | 总磷 (以P计)   | 1.5mg/L         |
| 主要排放口合计 |                |            | CODcr           |
|         |                |            | 氨氮              |
|         |                |            | 总氮 (以N计)        |

\*\*\*\*\*