



# Test Report

Report No. A2240578504105

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**Company Name** HAINING COMAX NEW MATERIAL CO., LTD.  
**show on Report**  
**Address** ROOM 912 NO.3 BUILDING SHANGDONG BUSINESS CENTER HAIZHOU  
DISTRICT HAINING ZHEJIANG CHINA

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

Sample Name PET Transfer Release Film  
Sample Received Date Oct. 8, 2024  
Testing Period Oct. 8, 2024 to Oct. 9, 2024

**Test Conducted:**

As requested by the applicant, for details refer to next page(s)



*Hill Zheng*

Hill Zheng  
Technical Manager  
Oct. 9, 2024

No. S607155180

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District,  
Shenzhen City, Guangdong Province, P.R. China

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| <b>Summary of Test Result(s)</b>  |  |                               |
|---|--|-------------------------------|
| <b>Test Item(s)</b>   | <b>Test Standard</b>   | <b>Test Result/Conclusion</b> |
| Total Organic Fluorine (TOF)  | Reference EN 14582:2016, solvent extraction & oxygen bomb combustion, determined by Ion Chromatography | See page 3                    |
| Perfluorooctanesulfonic acid (PFOS) and its salts & related substances  | EN 17681-1:2022&EN 17681-2:2022  | PASS                          |
| Perfluorooctanoic acid (PFOA) and its salts & related substances  | EN 17681-1:2022&EN 17681-2:2022  | PASS                          |
| Perfluorohexanoic acid (PFHxA) and its salts and related substances   | EN 17681-1:2022&EN 17681-2:2022  | PASS                          |
| Perfluorinated carboxylic acids (C9-C14 PFCAs) and their salts and related substances   | EN 17681-1:2022&EN 17681-2:2022  | PASS                          |
| Perfluorohexane-1-sulphonic acid (PFHxS) and its salts & related substances   | EN 17681-1:2022 & EN 17681-2:2022  | PASS                          |
| <p>*****For Further Details, Please Refer to the Following Page(s) *****</p> <p>***Note: "--" means not applicable in report. ***</p> |  |                               |

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Tests Conducted (As Requested by the Client)

**1 Total Organic Fluorine (TOF) ( Reference EN 14582:2016, solvent extraction & oxygen bomb combustion, determined by Ion Chromatography)**

| Code | Tested Item(s)              | CAS No. | Test Result (mg/kg) | MDL<br>(mg/kg) | Client's Limit<br>(mg/kg)             |
|------|-----------------------------|---------|---------------------|----------------|---------------------------------------|
|      |                             |         | 001                 |                |                                       |
| 1    | Total Organic Fluorine(TOF) | --      | N.D.                | 20             | 100ppm by<br>2025<br>50ppm by<br>2027 |

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**2 Perfluorooctanesulfonic acid (PFOS) and its salts & related substances (EN 17681-1:2022&EN 17681-2:2022)**

| Code | Tested Item(s)  | CAS No.     | Test Result (mg/kg) | MDL<br>(mg/kg) | Client's Limit<br>(mg/kg) |
|------|---|-------------|---------------------|----------------|---------------------------|
|      |   |             | 001                 |                |                           |
| 1    | Perfluorooctanesulfonic acid(PFOS)  | 1763-23-1   | N.D.                | 0.010          | --                        |
| 2    | Perfluorooctanesulfonic acid, potassium salt(PFOS-K)  | 2795-39-3   | N.D.                | 0.010          | --                        |
| 3    | Perfluorooctanesulfonic acid, lithium salt(PFOS-Li)   | 29457-72-5  | N.D.                | 0.010          | --                        |
| 4    | Perfluorooctanesulfonic acid, ammonium salt(PFOS-NH <sub>4</sub> )  | 29081-56-9  | N.D.                | 0.010          | --                        |
| 5    | Perfluorooctane sulfonate diethanolamine salt(PFOS-NH(OH) <sub>2</sub> )                                    | 70225-14-8  | N.D.                | 0.010          | --                        |
| 6    | Perfluorooctanesulfonic acid, tetraethylammonium salt(PFOS-N(C <sub>2</sub> H <sub>5</sub> ) <sub>4</sub> ) | 56773-42-3  | N.D.                | 0.010          | --                        |
| 7    | Didecyl dimethyl ammonium perfluorooctane sulfonate(PFOS-DDA)   | 251099-16-8 | N.D.                | 0.010          | --                        |
| 8    | N-Ethylperfluoro-1-octanesulfonamide(N-Et-FOSA)   | 4151-50-2   | N.D.                | 0.050          | --                        |
| 9    | N-Methylperfluoro-1-octanesulfonamide(N-Me-FOSA)  | 31506-32-8  | N.D.                | 0.050          | --                        |
| 10   | 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol(N-Et-FOSE)   | 1691-99-2   | N.D.                | 0.050          | --                        |
| 11   | 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol(N-Me-FOSE)  | 24448-09-7  | N.D.                | 0.050          | --                        |
| 12   | Perfluoro-1-octanesulfonyl fluoride(PFOSF)  | 307-35-7    | N.D.                | 0.010          | --                        |
| 13   | Perfluorooctane sulfonamide(PFOSA)  | 754-91-6    | N.D.                | 0.010          | --                        |
| 14   | PFOS and related substances(Total(PFOS))  | --          | N.D.                | --             | 1000                      |

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**3 Perfluorooctanoic acid (PFOA) and its salts & related substances (EN 17681-1:2022&EN 17681-2:2022)**

| Code | Tested Item(s)  | CAS No.    | Test Result (mg/kg) | MDL<br>(mg/kg) | Client's Limit<br>(mg/kg) |
|------|---|------------|---------------------|----------------|---------------------------|
|      |   |            | 001                 |                |                           |
| 1    | Perfluorooctanoic Acid(PFOA)  | 335-67-1   | N.D.                | 0.010          | --                        |
| 2    | Sodium perfluorooctanoate(PFOA-Na)  | 335-95-5   | N.D.                | 0.010          | --                        |
| 3    | Potassium perfluorooctanoate(PFOA-K)  | 2395-00-8  | N.D.                | 0.010          | --                        |
| 4    | Silver perfluorooctanoate(PFOA-Ag)  | 335-93-3   | N.D.                | 0.010          | --                        |
| 5    | Perfluorooctanoyl fluoride(PFOA-F)  | 335-66-0   | N.D.                | 0.010          | --                        |
| 6    | Ammonium pentadecafluorooctanoate(APFO)   | 3825-26-1  | N.D.                | 0.010          | --                        |
| 7    | PFOA and Its Salts (PFOA,PFOA-Na,PFOA-K ,PFOA-Ag,PFOA-F,APFO)(SUM PFOA (Salts)) | --         | N.D.                | --             | ≤0.025                    |
| 8    | 1H, 1H, 2H, 2H-perfluorodecane sulfonic acid(8:2 FTS)                           | 39108-34-4 | N.D.                | 0.010          | --                        |
| 9    | Methyl perfluorooctanoate(Me-PFOA)  | 376-27-2   | N.D.                | 0.500          | --                        |
| 10   | Ethyl perfluorooctanoate(Et-PFOA)   | 3108-24-5  | N.D.                | 0.500          | --                        |
| 11   | 1H,1H,2H,2H-Perfluoro-1-decanol(8:2 FTOH)                                       | 678-39-7   | N.D.                | 0.200          | --                        |
| 12   | 1H,1H,2H,2H-Heptadecafluorodecyl acrylate(8:2 FTA)                              | 27905-45-9 | N.D.                | 0.500          | --                        |

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| Code | Tested Item(s)   | CAS No.    | Test Result (mg/kg) | MDL (mg/kg) | Client's Limit (mg/kg) |
|------|--|------------|---------------------|-------------|------------------------|
|      |  |            | 001                 |             |                        |
| 13   | 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester(8:2 FTMA) | 1996-88-9  | N.D.                | 0.500       | --                     |
| 14   | 2H,2H-Perfluorodecanoate(H <sub>2</sub> PFDA)  | 27854-31-5 | N.D.                | 0.010       | --                     |
| 15   | Perfluorooctanoic acid (PFOA) and related substances   | --         | N.D.                | --          | ≤1                     |

#### 4 Perfluorohexanoic acid (PFHxA) and its salts and related substances (EN 17681-1:2022&EN 17681-2:2022)

| Code | Tested Item(s)                                       | CAS No.    | Test Result (mg/kg) | MDL (mg/kg) | Client's Limit (mg/kg) |
|------|--|------------|---------------------|-------------|------------------------|
|      |  |            | 001                 |             |                        |
| 1    | Perfluoro-hexanoic acid(PFHxA)                       | 307-24-4   | N.D.                | 0.010       | --                     |
| 2    | 1H,1H,2H,2H-Perfluoro-octane-sulphonic acid(6:2 FTS) | 27619-97-2 | N.D.                | 0.010       | --                     |
| 3    | 1H,1H,2H,2H-Perfluoro-1-oc tanol(6:2 FTOH)           | 647-42-7   | N.D.                | 0.200       | --                     |
| 4    | Perfluorohexanoic acid (PFHxA) and its salts         | --         | N.D.                | --          | ≤0.025                 |
| 5    | Perfluorohexanoic acid (PFHxA) related substances    | --         | N.D.                | --          | ≤1                     |

#### 5 Perfluorinated carboxylic acids (C9-C14 PFCAs) and their salts and related substances (EN 17681-1:2022&EN 17681-2:2022)

| Code | Tested Item(s)                                | CAS No.   | Test Result (mg/kg) | MDL (mg/kg) | Client's Limit (mg/kg) |
|------|---|-----------|---------------------|-------------|------------------------|
|      |   |           | 001                 |             |                        |
| 1    | Perfluorononanoic acid(PFNA)                  | 375-95-1  | N.D.                | 0.010       | --                     |
| 2    | Perfluorodecanoic acid(PFDA)                  | 335-76-2  | N.D.                | 0.010       | --                     |
| 3    | Perfluoroundecanoic acid(PFU <sub>n</sub> DA) | 2058-94-8 | N.D.                | 0.010       | --                     |

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| Code | Tested Item(s)   | CAS No.     | Test Result (mg/kg) | MDL (mg/kg) | Client's Limit (mg/kg) |
|------|--|-------------|---------------------|-------------|------------------------|
|      |  |             | 001                 |             |                        |
| 4    | Perfluoro-n-dodecanoic acid(PFDoDA)  | 307-55-1    | N.D.                | 0.010       | --                     |
| 5    | Perfluorotridecanoic acid(PFTrDA)  | 72629-94-8  | N.D.                | 0.010       | --                     |
| 6    | Perfluorotetradecanoic acid(PFTeDA)  | 376-06-7    | N.D.                | 0.010       | --                     |
| 7    | Perfluoro-3,7-dimethyloctanoic acid(PF-3,7-DMOA)                                     | 172155-07-6 | N.D.                | 0.010       | --                     |
| 8    | Perfluorinated carboxylic acids (C9-C14 PFCAs) and their salts(PFCAs)                | --          | N.D.                | --          | ≤0.025                 |
| 9    | 1H,1H,2H,2H-Tetrahydroperfluorododecyl acrylate(10:2 FTA)                            | 17741-60-5  | N.D.                | 0.200       | --                     |
| 10   | 2-(Perfluorodecyl)ethyl methacrylate(10:2 FTMA)                                      | 2144-54-9   | N.D.                | 0.200       | --                     |
| 11   | 1H,1H,2H,2H-Perfluoro-1-dodecanol(10:2 FTOH)   | 865-86-1    | N.D.                | 0.200       | --                     |
| 12   | 2H,2H,3H,3H-Perfluoroundecanoic acid(H <sub>4</sub> PFUnA)                           | 34598-33-9  | N.D.                | 0.010       | --                     |
| 13   | 1H,1H,2H,2H-Perfluoro-1-decanol(8:2 FTOH)  | 678-39-7    | N.D.                | 0.200       | --                     |
| 14   | 1H,1H,2H,2H-perfluorotetradecan-1-ol(12:2 FTOH)                                      | 39239-77-5  | N.D.                | 0.200       | --                     |
| 15   | 1H,1H,2H,2H-Perfluorododecanesulphonicacid(10:2 FTS)                                 | 120226-60-0 | N.D.                | 0.010       | --                     |
| 16   | 1H,1H,2H,2H-perfluorododecyl iodide(10:2 FTI)  | 2043-54-1   | N.D.                | 0.200       | --                     |
| 17   | 1H,1H,2H,2H-perfluorotetradecyl iodide(12:2 FTI)                                     | 30046-31-2  | N.D.                | 0.200       | --                     |
| 18   | Perfluorocarboxylic acid (C9-C14 PFCAs) related substances(PFCAs related substances) | --          | N.D.                | --          | ≤0.26                  |

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**6 Perfluorohexane-1-sulphonic acid (PFHxS) and its salts & related substances (EN 17681-1:2022 & EN 17681-2:2022)**

| Code | Tested Item(s)   | CAS No.    | Test Result (mg/kg) | MDL<br>(mg/kg) | Client's Limit<br>(mg/kg) |
|------|--|------------|---------------------|----------------|---------------------------|
|      |  |            | 001                 |                |                           |
| 1    | Perfluorohexanesulfonic acid(PFHxS)  | 355-46-4   | N.D.                | 0.010          | --                        |
| 2    | Potassium perfluorohexane-1-sulphonate(PFHxS-K)  | 3871-99-6  | N.D.                | 0.010          | --                        |
| 3    | 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, lithium salt (1:1)(PFHxS-Li)                | 55120-77-9 | N.D.                | 0.010          | --                        |
| 4    | 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, ammonium salt (1:1)(PFHxS-NH <sub>4</sub> ) | 68259-08-5 | N.D.                | 0.010          | --                        |
| 5    | 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, sodium salt(PFHxS-Na)                       | 82382-12-5 | N.D.                | 0.010          | --                        |
| 6    | Perfluorohexane-1-sulphonic acid (PFHxS) and its salts   | --         | N.D.                | --             | ≤0.025                    |
| 7    | n-methylperfluorohexanesulfonamide(MeFHxSA)  | 68259-15-4 | N.D.                | 0.010          | --                        |
| 8    | 1-Hexane-sulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro(FHxSA)   | 41997-13-1 | N.D.                | 0.010          | --                        |
| 9    | Perfluorohexane-1-sulphonic acid (PFHxS) related substances  | --         | N.D.                | --             | ≤1                        |

Remark: -MDL = Method Detection Limit

-N.D. = Not Detected (<MDL)

-mg/kg = ppm = parts per million

-The test method of Total Organic Fluorine(TOF) is based on laboratory screening plan and cannot exclude interference from some inorganic substances.



# Test Report

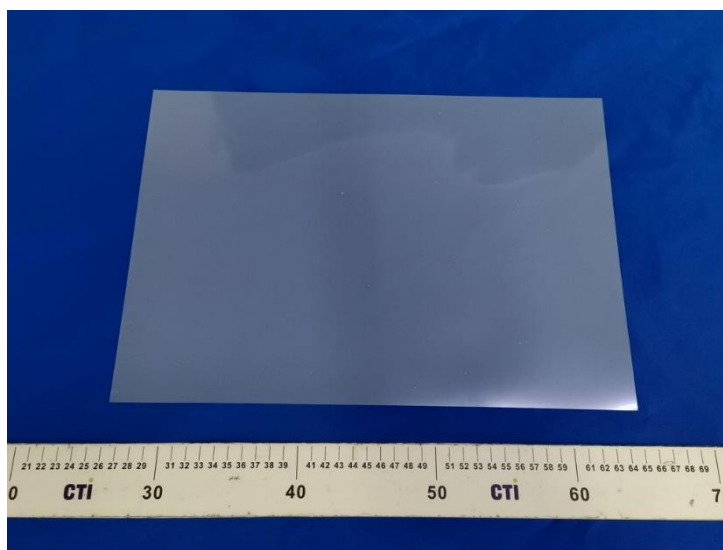
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**Tested Sample/Part Description**

| No. | CTI Sample ID | Description                   |
|-----|---------------|-------------------------------|
| 1   | 001           | White coating on plastic film |

## Photo(s) of the sample(s)

**Statement:**

1. This report is considered invalidated without approval signature, special stamp;
2. Company name and address shown on report, the sample(s) and sample Information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The test result(s) shown in this report refer(s) only to the sample(s) tested;
4. Without written approval of CTI, this report can't be reproduced except in full;
5. Except for the requirement of the client, the test results and the conformity assessment in this report do not take the uncertainty into account.

\*\*\* End of Report \*\*\*