

Report No. 48.400.25.0145.01-00/01

Dated 2025-02-24



## Technical Report

**Client:** Zhejiang Aiko Solar Technology Co., Ltd.  
No.655, Haopai Road, Suxi Town, Yiwu 322009 Zhejiang, P.R.China

**Contact person:** Su Xiong

**Test object:** The submitted samples were received and described by client as:

**Product:** PV Module

**Product model refer to the APPENDIX I.**

**Tested sample description:** Refer to next page(s).

**Test specification:**

- 1. Perfluorooctane Sulfonate (PFOS) Content According to Regulation (EU) 2019/1021 of the European Parliament and of the Council on persistent organic pollutants**  
Test with reference to EN 17681-1:2022 & EN 17681-2:2022
- 2. Perfluorooctanoic Acid (PFOA) and PFOA-related compounds Content According to Regulation (EU) 2019/1021 of the European Parliament and of the Council on persistent organic pollutants**  
Test with reference to EN 17681-1:2022 & EN 17681-2:2022
- 3. Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds Content According to Regulation (EU) 2019/1021 of the European Parliament and of the Council on persistent organic pollutants**  
Test with reference to EN 17681-1:2022 & EN 17681-2:2022

<b>Conclusion:</b>	1. Perfluorooctane Sulfonate (PFOS) Content	Pass
	2. Perfluorooctanoic Acid (PFOA) and PFOA-related compounds Content	Pass
	3. Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds Content	Pass

**Test results:** Refer to next page(s).

**Remarks:**

1. The tested samples were identified and appointed by client.
2. Sample was tested as received.

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TÜV SÜD Certification and Testing (China) Co., Ltd.

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## 1. Order

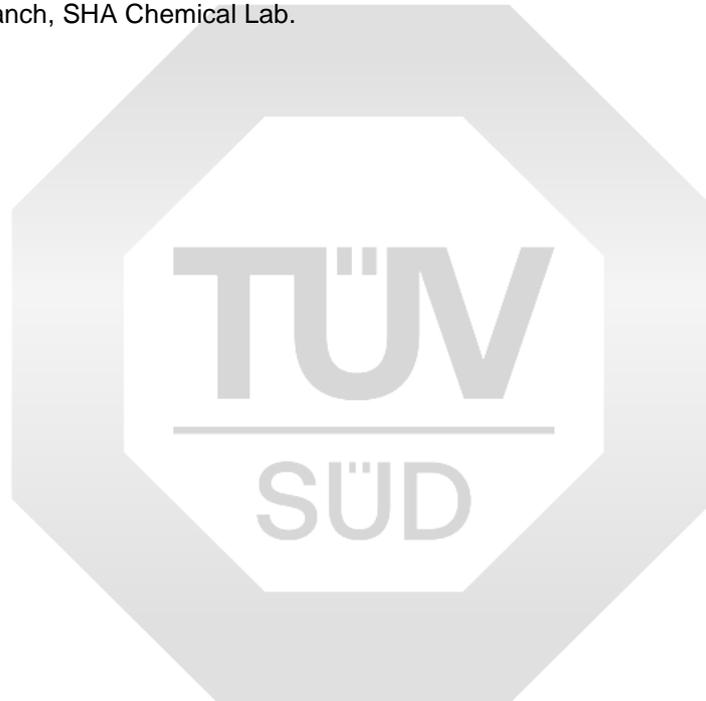
1.1 **Date of Purchase Order**  
2025-02-05

1.2 **Customer's Reference**  
Nil

1.3 **Receipt Date of Test Sample**  
2025-01-24

1.4 **Date of Testing**  
2025-02-17 – 2025-02-21

1.5 **Location of Testing**  
TÜV SÜD Certification and Testing (China) Co., Ltd.  
Shanghai Branch, SHA Chemical Lab.



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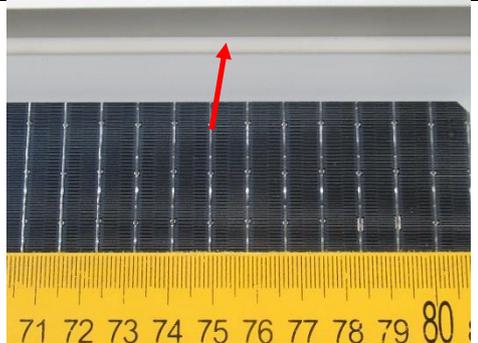
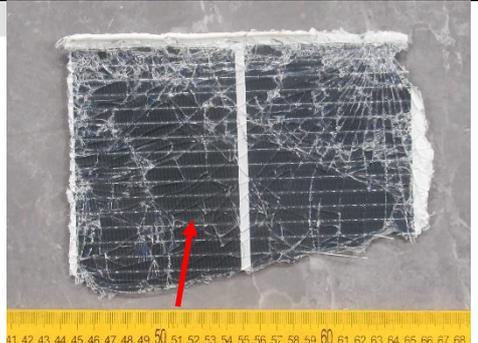
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2. Description of the tested specimen

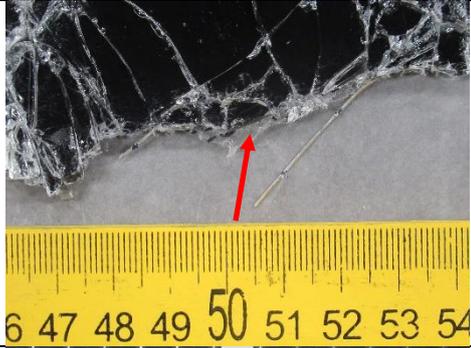
Sample No.	Description	Photograph/Location
01	White glue	
02	Silvery label	
03	Silvery label	
04	Blue solar cell	

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Sample No.	Description	Photograph/Location
05	Translucent plastic inner film	
06	White glue	
07	Black plastic junction box housing	
08	Black plastic cable jacket	

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Sample No.	Description	Photograph/Location
09	Black plastic plug	
10	Red plastic sealing ring	
11	Black plastic sleeve	
12	Black plastic sleeve	

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Sample No.	Description	Photograph/Location
13	Black plastic sleeve	

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3. Test Result

3.1 Perfluorooctane Sulfonate (PFOS) content test

Test Item	MDL	Unit	Result		Maximum Permissible Limit
			01	02	
Perfluorooctansulfonate (PFOS)	0.025	mg/kg	N.D.	N.D.	Sum < 1000
Potassium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Lithium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Bis(2-hydroxyethyl)ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Tetraethylammonium heptadecafluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Perfluorooctane sulfonamide (PFOSA)	0.025	mg/kg	N.D.	N.D.	
N-Methylperfluoro-1-octanesulfonamide(N-Me-FOSA)	0.025	mg/kg	N.D.	N.D.	
N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)	0.025	mg/kg	N.D.	N.D.	
2-(N-methylperfluoro-1-octanesulfonamideo)-ethanol (N-Me-FOSE)	0.025	mg/kg	N.D.	N.D.	
2-(N-Ethylperfluoro-1-octanesulfonamide)-ethanol (N-Et-FOSE)	0.025	mg/kg	N.D.	N.D.	
Heptadecafluorooctanesulfonyl fluoride (PFOSF)	0.025	mg/kg	N.D.	N.D.	
1-decanaminium, N-decyl-N,N-dimethyl-0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate	0.025	mg/kg	N.D.	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	<b>Pass</b>	

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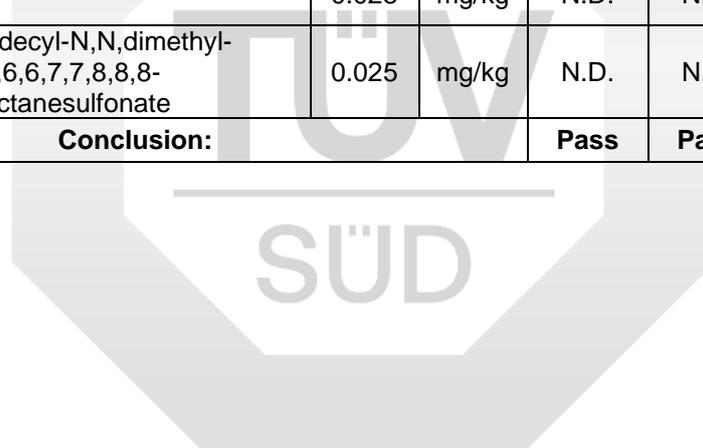
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Test Item	MDL	Unit	Result		Maximum Permissible Limit
			03	04	
Perfluorooctansulfonate (PFOS)	0.025	mg/kg	N.D.	N.D.	Sum < 1000
Potassium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Lithium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Bis(2-hydroxyethyl)ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Tetraethylammonium heptadecafluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Perfluorooctane sulfonamide (PFOSA)	0.025	mg/kg	N.D.	N.D.	
N-Methylperfluoro-1-octanesulfonamide(N-Me-FOSA)	0.025	mg/kg	N.D.	N.D.	
N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)	0.025	mg/kg	N.D.	N.D.	
2-(N-methylperfluoro-1-octanesulfonamideo)-ethanol (N-Me-FOSE)	0.025	mg/kg	N.D.	N.D.	
2-(N-Ethylperfluoro-1-octanesulfonamide)-ethanol (N-Et-FOSE)	0.025	mg/kg	N.D.	N.D.	
Heptadecafluorooctanesulfonyl fluoride (PFOSF)	0.025	mg/kg	N.D.	N.D.	
1-decanaminium, N-decyl-N,N,dimethyl-0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate	0.025	mg/kg	N.D.	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	<b>Pass</b>	

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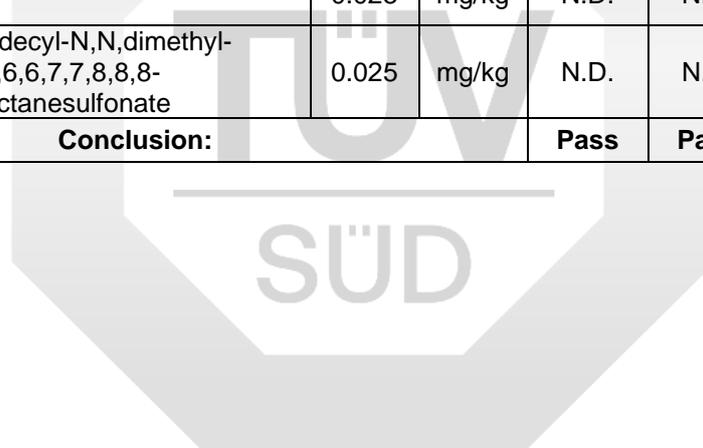
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Test Item	MDL	Unit	Result		Maximum Permissible Limit
			05	06	
Perfluorooctansulfonate (PFOS)	0.025	mg/kg	N.D.	N.D.	Sum < 1000
Potassium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Lithium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Bis(2-hydroxyethyl)ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Tetraethylammonium heptadecafluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Perfluorooctane sulfonamide (PFOSA)	0.025	mg/kg	N.D.	N.D.	
N-Methylperfluoro-1-octanesulfonamide(N-Me-FOSA)	0.025	mg/kg	N.D.	N.D.	
N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)	0.025	mg/kg	N.D.	N.D.	
2-(N-methylperfluoro-1-octanesulfonamideo)-ethanol (N-Me-FOSE)	0.025	mg/kg	N.D.	N.D.	
2-(N-Ethylperfluoro-1-octanesulfonamide)-ethanol (N-Et-FOSE)	0.025	mg/kg	N.D.	N.D.	
Heptadecafluorooctanesulfonyl fluoride (PFOSF)	0.025	mg/kg	N.D.	N.D.	
1-decanaminium, N-decyl-N,N,dimethyl-0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate	0.025	mg/kg	N.D.	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	<b>Pass</b>	

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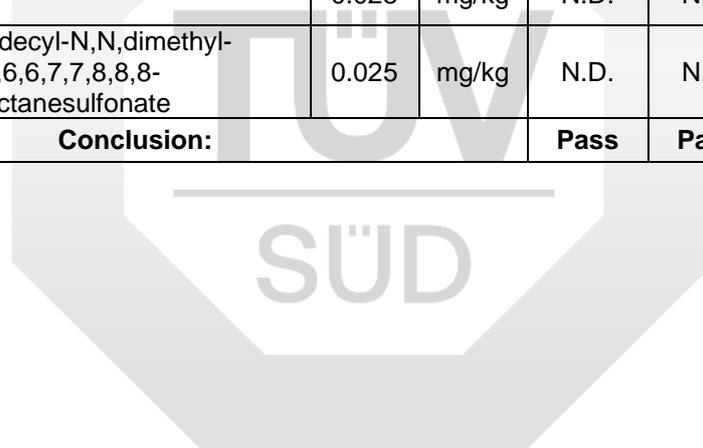
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			07	08	
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Potassium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Lithium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Bis(2-hydroxyethyl)ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Tetraethylammonium heptadecafluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Perfluorooctane sulfonamide (PFOSA)	0.025	mg/kg	N.D.	N.D.	
N-Methylperfluoro-1-octanesulfonamide(N-Me-FOSA)	0.025	mg/kg	N.D.	N.D.	
N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)	0.025	mg/kg	N.D.	N.D.	
2-(N-methylperfluoro-1-octanesulfonamideo)-ethanol (N-Me-FOSE)	0.025	mg/kg	N.D.	N.D.	
2-(N-Ethylperfluoro-1-octanesulfonamide)-ethanol (N-Et-FOSE)	0.025	mg/kg	N.D.	N.D.	
Heptadecafluorooctanesulfonyl fluoride (PFOSF)	0.025	mg/kg	N.D.	N.D.	
1-decanaminium, N-decyl-N,N,dimethyl-0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate	0.025	mg/kg	N.D.	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	<b>Pass</b>	

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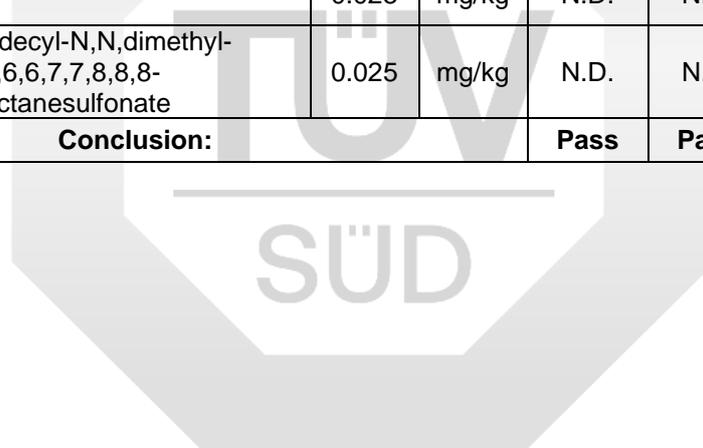
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Potassium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Lithium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Bis(2-hydroxyethyl)ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Tetraethylammonium heptadecafluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Perfluorooctane sulfonamide (PFOSA)	0.025	mg/kg	N.D.	N.D.	
N-Methylperfluoro-1-octanesulfonamide(N-Me-FOSA)	0.025	mg/kg	N.D.	N.D.	
N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)	0.025	mg/kg	N.D.	N.D.	
2-(N-methylperfluoro-1-octanesulfonamideo)-ethanol (N-Me-FOSE)	0.025	mg/kg	N.D.	N.D.	
2-(N-Ethylperfluoro-1-octanesulfonamide)-ethanol (N-Et-FOSE)	0.025	mg/kg	N.D.	N.D.	
Heptadecafluorooctanesulfonyl fluoride (PFOSF)	0.025	mg/kg	N.D.	N.D.	
1-decanaminium, N-decyl-N,N,dimethyl-0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate	0.025	mg/kg	N.D.	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	<b>Pass</b>	

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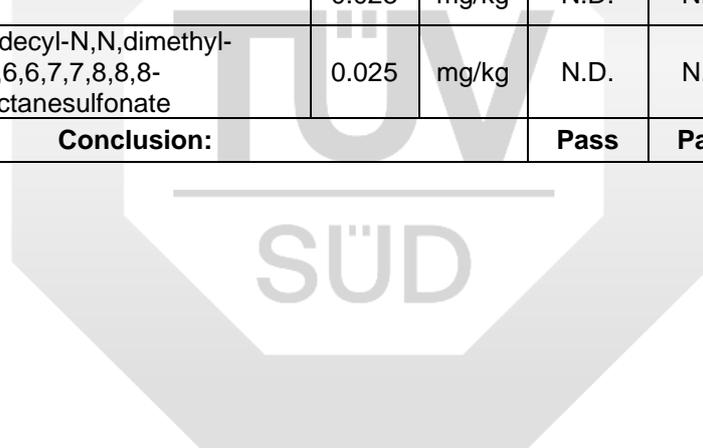
Report No. 48.400.25.0145.01-00/01

Dated 2025-02-24



Test Item	MDL	Unit	Result		Maximum Permissible Limit
			11	12	
Perfluorooctansulfonate (PFOS)	0.025	mg/kg	N.D.	N.D.	Sum < 1000
Potassium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Lithium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Bis(2-hydroxyethyl)ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Tetraethylammonium heptadecafluorooctane sulfonate	0.025	mg/kg	N.D.	N.D.	
Perfluorooctane sulfonamide (PFOSA)	0.025	mg/kg	N.D.	N.D.	
N-Methylperfluoro-1-octanesulfonamide(N-Me-FOSA)	0.025	mg/kg	N.D.	N.D.	
N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)	0.025	mg/kg	N.D.	N.D.	
2-(N-methylperfluoro-1-octanesulfonamideo)-ethanol (N-Me-FOSE)	0.025	mg/kg	N.D.	N.D.	
2-(N-Ethylperfluoro-1-octanesulfonamide)-ethanol (N-Et-FOSE)	0.025	mg/kg	N.D.	N.D.	
Heptadecafluorooctanesulfonyl fluoride (PFOSF)	0.025	mg/kg	N.D.	N.D.	
1-decanaminium, N-decyl-N,N,dimethyl-0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate	0.025	mg/kg	N.D.	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	<b>Pass</b>	

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Test Item	MDL	Unit	Result	Maximum Permissible Limit
			13	
Perfluorooctansulfonate (PFOS)	0.025	mg/kg	N.D.	Sum < 1000
Potassium perfluorooctane sulfonate	0.025	mg/kg	N.D.	
Lithium perfluorooctane sulfonate	0.025	mg/kg	N.D.	
Ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	
Bis(2-hydroxyethyl)ammonium perfluorooctane sulfonate	0.025	mg/kg	N.D.	
Tetraethylammonium heptadecafluorooctane sulfonate	0.025	mg/kg	N.D.	
Perfluorooctane sulfonamide (PFOSA)	0.025	mg/kg	N.D.	
N-Methylperfluoro-1-octanesulfonamide(N-Me-FOSA)	0.025	mg/kg	N.D.	
N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)	0.025	mg/kg	N.D.	
2-(N-methylperfluoro-1-octanesulfonamideo)-ethanol (N-Me-FOSE)	0.025	mg/kg	N.D.	
2-(N-Ethylperfluoro-1-octanesulfonamide)-ethanol (N-Et-FOSE)	0.025	mg/kg	N.D.	
Heptadecafluorooctanesulfonyl fluoride (PFOSF)	0.025	mg/kg	N.D.	
1-decanaminium, N-decyl-N,N-dimethyl-0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate	0.025	mg/kg	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	

**Remark:**

1. MDL=Method Detection Limit.
2. N.D.=Not Detected (<MDL)
3. "mg/kg" denotes "milligram per kilogram"
4. The limit was quoted from Regulation (EU) 2019/1021 of the European Parliament and of the Council on persistent organic pollutants.

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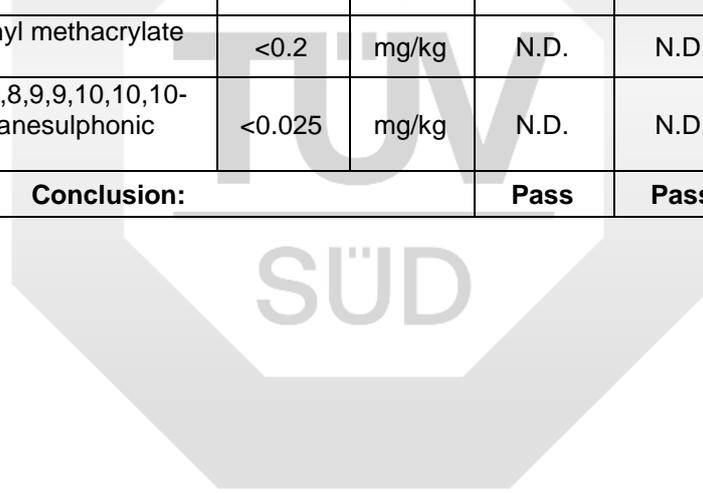
Dated 2025-02-24



3.2 Perfluorooctanoic Acid (PFOA) and PFOA-related compounds Content test

Tested Items	MDL	Unit	Result		Maximum Permissible Limit
			01	02	
Perfluorooctane Acid (PFOA)	0.025	mg/kg	N.D.	N.D.	Sum ≤ 0.025
Ammonium Pentadecafluorooctanoate(APFO)	0.025	mg/kg	N.D.	N.D.	
Sodium perfluorooctanoate (Na-PFO)	0.025	mg/kg	N.D.	N.D.	
Potassium perfluorooctanoate (K-PFO)	0.025	mg/kg	N.D.	N.D.	
Silver perfluorooctanoate (Ag-PFO)	0.025	mg/kg	N.D.	N.D.	
Perfluorooctanoate fluoride (F-PFO)	0.025	mg/kg	N.D.	N.D.	
Methyl pentadecafluorooctanoate (Me- PFOA)	<0.025	mg/kg	N.D.	N.D.	Sum ≤ 1
Ethyl pentadecafluorooctanoate (Et-PFOA)	<0.025	mg/kg	N.D.	N.D.	
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	<0.2	mg/kg	N.D.	N.D.	
1H,1H,2H,2H-Heptadecafluorodecyl acrylate (8:2 FTA)	<0.2	mg/kg	N.D.	N.D.	
2-(Perfluorooctyl)ethyl methacrylate (8:2 FTMA)	<0.2	mg/kg	N.D.	N.D.	
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecanesulphonic acid (8:2 FTS)	<0.025	mg/kg	N.D.	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	<b>Pass</b>	

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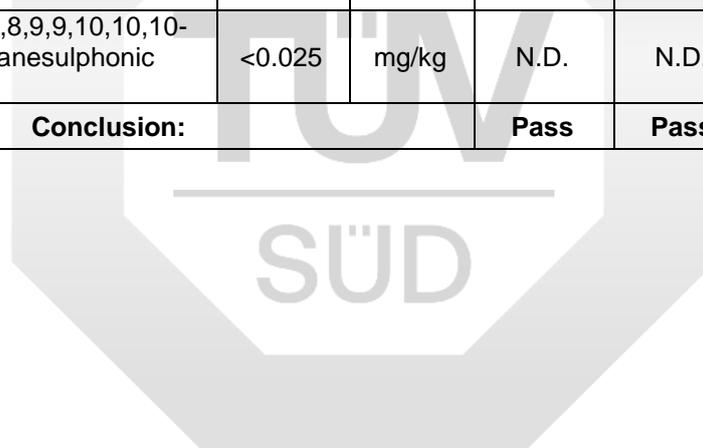
Report No. 48.400.25.0145.01-00/01

Dated 2025-02-24



Tested Items	MDL	Unit	Result		Maximum Permissible Limit
			03	04	
Perfluorooctane Acid (PFOA)	0.025	mg/kg	N.D.	N.D.	Sum ≤ 0.025
Ammonium Pentadecafluorooctanoate(APFO)	0.025	mg/kg	N.D.	N.D.	
Sodium perfluorooctanoate (Na-PFO)	0.025	mg/kg	N.D.	N.D.	
Potassium perfluorooctanoate (K-PFO)	0.025	mg/kg	N.D.	N.D.	
Silver perfluorooctanoate (Ag-PFO)	0.025	mg/kg	N.D.	N.D.	
Perfluorooctanoate fluoride (F-PFO)	0.025	mg/kg	N.D.	N.D.	
Methyl pentadecafluorooctanoate (Me- PFOA)	<0.025	mg/kg	N.D.	N.D.	Sum ≤ 1
Ethyl pentadecafluorooctanoate (Et-PFOA)	<0.025	mg/kg	N.D.	N.D.	
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	<0.2	mg/kg	N.D.	N.D.	
1H,1H,2H,2H-Heptadecafluorodecyl acrylate (8:2 FTA)	<0.2	mg/kg	N.D.	N.D.	
2-(Perfluorooctyl)ethyl methacrylate (8:2 FTMA)	<0.2	mg/kg	N.D.	N.D.	
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecanesulphonic acid (8:2 FTS)	<0.025	mg/kg	N.D.	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	<b>Pass</b>	

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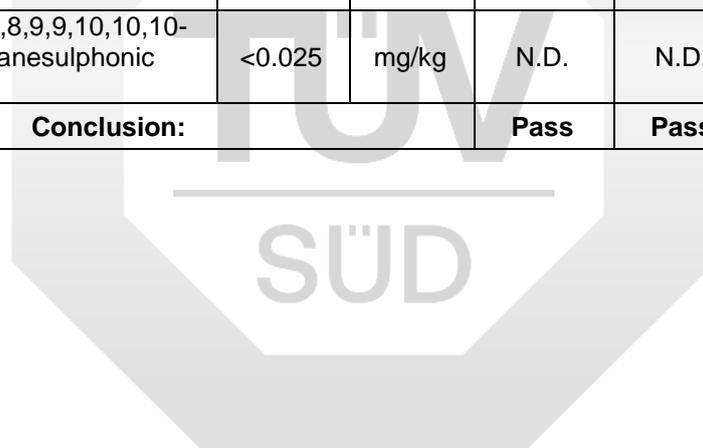
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Dated 2025-02-24



Tested Items	MDL	Unit	Result		Maximum Permissible Limit
			05	06	
Perfluorooctane Acid (PFOA)	0.025	mg/kg	N.D.	N.D.	Sum ≤ 0.025
Ammonium Pentadecafluorooctanoate(APFO)	0.025	mg/kg	N.D.	N.D.	
Sodium perfluorooctanoate (Na-PFO)	0.025	mg/kg	N.D.	N.D.	
Potassium perfluorooctanoate (K-PFO)	0.025	mg/kg	N.D.	N.D.	
Silver perfluorooctanoate (Ag-PFO)	0.025	mg/kg	N.D.	N.D.	
Perfluorooctanoate fluoride (F-PFO)	0.025	mg/kg	N.D.	N.D.	
Methyl pentadecafluorooctanoate (Me- PFOA)	<0.025	mg/kg	N.D.	N.D.	Sum ≤ 1
Ethyl pentadecafluorooctanoate (Et-PFOA)	<0.025	mg/kg	N.D.	N.D.	
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	<0.2	mg/kg	N.D.	N.D.	
1H,1H,2H,2H-Heptadecafluorodecyl acrylate (8:2 FTA)	<0.2	mg/kg	N.D.	N.D.	
2-(Perfluorooctyl)ethyl methacrylate (8:2 FTMA)	<0.2	mg/kg	N.D.	N.D.	
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecanesulphonic acid (8:2 FTS)	<0.025	mg/kg	N.D.	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	<b>Pass</b>	

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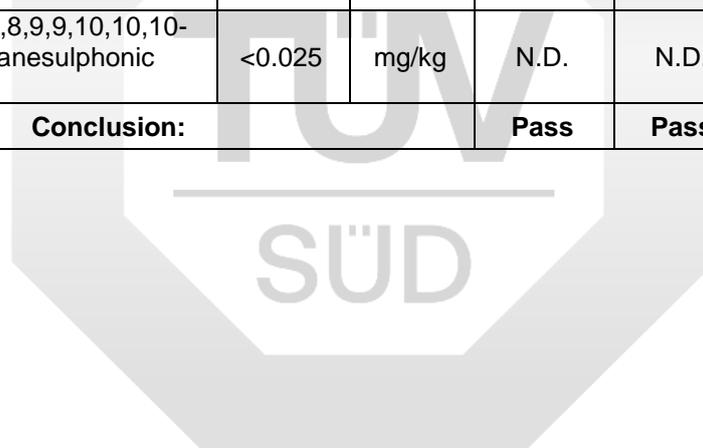
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Tested Items	MDL	Unit	Result		Maximum Permissible Limit
			07	08	
Perfluorooctane Acid (PFOA)	0.025	mg/kg	N.D.	N.D.	Sum ≤ 0.025
Ammonium Pentadecafluorooctanoate(APFO)	0.025	mg/kg	N.D.	N.D.	
Sodium perfluorooctanoate (Na-PFO)	0.025	mg/kg	N.D.	N.D.	
Potassium perfluorooctanoate (K-PFO)	0.025	mg/kg	N.D.	N.D.	
Silver perfluorooctanoate (Ag-PFO)	0.025	mg/kg	N.D.	N.D.	
Perfluorooctanoate fluoride (F-PFO)	0.025	mg/kg	N.D.	N.D.	
Methyl pentadecafluorooctanoate (Me- PFOA)	<0.025	mg/kg	N.D.	N.D.	Sum ≤ 1
Ethyl pentadecafluorooctanoate (Et-PFOA)	<0.025	mg/kg	N.D.	N.D.	
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	<0.2	mg/kg	N.D.	N.D.	
1H,1H,2H,2H-Heptadecafluorodecyl acrylate (8:2 FTA)	<0.2	mg/kg	N.D.	N.D.	
2-(Perfluorooctyl)ethyl methacrylate (8:2 FTMA)	<0.2	mg/kg	N.D.	N.D.	
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecanesulphonic acid (8:2 FTS)	<0.025	mg/kg	N.D.	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	<b>Pass</b>	

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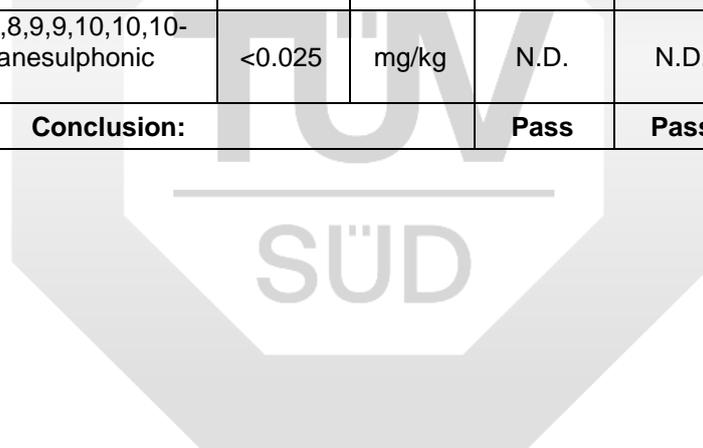
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Tested Items	MDL	Unit	Result		Maximum Permissible Limit
			09	10	
Perfluorooctane Acid (PFOA)	0.025	mg/kg	N.D.	N.D.	Sum ≤ 0.025
Ammonium Pentadecafluorooctanoate(APFO)	0.025	mg/kg	N.D.	N.D.	
Sodium perfluorooctanoate (Na-PFO)	0.025	mg/kg	N.D.	N.D.	
Potassium perfluorooctanoate (K-PFO)	0.025	mg/kg	N.D.	N.D.	
Silver perfluorooctanoate (Ag-PFO)	0.025	mg/kg	N.D.	N.D.	
Perfluorooctanoate fluoride (F-PFO)	0.025	mg/kg	N.D.	N.D.	
Methyl pentadecafluorooctanoate (Me- PFOA)	<0.025	mg/kg	N.D.	N.D.	Sum ≤ 1
Ethyl pentadecafluorooctanoate (Et-PFOA)	<0.025	mg/kg	N.D.	N.D.	
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	<0.2	mg/kg	N.D.	N.D.	
1H,1H,2H,2H-Heptadecafluorodecyl acrylate (8:2 FTA)	<0.2	mg/kg	N.D.	N.D.	
2-(Perfluorooctyl)ethyl methacrylate (8:2 FTMA)	<0.2	mg/kg	N.D.	N.D.	
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecanesulphonic acid (8:2 FTS)	<0.025	mg/kg	N.D.	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	<b>Pass</b>	

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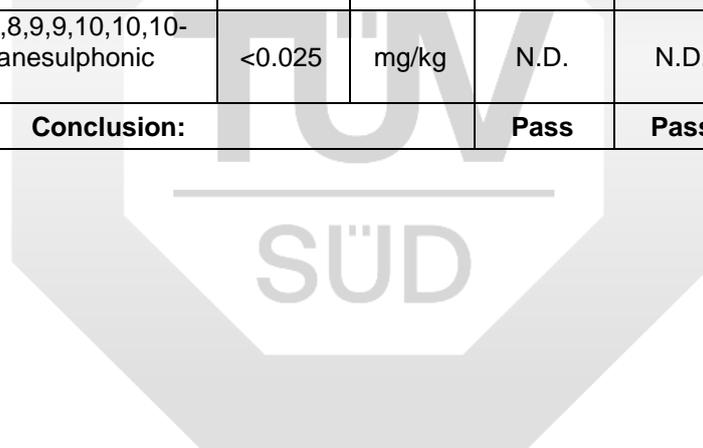
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Tested Items	MDL	Unit	Result		Maximum Permissible Limit
			11	12	
Perfluorooctane Acid (PFOA)	0.025	mg/kg	N.D.	N.D.	Sum ≤ 0.025
Ammonium Pentadecafluorooctanoate(APFO)	0.025	mg/kg	N.D.	N.D.	
Sodium perfluorooctanoate (Na-PFO)	0.025	mg/kg	N.D.	N.D.	
Potassium perfluorooctanoate (K-PFO)	0.025	mg/kg	N.D.	N.D.	
Silver perfluorooctanoate (Ag-PFO)	0.025	mg/kg	N.D.	N.D.	
Perfluorooctanoate fluoride (F-PFO)	0.025	mg/kg	N.D.	N.D.	
Methyl pentadecafluorooctanoate (Me- PFOA)	<0.025	mg/kg	N.D.	N.D.	Sum ≤ 1
Ethyl pentadecafluorooctanoate (Et-PFOA)	<0.025	mg/kg	N.D.	N.D.	
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	<0.2	mg/kg	N.D.	N.D.	
1H,1H,2H,2H-Heptadecafluorodecyl acrylate (8:2 FTA)	<0.2	mg/kg	N.D.	N.D.	
2-(Perfluorooctyl)ethyl methacrylate (8:2 FTMA)	<0.2	mg/kg	N.D.	N.D.	
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecanesulphonic acid (8:2 FTS)	<0.025	mg/kg	N.D.	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	<b>Pass</b>	

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Tested Items	MDL	Unit	Result	Maximum Permissible Limit
			13	
Perfluorooctane Acid (PFOA)	0.025	mg/kg	N.D.	Sum ≤ 0.025
Ammonium Pentadecafluorooctanoate(APFO)	0.025	mg/kg	N.D.	
Sodium perfluorooctanoate (Na-PFO)	0.025	mg/kg	N.D.	
Potassium perfluorooctanoate (K-PFO)	0.025	mg/kg	N.D.	
Silver perfluorooctanoate (Ag-PFO)	0.025	mg/kg	N.D.	
Perfluorooctanoate fluoride (F-PFO)	0.025	mg/kg	N.D.	
Methyl pentadecafluorooctanoate (Me- PFOA)	<0.025	mg/kg	N.D.	Sum ≤ 1
Ethyl pentadecafluorooctanoate (Et-PFOA)	<0.025	mg/kg	N.D.	
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	<0.2	mg/kg	N.D.	
1H,1H,2H,2H-Heptadecafluorodecyl acrylate (8:2 FTA)	<0.2	mg/kg	N.D.	
2-(Perfluorooctyl)ethyl methacrylate (8:2 FTMA)	<0.2	mg/kg	N.D.	
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecanesulphonic acid (8:2 FTS)	<0.025	mg/kg	N.D.	
<b>Conclusion:</b>			<b>Pass</b>	

**Remark:**

1. MDL=Method Detection Limit.
2. N.D.=Not Detected (<MDL)
3. "mg/kg" denotes "milligram per kilogram"
4. The limit was quoted from Regulation (EU) 2019/1021 of the European Parliament and of the Council on persistent organic pollutants.

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### 3.5 Perfluorohexane Sulfonic Acid (PFHxS), It's Salts and PFHxS-related Compounds Content Test

Test Items	Unit	MDL	Result		Maximum Permissible Limit
			01	02	
Perfluorohexane Sulphonic acid (PFHxS)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid potassium salt (PFHxS-K)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH4)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na)	mg/kg	0.01	N.D.	N.D.	0.025
N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA)	mg/kg	0.01	N.D.	N.D.	Sum<1
Perfluorohexane sulfonamide (PFHxSA)	mg/kg	0.01	N.D.	N.D.	
<b>Conclusion</b>			<b>Pass</b>	<b>Pass</b>	

Test Items	Unit	MDL	Result		Maximum Permissible Limit
			03	04	
Perfluorohexane Sulphonic acid (PFHxS)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid potassium salt (PFHxS-K)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH4)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na)	mg/kg	0.01	N.D.	N.D.	0.025
N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA)	mg/kg	0.01	N.D.	N.D.	Sum<1
Perfluorohexane sulfonamide (PFHxSA)	mg/kg	0.01	N.D.	N.D.	
<b>Conclusion</b>			<b>Pass</b>	<b>Pass</b>	

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Test Items	Unit	MDL	Result		Maximum Permissible Limit
			05	06	
Perfluorohexane Sulphonic acid (PFHxS)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid potassium salt (PFHxS-K)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH4)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na)	mg/kg	0.01	N.D.	N.D.	0.025
N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA)	mg/kg	0.01	N.D.	N.D.	Sum<1
Perfluorohexane sulfonamide (PFHxSA)	mg/kg	0.01	N.D.	N.D.	
<b>Conclusion</b>			<b>Pass</b>	<b>Pass</b>	

Test Items	Unit	MDL	Result		Maximum Permissible Limit
			07	08	
Perfluorohexane Sulphonic acid (PFHxS)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid potassium salt (PFHxS-K)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH4)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na)	mg/kg	0.01	N.D.	N.D.	0.025
N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA)	mg/kg	0.01	N.D.	N.D.	Sum<1
Perfluorohexane sulfonamide (PFHxSA)	mg/kg	0.01	N.D.	N.D.	
<b>Conclusion</b>			<b>Pass</b>	<b>Pass</b>	

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Test Items	Unit	MDL	Result		Maximum Permissible Limit
			09	10	
Perfluorohexane Sulphonic acid (PFHxS)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid potassium salt (PFHxS-K)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH4)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na)	mg/kg	0.01	N.D.	N.D.	0.025
N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA)	mg/kg	0.01	N.D.	N.D.	Sum<1
Perfluorohexane sulfonamide (PFHxSA)	mg/kg	0.01	N.D.	N.D.	
<b>Conclusion</b>			<b>Pass</b>	<b>Pass</b>	

Test Items	Unit	MDL	Result		Maximum Permissible Limit
			11	12	
Perfluorohexane Sulphonic acid (PFHxS)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid potassium salt (PFHxS-K)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH4)	mg/kg	0.01	N.D.	N.D.	0.025
Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na)	mg/kg	0.01	N.D.	N.D.	0.025
N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA)	mg/kg	0.01	N.D.	N.D.	Sum<1
Perfluorohexane sulfonamide (PFHxSA)	mg/kg	0.01	N.D.	N.D.	
<b>Conclusion</b>			<b>Pass</b>	<b>Pass</b>	

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Test Items	Unit	MDL	Result	Maximum Permissible Limit
			13	
Perfluorohexane Sulphonic acid (PFHxS)	mg/kg	0.01	N.D.	0.025
Perfluorohexane Sulfonic acid potassium salt (PFHxS-K)	mg/kg	0.01	N.D.	0.025
Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li)	mg/kg	0.01	N.D.	0.025
Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH4)	mg/kg	0.01	N.D.	0.025
Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na)	mg/kg	0.01	N.D.	0.025
N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA)	mg/kg	0.01	N.D.	Sum<1
Perfluorohexane sulfonamide (PFHxSA)	mg/kg	0.01	N.D.	
<b>Conclusion</b>			<b>Pass</b>	

**Remark:**

1. MDL=Method Detection Limit.
2. N.D.=Not Detected (<MDL)
3. "mg/kg" denotes "milligram per kilogram"
4. The limit was quoted from Regulation (EU) 2019/1021 of the European Parliament and of the Council on persistent organic pollutants.

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Prepared by:

**Mr. Jialong HAN**

Checked by:

**Mr. Feng ZHANG**

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APPENDIX I: Product Model

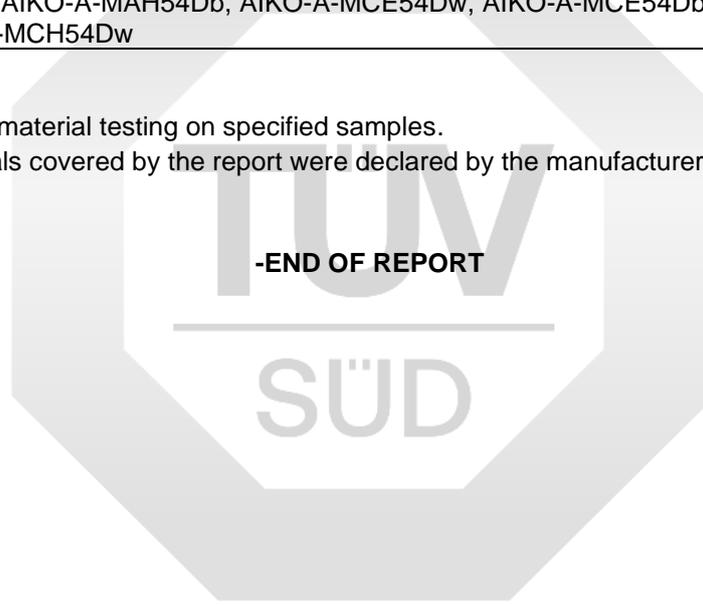
Product: PV Module	Model: AIKO-A-GRH66Dw
	
Additional model: AIKO-A-MAH78Dw, AIKO-A-MAE78Dw, AIKO-A-MAH72Dw, AIKO-A-MAH72Db, AIKO-A-MAE72Dw, AIKO-A-MDE72Dw, AIKO-G-MCH72Dw, AIKO-A-MAH60Dw, AIKO-A-MAH60Db, AIKO-A-MAE60Dw, AIKO-A-MCE60Dw, AIKO-A-MCE60Db, AIKO-A-MDE60Dw, AIKO-G-MCH60Dw, AIKO-A-MAH54Dw, AIKO-A-MAH54Db, AIKO-A-MCE54Dw, AIKO-A-MCE54Db, AIKO-A-MDE54Dw, AIKO-G-MCH54Dw	

Remark:

- 1. The report covers material testing on specified samples.
- 2. The tested materials covered by the report were declared by the manufacturer to be used on the additional model.

-END OF REPORT

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