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国际互认
检测
TESTING
CNAS L0446

GRGTEST

TEST REPORT

CheckCode:662081
Report No.:C202312296875-1E

Company Name: SHANGHAI EASCO ELECTRICAL CO.,LTD.
Address: BLDG. A JIAN GONG INDUSTRIAL PARK HUI PING TOWN QI DONG,
JIANGSU CHINA

The following sample information was submitted and identified by/on the behalf of the client

Name: Low Smoke Halogen Free Wiring Duct
Material: PC+ABS
Supplier: SHANGHAI EASCO ELECTRICAL CO.,LTD.
Sample Type: Irregular rubber and plastic products
Sample State: Normal

Date of Receipt: Jan.5, 2024
Jan.10, 2024
Test Period: Jan.5, 2024 – Jan.12, 2024

Test Request: According to TB/T 3139-2021 *Limit of harmful substance of non-metallic materials and indoor air for railway locomotive and vehicle*
4.6 rubber and plastic products and 5 requirements and test methods for prohibited and restricted substances in non-metallic materials for railway locomotive and vehicle, to determine Soluble Lead, Soluble Cadmium, Volatile Matter, Prohibited Substances, Restricted Substances in the submitted sample.

Judge Standard: TB/T 3139-2021 *Limit of harmful substance of non-metallic materials and indoor air for railway locomotive and vehicle*

Test Result: Please refer to following page(s).

Conclusion:

Sample No.	Conclusion
1~2	The result(s) comply with the requirement of TB/T 3139-2021 <i>Limit of harmful substance of non-metallic materials and indoor air for railway locomotive and vehicle</i> 4.6 rubber and plastic products.
1	The result(s) comply with the requirement of TB/T 3139-2021 <i>Limit of harmful substance of non-metallic materials and indoor air for railway locomotive and vehicle</i> 5 requirements and test methods for prohibited and restricted substances in non-metallic materials for railway locomotive and vehicle.

Edited by Mo Zhixun

Reviewed by Tang Liping

Approved by Zhang Xiangping



The result(s) shown in this report refer(s) only to the sample(s) tested. This report is considered invalid without approved signature, special seal and the seal on the perforation. Without written approval of GRGTEST, this report can't be reproduced except in full. Any disagreements of the test report should be fed back to us within 15 workdays upon receiving the report.

GRG METROLOGY & TEST GROUP CO., LTD.

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Result Summary:

4.6 Rubber and plastic products

No.	Test Item	Standard Requirements	Sample	Conclusion
			1	
1	Soluble Lead(Pb)	≤5mg/kg	N.D.	Comply
2	Soluble Cadmium(Cd)	≤5mg/kg	N.D.	Comply

No.	Test Item	Standard Requirements	Sample	Conclusion
			2	
3	Volatile Matter	≤6g/kg	1.0g/kg	Comply

5 Requirements and test methods for prohibited and restricted substances in non-metallic materials for railway locomotive and vehicle

Prohibited Substances:

No.	Test Item	Controlled Applications	Standard Requirements	Sample	Conclusion
				1	
1	Asbestos	All	Prohibited	Negative	Comply
2	Chlorofluorocarbon(CFC)	Solvent, Aerosol, Refrigerant, Foaming Material	Prohibited	N.A.	N.A.
3	Perbromofluorocarbon (HALON)			N.A.	
4	Hydrofluorocarbon (HCFC)			N.A.	
5	Hydrofluorocarbon(HFC)	Foaming Material	Prohibited	N.A.	N.A.
6	Perfluorocarbon(PFC)			N.A.	
7	Sulphur hexafluoride(SF6)			N.A.	
8	Tetrachloroethylene	Solvent	Prohibited	N.A.	N.A.
9	Arsenic and its compounds (Count as As)	Wooden Product	Prohibited	N.A.	N.A.
10	Beryllium and its compounds (Count as Be)	All	Prohibited	N.D.	Comply

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No.	Test Item		Controlled Applications	Standard Requirements	Sample	Conclusion
					1	
11	Cobalt and its compounds (Count as Co)		All	Prohibited	N.D.	Comply
12	Cadmium and its compounds (Count as Cd)		All	≤100mg/kg	N.D.	Comply
13	Lead and its compounds (Count as Pb)		Coating	Prohibited	N.A.	N.A.
14	Mercury and its compounds (Count as Hg)		Wooden Product	Prohibited	N.A.	N.A.
15	Hexavalent chromium compound(Count as Cr(VI))		Leather	≤3mg/kg	N.A.	N.A.
16	4-Nitrobiphenyl		All	Prohibited	N.D.	Comply
17	Aromatic amine	2-naphthylamine	All	Prohibited	N.D.	Comply
18		Benzidine			N.D.	
19		4-aminobiphenyl			N.D.	
20	Halogenated Benzyltoluene	Monomethyl dibromodiphenyl methane	All	Prohibited	N.D.	Comply
21		Monomethyl dichlorodiphenyl methane (Ugilec 121 Ugilec 21)				
22		Monomethyl tetrachlorodiphenyl methane(Ugilec 141)				
23	Nonylphenol(NP)		Textile,Leather, Detergent	≤1000mg/kg	N.A.	N.A.
24	Nonylphenol ethoxylates (NPEO)			≤1000mg/kg	N.A.	N.A.

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No.	Test Item	Controlled Applications	Standard Requirements	Sample	Conclusion
				1	
25	Polybrominated Diphenyl Ethers (PBDE)	All	Pentabromodiphenyl ether: ≤1000mg/kg Octabromodiphenyl ether: Prohibited	N.D.	Comply
26	Pentachlorophenol (PCP) and its salts and esters	All	≤1000mg/kg	N.D.	Comply
27	Polychlorinated Terphenyls (PCT)	All	≤50mg/kg	N.D.	Comply
28	short-chain chlorinated paraffins (SCCP)	All	≤1000mg/kg	N.D.	Comply
29	Polybrominated biphenyls (PBB)	Textile	Prohibited	N.A.	N.A.
30	Tris (2,3-dibromopropyl) phosphate	Textile	Prohibited	N.A.	N.A.
31	Tris(aziridinyl)phosphin oxide	Textile	Prohibited	N.A.	N.A.
32	Halogen	Electrical component	Cl≤900mg/kg Br≤900mg/kg Cl+Br≤1500mg/kg	N.A.	N.A.

Restricted Substances:

No.	Test Item	Controlled Applications	Standard Requirements	Sample	Conclusion
				1	
1	Lead and its compounds (Count as Pb)	All (except coating)	≤1000mg/kg	N.D.	Comply
2	Mercury and its compounds (Count as Hg)	All (except wooden product)	≤1000mg/kg	N.D.	Comply
3	Hexavalent chromium compound (Count as Cr(VI))	All (except Leather)	≤1000mg/kg	N.D.	Comply
4	Polybrominated biphenyls (PBB)	All (except Textile)	≤1000mg/kg	N.D.	Comply

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No.	Test Item		Controlled Applications	Standard Requirements	Sample	Conclusion
					1	
5	Polybrominated Diphenyl Ethers (PBDE)(except Pentabromodiphenyl ether and Octabromodiphenyl ether)		All	≤1000mg/kg	N.D.	Comply
6	MMMF		All	Each ≤1000mg/kg	N.D.	Comply
7	Talcum		All	≤1000mg/kg	N.D.	Comply
8	Antimony and its compounds (Count as Sb)		All	≤1000mg/kg	N.D.	Comply
9	Nickel		Metal coating	Nickel release ≤0.5µg/cm ² / week	N.A.	N.A.
10	Medium Chain Chlorinated Paraffins (MCCP)		All	≤1000mg/kg	N.D.	Comply
11	Methylenediphenyl diisocyanate(MDI)		All	≤1000mg/kg	N.D.	Comply
12	Toluene		Adhesive, coating	≤1000mg/kg	N.A.	N.A.
13	PAHs		All	≤500mg/kg	N.D.	Comply
14	Organic tin compounds		All	Each ≤1000mg/kg	N.D.	Comply
15	Triphenyl phosphate (TPP)		All	≤1000mg/kg	N.D.	Comply
16	Phthalates	Benzylbutyl phthalate (BBP)	All	Sum ≤1000mg/kg	N.D.	Comply
17		Dibutyl phthalate (DBP)			N.D.	
18		Diethylhexyl phthalate (DEHP)			N.D.	
19		Diisobutyl phthalate (DIBP)			N.D.	
20		Diisononyl phthalate (DINP)	All	Each ≤1000mg/kg	N.D.	Comply
21		Diisodecyl phthalate (DIDP)			N.D.	

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No.	Test Item		Controlled Applications	Standard Requirements	Sample	Conclusion
					1	
22	Phthalates	Di-n-octyl phthalate (DNOP)	All	Each ≤1000mg/kg	N.D.	Comply
23		Dimethyl phthalate (DMP)			N.D.	
24	TMTD		All	≤1000mg/kg	N.D.	Comply
25	Polychlorinated Biphenyls (PCB)		All	≤50mg/kg	N.D.	Comply
26	Trichlorobenzene(TCB)		All	≤1000mg/kg	N.D.	Comply

Sample description:

Sample No.	Description
1	Lt- grey plastic
2	Lt- grey plastic

- Remark:
- 1) 1mg/kg = 1ppm = 0.0001%
 - 2) "N.D." = Not Detected (Below Method Detection Limit or below reporting limit)
 - 3) RL=Reporting Limit
 - 4) MDL = Method Detection Limit
 - 5) Negative<0.1%(m/m) (Not detected asbestos),Positive≥0.1%(m/m) (Detected asbestos)
 - 6) N.A. = Not Applicable
 - 7) The report is English version of test report C202312296875-1. In case of divergence, the Chinese text shall be regarded as authentic.
 - 8) Result shown of specimen 1 was based on sample submitted by 2024-01-05.
Result shown of specimen 2 was based on sample submitted by 2024-01-10.

Test results:

4.6 rubber and plastic products

Test Method: With reference to TB/T 3139-2021&GB 18586-2001 section 5.4, analysis was performed by AAS.

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No.	Test Item	Sample	Unit	MDL	Standard Requirements	Conclusion
		1				
1	Soluble Lead(Pb)	N.D.	mg/kg	2	≤5	Comply
2	Soluble Cadmium(Cd)	N.D.	mg/kg	2	≤5	Comply

Test Method: With reference to TB/T 3139-2021&GB 18586-2001 section 5.5.

No.	Test Item	Sample	Unit	MDL	Standard Requirements	Conclusion
		2				
3	Volatile Matter	1.0	g/kg	0.10	≤6	Comply

5 Requirements and test methods for prohibited and restricted substances in non-metallic materials for railway locomotive and vehicle

Prohibited Substances:

Test Method: With reference to GB/T 23263-2009, analysis was performed by Polarizing microscope (PLM) and X-ray powder diffractometer (XRD).

No.	Test Item	CAS No.	Sample	MDL	Standard Requirements	Conclusion
			1			
1	Asbestos					
	Chrysotile	12001-29-5	Negative	0.1% (m/m)	Prohibited	Comply
	Amosite	12172-73-5	Negative	0.1% (m/m)		
	Crocidolite	12001-28-4	Negative	0.1% (m/m)		
	Anthophyllite	77536-67-5	Negative	0.1% (m/m)		
	Tremolite	77536-68-6	Negative	0.1% (m/m)		
	Actinolite	77536-66-4	Negative	0.1% (m/m)		

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Test Method: With reference to TB/T 3139-2021 Annex D, analysis was performed by HS-GC/MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
2	Chlorofluorocarbon(CFC)						
	CFC-11	75-69-4	N.A.	mg/kg	0.1	Prohibited	N.A.
	CFC-12	75-71-8	N.A.	mg/kg	0.1		
	CFC-13	75-72-9	N.A.	mg/kg	0.1		
	CFC-111	354-56-3	N.A.	mg/kg	0.1		
	CFC-112	76-11-9	N.A.	mg/kg	0.1		
	CFC-113	76-13-1	N.A.	mg/kg	0.1		
	CFC-114	76-14-2	N.A.	mg/kg	0.1		
	CFC-115	76-15-3	N.A.	mg/kg	0.1		
	CFC-211	422-78-6	N.A.	mg/kg	0.1		
	CFC-212	661-96-1	N.A.	mg/kg	0.1		
	CFC-213	1652-89-7	N.A.	mg/kg	0.1		
	CFC-214	677-68-9	N.A.	mg/kg	0.1		
	CFC-215	1599-41-3	N.A.	mg/kg	0.1		
	CFC-215	76-17-5	N.A.	mg/kg	0.1		
	CFC-216	661-97-2	N.A.	mg/kg	0.1		
	CFC-216	1652-80-8	N.A.	mg/kg	0.1		
	CFC-217	422-86-6	N.A.	mg/kg	0.1		
3	Perbromofluorocarbon(HALON)						
	Halon 2402	124-73-2	N.A.	mg/kg	0.1	Prohibited	N.A.
	Halon 1211	353-59-3	N.A.	mg/kg	0.1		
	Halon 1301	75-63-8	N.A.	mg/kg	0.1		
4	Hydrofluorocarbon(HCFC)						
	HCFC-21	75-43-4	N.A.	mg/kg	0.1	Prohibited	N.A.
	HCFC-22	75-45-6	N.A.	mg/kg	0.1		
	HCFC-31	593-70-4	N.A.	mg/kg	0.1		
	HCFC-121	354-14-3	N.A.	mg/kg	0.1		
	HCFC-122	354-21-2	N.A.	mg/kg	0.1		
	HCFC-123	306-83-2	N.A.	mg/kg	0.1		
	HCFC-124	2837-89-0	N.A.	mg/kg	0.1		
	HCFC-131	359-28-4	N.A.	mg/kg	0.1		
	HCFC-132	431-06-1	N.A.	mg/kg	0.1		

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No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
4	HCFC-133	---	N.A.	mg/kg	0.1	Prohibited	N.A.
	HCFC-141	---	N.A.	mg/kg	0.1		
	HCFC-141b	1717-00-6	N.A.	mg/kg	0.1		
	HCFC-142	---	N.A.	mg/kg	0.1		
	HCFC-142b	75-68-3	N.A.	mg/kg	0.1		
	HCFC-151	---	N.A.	mg/kg	0.1		
	HCFC-221	422-26-4	N.A.	mg/kg	0.1		
	HCFC-222	422-30-0	N.A.	mg/kg	0.1		
	HCFC-223	422-52-6	N.A.	mg/kg	0.1		
	HCFC-224	---	N.A.	mg/kg	0.1		
	HCFC-225	---	N.A.	mg/kg	0.1		
	HCFC-225ca	422-56-0	N.A.	mg/kg	0.1		
	HCFC-225cb	507-55-1	N.A.	mg/kg	0.1		
	HCFC-226	431-87-8	N.A.	mg/kg	0.1		
	HCFC-231	421-94-3	N.A.	mg/kg	0.1		
	HCFC-232	460-89-9	N.A.	mg/kg	0.1		
	HCFC-233	7125-84-0	N.A.	mg/kg	0.1		
	HCFC-234	425-94-5	N.A.	mg/kg	0.1		
	HCFC-235	460-92-4	N.A.	mg/kg	0.1		
	HCFC-241	666-27-3	N.A.	mg/kg	0.1		
	HCFC-242	460-63-9	N.A.	mg/kg	0.1		
	HCFC-243	338-75-0	N.A.	mg/kg	0.1		
	HCFC-244	679-85-6	N.A.	mg/kg	0.1		
	HCFC-251	421-41-0	N.A.	mg/kg	0.1		
	HCFC-252	819-00-1	N.A.	mg/kg	0.1		
	HCFC-253	460-35-5	N.A.	mg/kg	0.1		
	HCFC-261	7799-56-6 420-97-3	N.A.	mg/kg	0.1		
	HCFC-262	102738-79-4 420-99-5	N.A.	mg/kg	0.1		
	HCFC-271	430-55-7	N.A.	mg/kg	0.1		

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			1				
5	Hydrofluorocarbon(HFC)						
	HFC-23	75-46-7	N.A.	mg/kg	0.1	Prohibited	N.A.
	HFC-32	75-10-5	N.A.	mg/kg	0.1		
	HFC-41	593-53-3	N.A.	mg/kg	0.1		
	HFC-43-10mee	---	N.A.	mg/kg	0.1		
	HFC-125	354-33-6	N.A.	mg/kg	0.1		
	HFC-134	359-35-3	N.A.	mg/kg	0.1		
	HFC-134a	811-97-2	N.A.	mg/kg	0.1		
	HFC-143	420-46-2	N.A.	mg/kg	0.1		
	HFC-143a	430-66-0	N.A.	mg/kg	0.1		
	HFC-152a	75-37-6	N.A.	mg/kg	0.1		
	HFC-227ea	---	N.A.	mg/kg	0.1		
	HFC-236cb	---	N.A.	mg/kg	0.1		
	HFC-236ea	431-63-0	N.A.	mg/kg	0.1		
	HFC-236fa	690-39-1	N.A.	mg/kg	0.1		
	HFC-245ca	679-86-7	N.A.	mg/kg	0.1		
	HFC-245fa	---	N.A.	mg/kg	0.1		
	HFC-365mfc	---	N.A.	mg/kg	0.1		
6	Perfluorocarbon(PFC)						
	Perfluoromethane	75-73-0	N.A.	mg/kg	0.1	Prohibited	N.A.
	Perfluoroethane	76-16-4	N.A.	mg/kg	0.1		
	Perfluoropropane	76-19-7	N.A.	mg/kg	0.1		
	Perfluorobutane	355-25-9	N.A.	mg/kg	0.1		
	Perfluoropentane	678-26-2	N.A.	mg/kg	0.1		
	Perfluorohexane	355-42-0	N.A.	mg/kg	0.1		
	Perfluorocyclobutane	115-25-3	N.A.	mg/kg	0.1		

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No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
7	Sulphur hexafluoride(SF6)	2551-62-4	N.A.	mg/kg	0.1	Prohibited	N.A.
8	Tetrachloroethylene	127-18-4	N.A.	mg/kg	0.1	Prohibited	N.A.

Test Method: With reference to GB/T 33422-2016, analysis was performed by ICP-OES.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
9	Arsenic and its compounds (Count as As)	---	N.A.	mg/kg	10	Prohibited	N.A.

Test Method: With reference to TB/T 3139-2021&GB/T 33422-2016, analysis was performed by ICP-OES.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
10	Beryllium and its compounds(Count as Be)	---	N.D.	mg/kg	5	Prohibited	Comply
11	Cobalt and its compounds (Count as Co)	---	N.D.	mg/kg	5	Prohibited	Comply

Test Method: With reference to GB/T 26125-2011, analysis was performed by ICP-OES.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
12	Cadmium and its compounds (Count as Cd)	---	N.D.	mg/kg	2	≤100	Comply
13	Lead and its compounds (Count as Pb)	---	N.A.	mg/kg	2	Prohibited	N.A.
14	Mercury and its compounds (Count as Hg)	---	N.A.	mg/kg	2	Prohibited	N.A.

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Test Method: With reference to GB/T 22807-2019, analysis was performed by UV-Vis.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
15	Hexavalent chromium compound(Count as Cr(VI))	---	N.A.	mg/kg	3	≤3	N.A.

Test Method: With reference to TB/T 3139-2021 Annex E, analysis was performed by GC-MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
16	4-Nitrobiphenyl	92-93-3	N.D.	mg/kg	10	Prohibited	Comply

Test Method: With reference to TB/T 3139-2021& GB/T 17592 -2011, analysis was performed by GC-MS.

No.	Test Item		CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
				1				
17	Aromatic amine	2-naphthylamine	91-59-8	N.D.	mg/kg	5	Prohibited	Comply
18		Benzidine	92-87-5	N.D.	mg/kg	5		
19		4-aminobiphenyl	92-67-1	N.D.	mg/kg	5		

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Test Method: With reference to TB/T 3139-2021 Annex F, analysis was performed by GC-MS.

No.	Test Item		CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
				1				
20	Halogenated Benzyltoluene	Monomethyl dibromodiphenyl methane	99688-47-8	N.D.	mg/kg	10	Prohibited	Comply
21		Monomethyl dichlorodiphenyl methane (Ugilec 121 Ugilec 21)	81161-70-8					
22		Monomethyl tetrachlorodiphenyl methane(Ugilec 141)	76253-60-6					

Test Method: With reference to GB/T 23322-2018, analysis was performed by LC-MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
23	Nonylphenol(NP)	25154-52-3 84852-15-3	N.A.	mg/kg	10	≤1000	N.A.
24	Nonylphenol ethoxylates(NPEO)	9016-45-9	N.A.	mg/kg	10	≤1000	N.A.

Test Method: With reference to GB/T 26125-2011, analysis was performed by GC-MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
25	Polybrominated Diphenyl Ethers (PBDE)						
	Pentabromodiphenyl ether	---	N.D.	mg/kg	5	≤1000	Comply
	Octabromodiphenyl ether	---	N.D.	mg/kg	5	Prohibited	Comply

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Test Method: With reference to GB/T 18414.1-2006, analysis was performed by GC-MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
26	Pentachlorophenol (PCP) and its salts and esters	---	N.D.	mg/kg	0.5	≤1000	Comply

Test Method: With reference to TB/T 3139-2021&SN/T 3918-2014, analysis was performed by GC-ECD.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
27	Polychlorinated Terphenyls (PCT)	---	N.D.	mg/kg	5	≤50	Comply

Test Method: With reference to GB/T 33345-2016, analysis was performed by GC-ECD/NCI-GC/MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
28	Short-chain chlorinated paraffins (SCCP)	85535-84-8	N.D.	mg/kg	50	≤1000	Comply

Test Method: With reference to GB/T 26125-2011, analysis was performed by GC-MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
29	Polybrominated biphenyls (PBB)						
	Monobromobiphenyl	---	N.A.	mg/kg	5	---	---
	Dibromobiphenyl	---	N.A.	mg/kg	5	---	---
	Tribromobiphenyl	---	N.A.	mg/kg	5	---	---
	Tetrabromobiphenyl	---	N.A.	mg/kg	5	---	---
	Pentabromobiphenyl	---	N.A.	mg/kg	5	---	---
	Hexabromobiphenyl	---	N.A.	mg/kg	5	---	---
	Heptabromobiphenyl	---	N.A.	mg/kg	5	---	---

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No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
29	Octabromobiphenyl	---	N.A.	mg/kg	5	---	---
	Nonabromobiphenyl	---	N.A.	mg/kg	5	---	---
	Decabromobiphenyl	---	N.A.	mg/kg	5	---	---
	Sum	---	N.A.	mg/kg	---	Prohibited	N.A.

Test Method: With reference to TB/T 3139-2021 Annex G, analysis was performed by GC-MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
30	Tris (2,3-dibromopropyl) phosphate	126-72-7	N.A.	mg/kg	5	Prohibited	N.A.
31	Tris(aziridinyl)phosphin oxide	545-55-1	N.A.	mg/kg	5	Prohibited	N.A.

Test Method: With reference to GB/T 34692-2017, analysis was performed by Ion Chromatography.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
32	Halogen						
	Cl	7782-50-5	N.A.	mg/kg	50.0	≤900	N.A.
	Br	7726-95-6	N.A.	mg/kg	50.0	≤900	N.A.
	Cl+ Br	---	N.A.	mg/kg	---	≤1500	N.A.

Restricted Substances:

Test Method: With reference to GB/T 26125-2011, analysis was performed by ICP-OES.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
1	Lead and its compounds (Count as Pb)	---	N.D.	mg/kg	2	≤1000	Comply
2	Mercury and its compounds (Count as Hg)	---	N.D.	mg/kg	2	≤1000	Comply

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Test Method: With reference to GB/T 26125-2011, analysis was performed by UV-Vis.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
3	Hexavalent chromium compound(Count as Cr(VI))	---	N.D.	mg/kg	5	≤1000	Comply

Test Method: With reference to GB/T 26125-2011, analysis was performed by GC-MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Require ments	Conclusi on
			1				
4	Polybrominated biphenyls (PBB)						
	Monobromobiphenyl	---	N.D.	mg/kg	5	---	---
	Dibromobiphenyl	---	N.D.	mg/kg	5	---	---
	Tribromobiphenyl	---	N.D.	mg/kg	5	---	---
	Tetrabromobiphenyl	---	N.D.	mg/kg	5	---	---
	Pentabromobiphenyl	---	N.D.	mg/kg	5	---	---
	Hexabromobiphenyl	---	N.D.	mg/kg	5	---	---
	Heptabromobiphenyl	---	N.D.	mg/kg	5	---	---
	Octabromobiphenyl	---	N.D.	mg/kg	5	---	---
	Nonabromobiphenyl	---	N.D.	mg/kg	5	---	---
	Decabromobiphenyl	---	N.D.	mg/kg	5	---	---
	Sum	---	N.D.	mg/kg	---	≤1000	Comply

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Test Method: With reference to GB/T 26125-2011, analysis was performed by GC-MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Require ments	Conclusi on
			1				
5	Polybrominated Diphenyl Ethers (PBDE)						
	Monobromodiphenyl ether	---	N.D.	mg/kg	5	---	---
	Dibromodiphenyl ether	---	N.D.	mg/kg	5	---	---
	Tribromodiphenyl ether	---	N.D.	mg/kg	5	---	---
	Tetrabromodiphenyl ether	---	N.D.	mg/kg	5	---	---
	Hexabromodiphenyl ether	---	N.D.	mg/kg	5	---	---
	Heptabromodiphenyl ether	---	N.D.	mg/kg	5	---	---
	Nonabromodiphenyl ether	---	N.D.	mg/kg	5	---	---
	Decabromodiphenyl ether	---	N.D.	mg/kg	5	---	---
	Sum	---	N.D.	mg/kg	---	≤1000	Comply

Test Method: With reference to TB/T 3139-2021 Annex H, analysis was performed by ICP-OES.

No.	Test Item	CAS No.	Sample	Unit	RL	Standard Require ments	Conclusi on
			1				
6	MMMF						
	Aluminosilicate Refractory Ceramic Fibres *	---	N.D.	mg/kg	50	≤1000	Comply
	Zirconia Aluminosilicate Refractory Ceramic Fibres *	---	N.D.	mg/kg	50	≤1000	Comply

Remark: * The substances are tested in term of its respective elements (e.g. Si, Al,Zr).

Test Method: With reference to TB/T 3139-2021 Annex I, qualitative determination by Polarizing microscope (PLM) and X-ray powder diffractometer (XRD), quantitative determination by ICP-OES.

No.	Test Item	CAS No.	Sample	Unit	RL	Standard Requirements	Conclusion
			1				
7	Talcum *	14807-96-6	N.D.	mg/kg	500	≤1000	Comply

Remark: * The substances are tested in term of its respective elements (e.g. Mg).

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Test Method: With reference to TB/T 3139-2021&GB/T 33422-2016, analysis was performed by ICP-OES.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
8	Antimony and its compounds (Count as Sb)	---	N.D.	mg/kg	10	≤1000	Comply

Test Method: With reference to GB/T 19719-2005, analysis was performed by ICP-OES.

No.	Test Item	CAS No.	Tested Sample Area (cm ²)	The volum e of test soluti on (ml)	Nickel release				Unit	Stand ard Req uire men ts	Con clus ion
					Sample 1						
					Trial 1	Trial 2	Result 1	Result 2			
9	Nickel release	7440-02-0	---	---	N.A.	N.A.	N.A.	N.A.	µg/cm ² /week	≤0.5	N.A.

Remark: 1) Adjust Analytical Result is the report finally result; Adjust Analytical Result = 0.1×Nickel Release
2) MDL = method detection limit = 0.1μg/cm²/week

Test Method: With reference to TB/T 3139-2021 Annex J, analysis was performed by GC-ECD/NCI-GC/MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
10	Medium Chain Chlorinated Paraffins (MCCP)	85535-85-9	N.D.	mg/kg	50	≤1000	Comply

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Test Method: With reference to TB/T 3139-2021& GB/T 18446-2009, analysis was performed by GC-FID.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
11	Methylenediphenyl diisocyanate (MDI) ⁺	---	N.D.	mg/kg	10	≤1000	Comply

Remark: ⁺Methylenediphenyl diisocyanate (MDI) including 4,4'-methylenediphenyl diisocyanate, 2,2'-methylenediphenyl diisocyanate, 2,4'-methylenediphenyl diisocyanate.

Test Method: With reference to TB/T 3139-2021& GB 18583-2008, analysis was performed by GC-FID.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
12	Toluene	108-88-3	N.A.	mg/kg	10	≤1000	N.A.

Test Method: With reference to GB/T 29784.2-2013, analysis was performed by GC-MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
13	PAHs						
	Naphthalene	91-20-3	N.D.	mg/kg	0.2	---	---
	Acenaphthylene	208-96-8	N.D.	mg/kg	0.2	---	---
	Acenaphthene	83-32-9	N.D.	mg/kg	0.2	---	---
	Fluorene	86-73-7	N.D.	mg/kg	0.2	---	---
	Phenanthrene	85-01-8	N.D.	mg/kg	0.2	---	---
	Anthracene	120-12-7	N.D.	mg/kg	0.2	---	---
	Fluoranthene	206-44-0	N.D.	mg/kg	0.2	---	---
	Pyrene	129-00-0	N.D.	mg/kg	0.2	---	---
	Benzo[a]anthracene	56-55-3	N.D.	mg/kg	0.2	---	---
	Chrysene	218-01-9	N.D.	mg/kg	0.2	---	---
	Benzo[b]fluoranthene	205-99-2	N.D.	mg/kg	0.2	---	---
	Benzo[j]fluoranthene	205-82-3	N.D.	mg/kg	0.2	---	---
	Benzo[k]fluoranthene	207-08-9	N.D.	mg/kg	0.2	---	---
	Benzo[a]pyrene	50-32-8	N.D.	mg/kg	0.2	---	---

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No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
13	Indeno[1,2,3-cd]pyrene	193-39-5	N.D.	mg/kg	0.2	---	---
	Dibenzo[a,h]anthracene	53-70-3	N.D.	mg/kg	0.2	---	---
	Benzo[g,h,i]perylene	191-24-2	N.D.	mg/kg	0.2	---	---
	Benzo[e]pyrene	192-97-2	N.D.	mg/kg	0.2	---	---
	Sum	---	N.D.	mg/kg	---	≤500	Comply

Test Method: With reference to GB/T 35492-2017, analysis was performed by GC-MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
14	Organic tin compounds						
	Diocetyltn	3542-36-7	N.D.	mg/kg	2	≤1000	Comply
	Dibutyltn	683-18-1	N.D.	mg/kg	2	≤1000	Comply
	Tributyltn	1461-22-9	N.D.	mg/kg	2	≤1000	Comply
	Triphenyltn	639-58-7	N.D.	mg/kg	2	≤1000	Comply

Test Method: With reference to TB/T 3139-2021 Annex G, analysis was performed by GC-MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
15	Triphenyl phosphate (TPP)	115-86-6	N.D.	mg/kg	5	≤1000	Comply

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Test Method: With reference to TB/T 3139-2021 Annex K, analysis was performed by GC-MS.

No.	Test Item		CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
				1				
16	Phthalates	Benzylbutyl phthalate (BBP)	85-68-7	N.D.	mg/kg	50	---	---
17		Dibutyl phthalate (DBP)	84-74-2	N.D.	mg/kg	50	---	---
18		Diethylhexyl phthalate (DEHP)	117-81-7	N.D.	mg/kg	50	---	---
19		Diisobutyl phthalate (DIBP)	84-69-5	N.D.	mg/kg	50	---	---
---		Sum	---	N.D.	mg/kg	---	≤1000	Comply
20		Diisononyl phthalate (DINP)	28533-12-0	N.D.	mg/kg	50	≤1000	Comply
21		Diisodecyl phthalate (DIDP)	26761-40-0	N.D.	mg/kg	50	≤1000	Comply
22		Di-n-octyl phthalate (DNOP)	117-84-0	N.D.	mg/kg	50	≤1000	Comply
23		Dimethyl phthalate (DMP)	131-11-3	N.D.	mg/kg	50	≤1000	Comply

Test Method: With reference to TB/T 3139-2021, analysis was performed by LC-PDA.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
24	TMTD	137-26-8	N.D.	mg/kg	10	≤1000	Comply

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Test Method: With reference to GB/T 32887-2016, analysis was performed by GC-MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
25	Polychlorinated Biphenyls (PCB)						
	2-Chlorobiphenyl (PCB 1)	2051-60-7	N.D.	mg/kg	5	---	---
	2,2'-Dichlorobiphenyl(PCB 4)	13029-08-8	N.D.	mg/kg	5	---	---
	2,4,4'-Trichlorobiphenyl (PCB 28)	7012-37-5	N.D.	mg/kg	5	---	---
	2,2'.5.5'-Tetrachlorobiphenyl (PCB 52)	35693-99-3	N.D.	mg/kg	5	---	---
	2,2'.4.5.5'-Pentachlorobiphenyl (PCB 101)	37680-73-2	N.D.	mg/kg	5	---	---
	2,2'3.4.4'.5'-Hexachlorobiphenyl (PCB 138)	35065-28-2	N.D.	mg/kg	5	---	---
	2,2'.3.4.4'.5.5'-Heptachlorobiphenyl(PCB 180)	35065-29-3	N.D.	mg/kg	5	---	---
	2,2',3,3',4,4',5,5'-Chlorobiphenyl (PCB 194)	35694-08-7	N.D.	mg/kg	5	---	---
	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)	40186-72-9	N.D.	mg/kg	5	---	---
	2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)	2051-24-3	N.D.	mg/kg	5	---	---
	Sum	---	N.D.	mg/kg	---	≤50	Comply

Test Method: With reference to GB/T 20384-2006, analysis was performed by GC-MS.

No.	Test Item	CAS No.	Sample	Unit	MDL	Standard Requirements	Conclusion
			1				
26	Trichlorobenzene (TCB)	120-82-1, 87-61-6	N.D.	mg/kg	1	≤1000	Comply

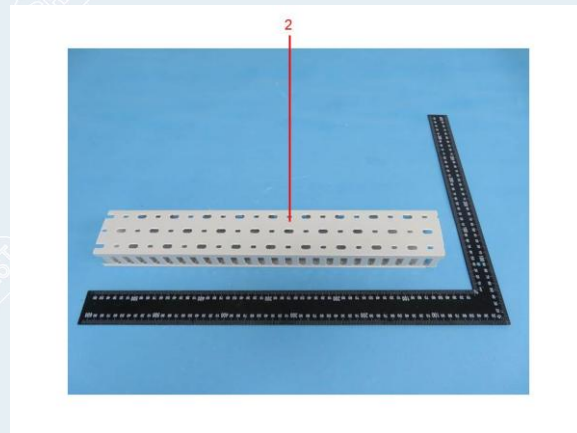
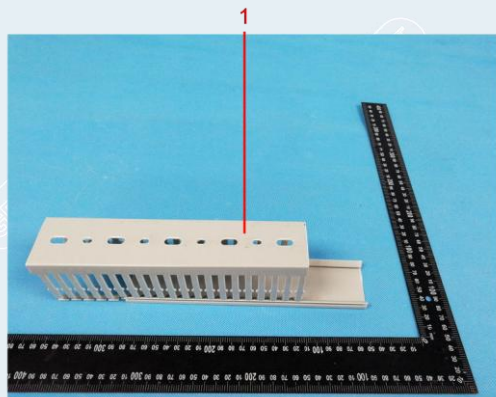
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Photo of Sample



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