

TEST REPORT

APPLICANT : KGDONGBU STEEL CO.,LTD.
ADDRESS : 5F, 92, Tongil-ro, Jung-gu,
Seoul, Korea

PAGE: 1 of 6

REPORT NO. RT24R-S5087-014-E

DATE: Aug. 07, 2024

SAMPLE DESCRIPTION : The following submitted sample(s) said to be:-

NAME/TYPE OF PRODUCT : PO
SAMPLE ID NO. : RT24R-S5087-014
MANUFACTURER/VENDOR : KGDONGBU STEEL CO.,LTD.

SAMPLE RECEIVED : Jul. 30, 2024
TESTING DATE : Jul. 30, 2024 ~ Aug. 07, 2024

TEST METHOD(S) : Please see the following page(s).
TEST RESULT(S) : Please see the following page(s).

* Note 1 : The test results presented in this report refer only to the object tested.

* Note 2 : This report shall not be reproduced except in full without the written approval of the testing laboratory.

Approved by,



Jade Jang / Lab. Technical Manager

Authorized by,



Bo Park / Lab. General Manager



Authenticity check



TEST REPORT

PAGE: 2 of 6
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REPORT NO. RT24R-S5087-014-E

SAMPLE ID NO. : RT24R-S5087-014

SAMPLE DESCRIPTION : PO

TEST ITEM	UNIT	TEST METHOD	MDL	RESULT
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5 Edition 1.0 : 2013, by acid digestion and determined by ICP-OES	0.5	N.D.
Lead (Pb)	mg/kg		5	N.D.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4 : 2013/AMD1 : 2017, by acid digestion and determined by ICP-OES	2	N.D.
Hexavalent Chromium (Cr ⁶⁺) (For metal)	μg/cm ²	With reference to IEC 62321-7-1 Edition 1.0 : 2015, by boiling water extraction and determined by UV-VIS Spectrophotometer	0.10	Negative

Tested by : Jooyeon Lee, Chano Kim

Notes : mg/kg = ppm = parts per million
μg/cm² = microgram per square centimeter
< = Less than
N.D. = Not detected (<MDL)
MDL = Method detection limit

Remarks : Interpretation of Cr⁶⁺ results

Qualitative result	Concentration of Cr ⁶⁺ (μg/cm ²)	Meaning
Negative	< 0.10	The sample coating is considered a non-Cr ⁶⁺ based coating.
Inconclusive	0.10 ≤ and ≤ 0.13	Unavoidable coating variation may influence the determination.
Positive	> 0.13	The sample coating is considered to contain Cr ⁶⁺ .

1. The qualitative results should be determination by the average result of three test results.
(If concentration of Cr⁶⁺ is over 0.10μg/cm²)
2. The above results will be carried out by visual comparison only with the standard.



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SAMPLE DESCRIPTION : PO

TEST ITEM	UNIT	TEST METHOD	MDL	RESULT
Polybrominated Biphenyl (PBBs)				
Monobromobiphenyl	mg/kg	With reference to IEC 62321-6 Edition 1.0 : 2015, by solvent extraction and determined by GC/MS	5	N.D.
Dibromobiphenyl	mg/kg		5	N.D.
Tribromobiphenyl	mg/kg		5	N.D.
Tetrabromobiphenyl	mg/kg		5	N.D.
Pentabromobiphenyl	mg/kg		5	N.D.
Hexabromobiphenyl	mg/kg		5	N.D.
Heptabromobiphenyl	mg/kg		5	N.D.
Octabromobiphenyl	mg/kg		5	N.D.
Nonabromobiphenyl	mg/kg		5	N.D.
Decabromobiphenyl	mg/kg		5	N.D.
Polybrominated Diphenyl Ether (PBDEs)				
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321-6 Edition 1.0 : 2015, by solvent extraction and determined by GC/MS	5	N.D.
Dibromodiphenyl ether	mg/kg		5	N.D.
Tribromodiphenyl ether	mg/kg		5	N.D.
Tetrabromodiphenyl ether	mg/kg		5	N.D.
Pentabromodiphenyl ether	mg/kg		5	N.D.
Hexabromodiphenyl ether	mg/kg		5	N.D.
Heptabromodiphenyl ether	mg/kg		5	N.D.
Octabromodiphenyl ether	mg/kg		5	N.D.
Nonabromodiphenyl ether	mg/kg		5	N.D.
Decabromodiphenyl ether	mg/kg		5	N.D.

Tested by : Hayan Park

Notes : mg/kg = ppm = parts per million
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 N.D. = Not detected (<MDL)
 MDL = Method detection limit

Intertek Testing Services Korea Ltd.

Seoul Office: Tel : 02-6090-9500 Fax : 02-3409-0025 Web Site : intertek.co.kr

Seoul Lab. Address : 7, Ahasan-ro 5-gil, Seongdong-gu, Seoul, 04793 Korea



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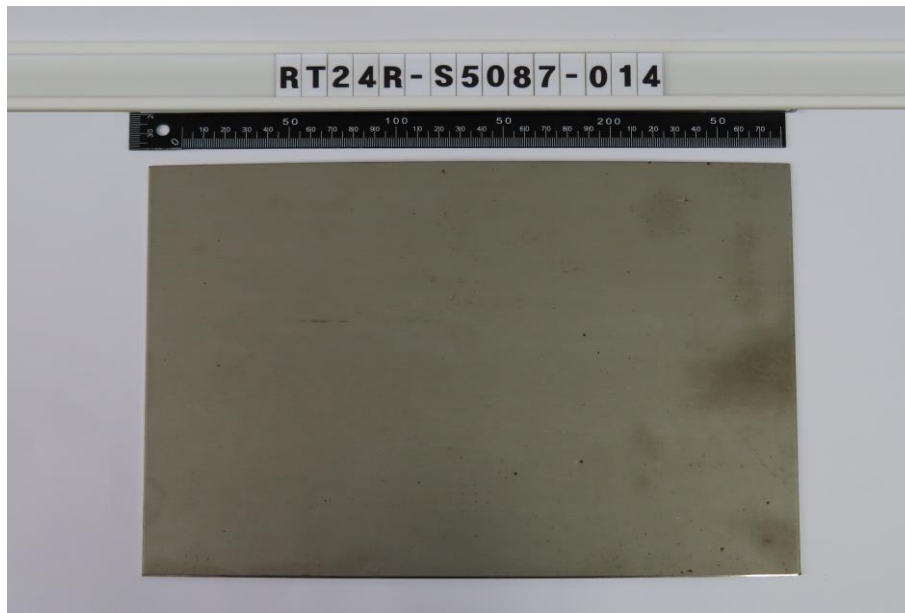
SAMPLE DESCRIPTION : PO

TEST ITEM	CAS NO.	UNIT	TEST METHOD	MDL	RESULT
Dibutyl phthalate (DBP)	84-74-2	mg/kg	With reference to IEC 62321-8 Edition 1.0 : 2017, by solvent extraction and determined by GC/MS	50	N.D.
Di(2-ethylhexyl) phthalate (DEHP)	117-81-7	mg/kg		50	N.D.
Benzyl butyl phthalate (BBP)	85-68-7	mg/kg		50	N.D.
Diisobutyl phthalate (DIBP)	84-69-5	mg/kg		50	N.D.

Tested by : Hayan Park

Notes : mg/kg = ppm = parts per million
< = Less than
N.D. = Not detected (<MDL)
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* View of sample as received;-



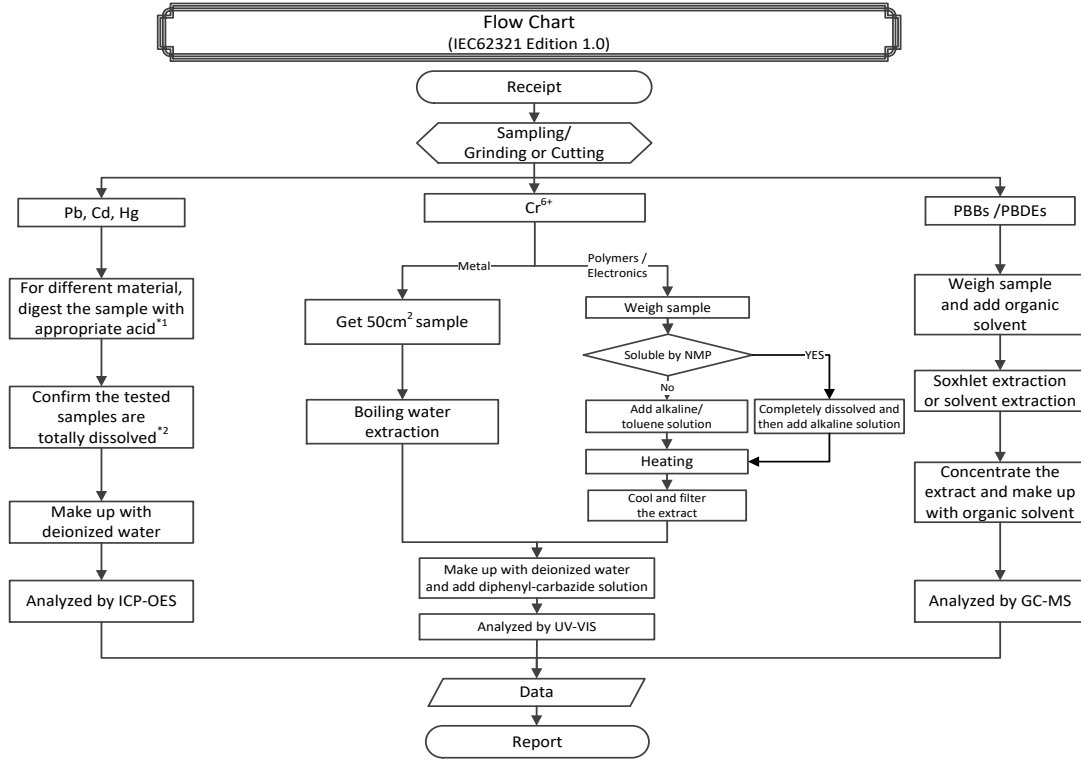
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Remarks :

*1 : List of appropriate acid :

Material	Acid added for digestion
Polymers	HNO ₃ , HCl, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCl, HF
Electronics	HNO ₃ , HCl, H ₂ O ₂ , HBF ₄

*2 : The samples were dissolved totally by pre-conditioning method according to above flow chart.



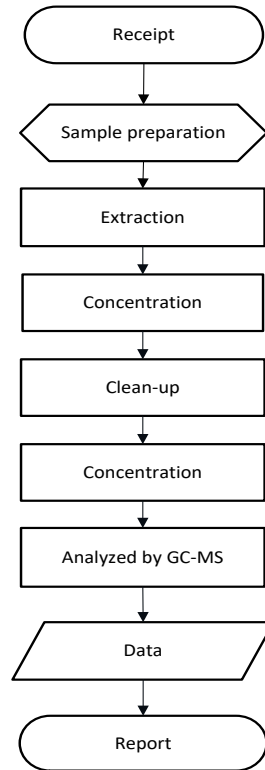
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Flow Chart (Phthalates)



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

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