



Test Report No. F690101/LF-CTSAYGU21-00095

Issued Date : 2021. 01. 08

Page 1 of 6

HYUNDAI SPECIAL STEEL
151 Daesong-ro, Nam-gu
Pohang-si, Gyeongbuk
Korea



The following sample(s) was/were submitted and identified by/on behalf of the client as:-

SGS File No. : AYGU21-00095
Product Name : SCM435
Item No./Part No. : N/A
Received Date : 2021. 01. 04
Test Period : 2021. 01. 04 to 2021. 01. 08
Test Results : For further details, please refer to following page(s)

SGS Korea Co., Ltd.
/ Busan Laboratory

Dongju Lee / Technical Manager

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).

MQP-708-001-F12 (00)

SGS Korea Co., Ltd.

50, Sinsan-ro 29beon-gil, Saha-gu, Busan, Korea 49432
t +82 (0)51 795 7300 f +82 (0)51 795 7310 <http://www.sgsgroup.kr>



Test Report No. F690101/LF-CTSAYGU21-00095

Issued Date : 2021. 01. 08

Page 2 of 6

Sample No. : AYGU21-00095.001
 Sample Description : SCM435
 Item No./Part No. : N/A
 Materials : N/A

Heavy Metals

| Test Items | Unit | Test Method | MDL | Results |
|-------------------------------|--------------------|--|-----|---------|
| Cadmium (Cd) | mg/kg | With reference to IEC 62321-5 : 2013, by ICP-OES | 0.5 | N.D. |
| Lead (Pb) | mg/kg | With reference to IEC 62321-5 : 2013, by ICP-OES | 5 | N.D. |
| Mercury (Hg) | mg/kg | With reference to IEC 62321-4 : 2013+A1 : 2017, by ICP-OES | 2 | N.D. |
| Hexavalent Chromium (Cr VI) * | µg/cm ² | With reference to IEC 62321-7-1 : 2015, by UV-Vis | 0.1 | N.D. |

Flame Retardants-PBBs/PBDEs

| Test Items | Unit | Test Method | MDL | Results |
|--------------------------|-------|--|-----|---------|
| Monobromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Dibromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Tribromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Tetrabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Pentabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Hexabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Heptabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Octabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Nonabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Decabromobiphenyl | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Monobromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Dibromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Tribromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Tetrabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Pentabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Hexabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Heptabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Octabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Nonabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |
| Decabromodiphenyl ether | mg/kg | With reference to IEC 62321-6 : 2015, by GC-MS | 5 | N.D. |

Flame Retardants

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).

MQP-708-001-F12 (00)

SGS Korea Co.,Ltd.

50, Sinsan-ro 29beon-gil, Saha-gu, Busan, Korea 49432
 t +82 (0)51 795 7300 f +82 (0)51 795 7310 <http://www.sgsgroup.kr>

Member of the SGS Group (Société Générale de Surveillance)

Sample No. : AYGU21-00095.001
Sample Description : SCM435
Item No./Part No. : N/A
Materials : N/A

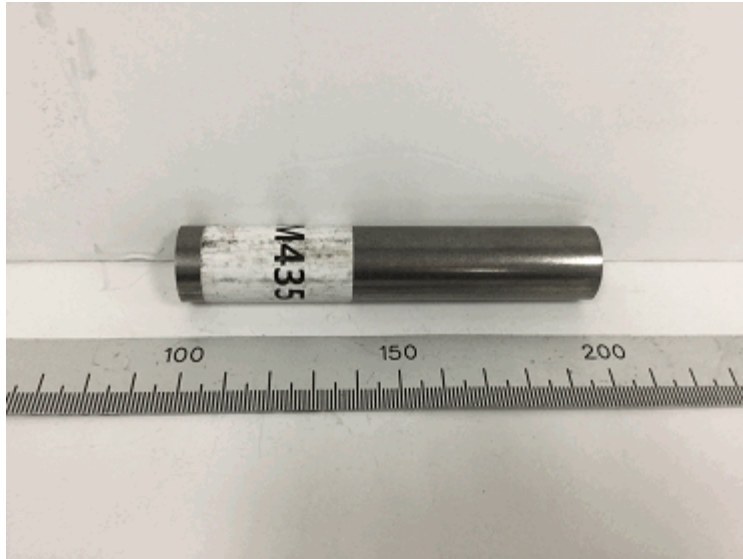
Flame Retardants

| Test Items | Unit | Test Method | MDL | Results |
|--------------------------------------|-------|--|-----|---------|
| Hexabromocyclododecane (HBCDD, HBCD) | mg/kg | With reference to IEC EPA 3540C : 1996, by GC-MS | 5 | N.D. |

- NOTE:
- (1) N.D. = Not detected.(<MDL)
 - (2) mg/kg = ppm
 - (3) µg/kg = ppb
 - (4) MDL = Method Detection Limit
 - (5) - = No regulation
 - (6) Negative = Undetectable / Positive = Detectable
 - (7) ** = Qualitative analysis (No Unit)
 - (8) * = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 ug/cm2. The sample coating is considered to contain CrVI.
 b. The sample is negative for CrVI if CrVI is n.d. (concentration less than 0.10 ug/cm2). The coating is considered a non-CrVI based coating.
 c. The result between 0.10 ug/cm2 and 0.13 ug/cm2 is considered to be inconclusive - unavoidable coating variations may influence the determination.
 - (9) The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
 This test report is not related to Korea Laboratory Accreditation Scheme .

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).

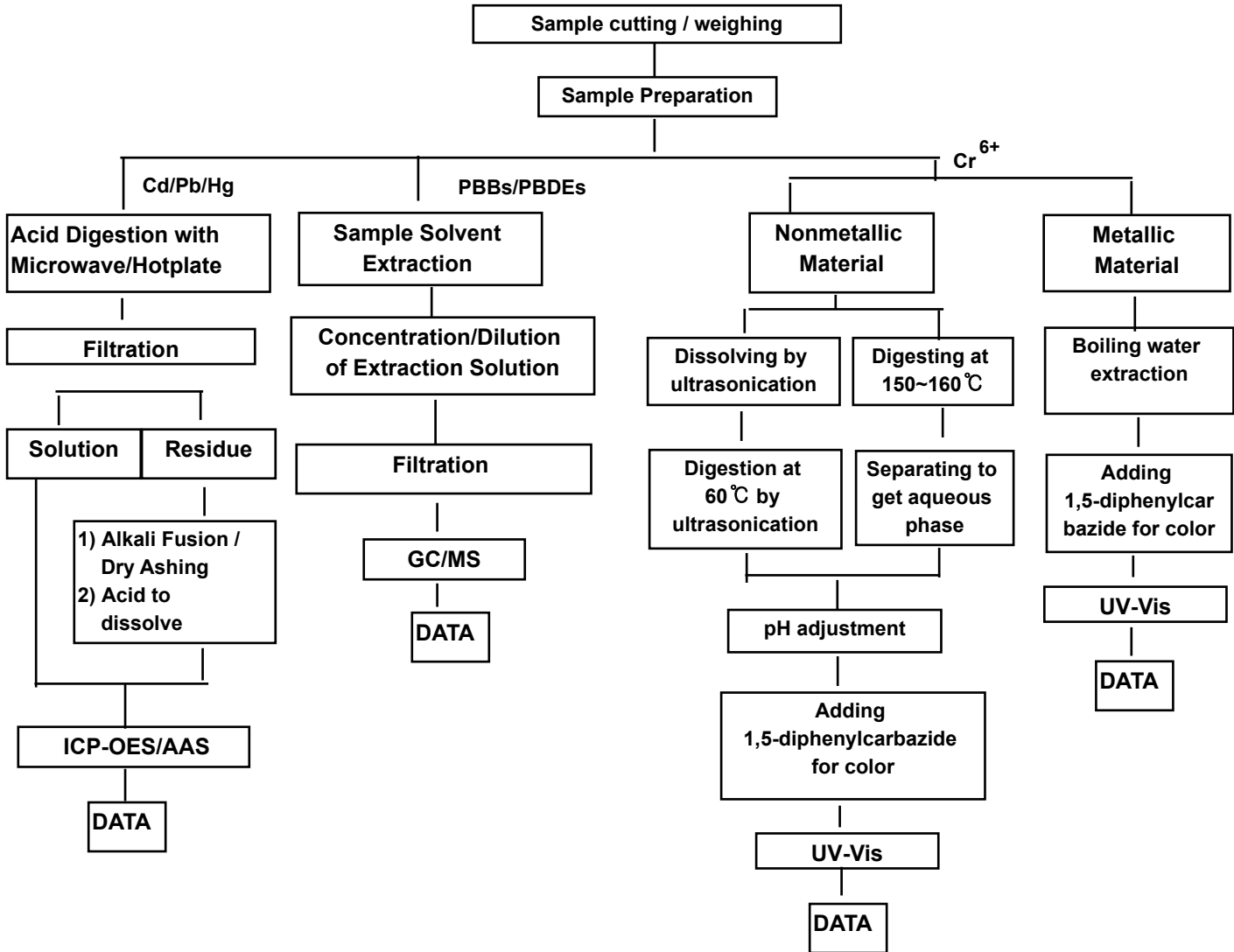
Picture of Sample as Received:



AYGU21-00095.001

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).

Testing Flow Chart for RoHS:Cd/Pb/Hg/Cr⁶⁺ /PBBs&PBDEs Testing

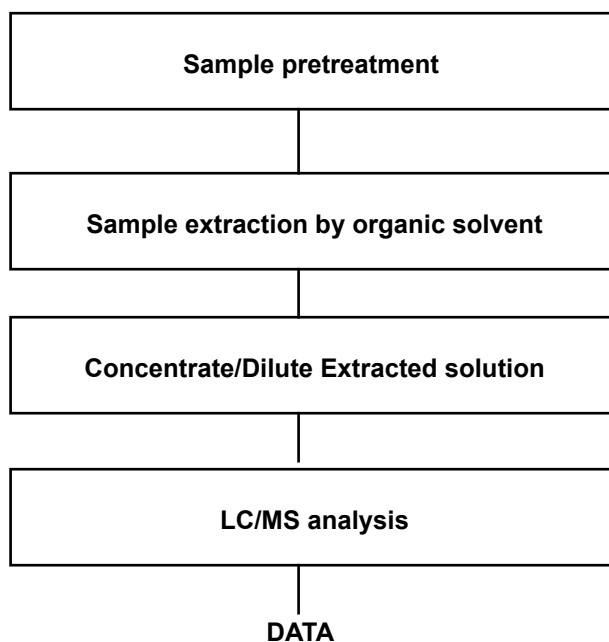


The samples were dissolved totally at the acid digestion step of the above flow chart for Cd,Pb,Hg
Section Chief : Gihwan Kim

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).



Testing Flow Chart for HBCD



*** End of Report ***

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s).