

Issued Date: 2012. 07. 10 Page 1 of 4

# To: KUMHO PETROCHEMICAL CO., LTD.

118 3 ro Yeosusandan Yeosu-si Jeonlanamdo Korea

The following merchandise was submitted and identified by the client as :

Product Name : SSBR
Item No./Part No. : SOL-C6450SL
<b>Received Date</b> : 2012. 07. 03
Test Period   : 2012. 07. 04   to   2012. 07. 10
Test Results : For further details, please refer to following page(s)
<b>Test Performed</b> : SGS Korea tested the sample(s) selected by applicant with following results.

SGS Korea Co. Ltd.

Jeff Jay

Timothy Jeon Jinhee Kim Cindy Park Jerry Jung/ Testing Person

Jeff Jang / Chemical Lab Mgr

his document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.ga.com/terms\_end\_Conditions\_aspx</u> and, for electronic format documents, subject. To Terms and Conditions of Service printed overleaf, available on request or accessible at <u>http://www.ga.com/terms\_end\_Conditions\_aspx</u> and, for electronic Documents at <u>www.sap.com/terms\_end\_Conditions</u> for the transaction is drawn to the limitation of liability, indemnification and jurisdicion issues defined therein. Any holder of this document, and his document, for electronic Documents at the time of its intervention only and within the limits of Client's instructions, if you are printed overlar and big document does not exceed and for 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 of the available three transaction to the sample(s) are retained for 90 days only.



Issued Date: 2012. 07. 10 Page 2 of 4

Sample No.	: AYAA12-25342.001
Sample Description	: SSBR
Item No./Part No.	: SOL-C6450SL
Materials	: Rubber
Heavy Metals	

Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	With reference to IEC 62321:2008, ICP	0.5	N.D.
Lead (Pb)	mg/kg	With reference to IEC 62321:2008, ICP	5	N.D.
Mercury (Hg)	mg/kg	With reference to IEC 62321:2008, ICP	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	With reference to IEC 62321:2008, UV-VIS	1	N.D.

#### Polycyclic Aromatic Hydrocarbons

Test Items	Unit	Test Method	MDL	Results
Naphthalene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
1-Methyl naphthalene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
2-Methyl naphthalene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
Acenaphthylene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
Acenaphthene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
Fluorene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
Phenanthrene	mg/kg	ZEK 01.4-08, GC/MS	0.2	0.36
Anthracene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
Fluoranthene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
Pyrene	mg/kg	ZEK 01.4-08, GC/MS	0.2	0.23
Benzo(a)anthracene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
Chrysene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
Benzo(b)fluoranthene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
Benzo(j)fluoranthene + Benzo(k)fluoranthene	mg/kg	ZEK 01.4-08, GC/MS	0.4	N.D.
Benzo(e)pyrene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
Benzo(a)pyrene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
Indeno(1,2,3-c,d)pyrene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
Dibenzo(a,h)anthracene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.
Benzo(g,h,i)perylene	mg/kg	ZEK 01.4-08, GC/MS	0.2	N.D.

NOTE: (1) N.D. = Not detected.(<MDL)

(2) mg/kg = ppm

(3) MDL = Method Detection Limit

(4) - = No regulation

(5) Negative = Undetectable / Positive = Detectable

- (6) \*\* = Qualitative analysis (No Unit)
- (7) \* = Boiling-water-extraction:

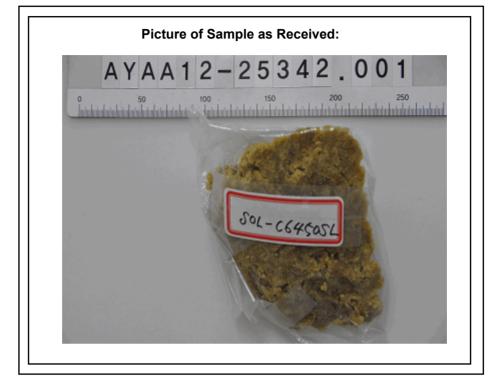
Negative = Absence of CrVI coating

Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm2 sample surface area.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/enTerms-and-Conditions.aspx">http://www.sgs.com/enTerms-and-Conditions.aspx</a>, and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/enTerms-and-Conditions.aspx">http://www.sgs.com/enTerms-and-Conditions.aspx</a>, and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/enTerms-and-Conditions.aspx">http://www.sgs.com/enTerms-and-Conditions.aspx</a>, and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/enTerms-and-Conditions.aspx">http://www.sgs.com/enTerms-and-Conditions.aspx</a>, and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/enTerms-and-Conditions.aspx">http://www.sgs.com/enTerms-and-Conditions.aspx</a>, and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/enTerms-and-Conditions.aspx">http://www.sgs.com/enTerms-and-Conditions.aspx</a>, and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/enTerms-and-Conditions.aspx">http://www.sgs.com/enTerms-and-Conditions.aspx</a>, and, for electronic format documents documents, subject to Terms and Conditions for Electronic format documents, subject to Terms and Conditions for Electronic for 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, for earcising attact the results shown in this test report report role only to the sample(s) are retained for 90 days only.</a>

322, The O valley, 555-9, Hogye-dong, Dongan-gu, Anyang-si, Gyeonggi-do, Korea 431-080 t +82 (0)31 4608 000 f +82 (0)31 4608 059 <u>http://www.sgslab.co.kr ,www.kr.sgs.com/greenlab</u>





- NOTE: (1) N.D. = Not detected.(<MDL)
  - (2) mg/kg = ppm
  - (3) MDL = Method Detection Limit
  - (4) = No regulation
  - (5) Negative = Undetectable / Positive = Detectable
  - (6) \*\* = Qualitative analysis (No Unit)
  - (7) \* = Boiling-water-extraction:
    - Negative = Absence of CrVI coating

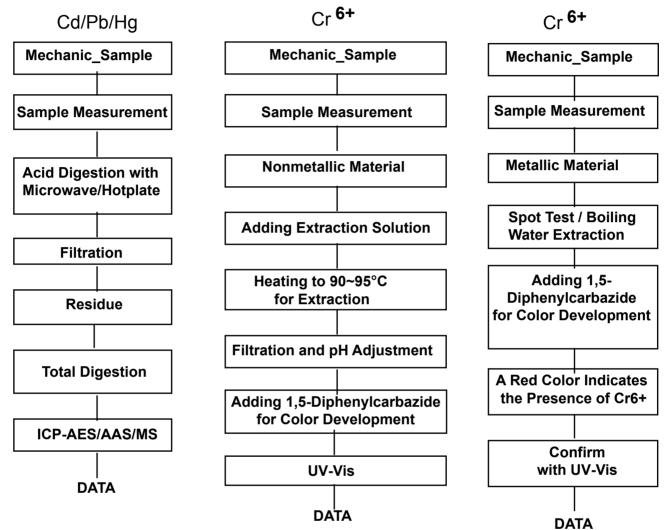
Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm2 sample surface area.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sas.com/ems-and-Conditions.aspx">http://www.sas.com/ems-and-Conditions.aspx</a> and, for electonic format documents, subject to its memory and Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sas.com/ems-and-Conditions.aspx">http://www.sas.com/ems-and-Conditions.aspx</a> and, for electonic format documents, subject to its memory and conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sas.com/ems-and-Conditions.aspx">http://www.sas.com/ems-and-Conditions.aspx</a> and, for electonic format documents, subject to its intervention only and within the limits of Client's instructions, if within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exorer target apriles to a transaction into 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, orgeny or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the law?

322, The O valley, 555-9, Hogye-dong, Dongan-gu, Anyang-si, Gyeonggi-do, Korea 431-080 t +82 (0)31 4608 000 f +82 (0)31 4608 059 <u>http://www.sgslab.co.kr ,www.kr.sgs.com/greenlab</u>



# Testing Flow Chart for RoHS:Cd/Pb/Hg/Cr<sup>6+</sup> Testing



The samples were dissolved totally by pre-conditioning method according to above flow chart for Cd,Pb,Hg. Section Chief : Gilsae Yi

\*\*\* End \*\*\*

NOTE: (1) N.D. = Not detected.(<MDL)

- (2) mg/kg = ppm
- (3) MDL = Method Detection Limit
- (4) = No regulation
- (5) Negative = Undetectable / Positive = Detectable
- (6) \*\* = Qualitative analysis (No Unit)
- (7) \* = Boiling-water-extraction:
  - Negative = Absence of CrVI coating

Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm2 sample surface area.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/emTs-and-Conditions.aspx">http://www.sgs.com/emTs-and-Conditions.aspx</a>, and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/emTs-edocument.htm">http://www.sgs.com/emTs-edocument.htm</a>, Attention is drawn to the limitation of liability, indemnification and jurisdiction is used within the limits of the document is advised that information contained hereon reflexes 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 aprets base at anaccont obligations under the transaction document. This document is advised that information contained hereon reflexes 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's instructions, if the limits of table to the subject to the

322, The O valley, 555-9, Hogye-dong, Dongan-gu, Anyang-si, Gyeonggi-do, Korea 431-080

t +82 (0)31 4608 000 f +82 (0)31 4608 059 http://www.sgslab.co.kr ,www.kr.sgs.com/greenlab