

## TEST REPORT

Report No. : MAN:TR:9530009996

DATE : 13/06/2018



**DEE FIVE SHRINK INSULATIONS PRIVATE LIMITED**  
PLOT NO. - 165, SECTOR - 17, HSIIDC, BAHADURGARH  
Jhajjar-124507  
IN  
**CONTACT PERSON : MR. NEERAJ DHINGRA**

**THE FOLLOWING SAMPLE(S) WAS/WERE SUBMITTED AND IDENTIFIED BY/ON BEHALF OF THE CUSTOMER AS :**

|                           |                    |   |
|---------------------------|--------------------|---|
| <b>SAMPLE DESCRIPTION</b> | HEAT SHRINK SLEEVE |   |
| <b>COUNTRY OF ORIGIN</b>  | INDIA              |   |
| <b>SAMPLE RECD ON</b>     | 04/06/2018         | <b>TESTING PERIOD :</b> 05/06/2018 - 12/06/2018 |
| <b>TEST(S) REQUESTED</b>  | ROHS TEST          |   |

**Conclusion :** Based on the performed tests on submitted sample(s), the results of Cadmium, Lead, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU (Pass for testing on submitted sample)

Per Pro SGS India Pvt Ltd.

**Authorized Signatory**

**Kapil Patil**

**(Asst. Manager- Chemical)**

**Email your Test Report Related Enquiries at [Feedback.trp@sgs.com](mailto:Feedback.trp@sgs.com)**

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**Test Part Description:**

| Product No. | Sample No. | Material Description | Remarks |
|-------------|------------|----------------------|---------|
| -           | 1          | HEAT SHRINK SLEEVE   | -       |

Remarks:

- (1) 1mg/kg=0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (<MDL)
- (4) - = not regulated

**RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU**

Test Method:

- (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
- (2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
- (3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
- (4) With reference to IEC 62321-7-2:2017, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis and/or with reference to IEC 62321-5:2013, determination of Chromium by ICP-OES.
- (5) With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.

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**Test result:**

| Test Item(s):              | Unit  | Results          | MDL | Limit |
|----------------------------|-------|------------------|-----|-------|
|                            |       | <b>Sample -1</b> |     |       |
| Cadmium(Cd)                | mg/kg | n.d.             | 5   | 100   |
| Lead (Pb)                  | mg/kg | n.d.             | 5   | 1000  |
| Mercury (Hg)               | mg/kg | n.d.             | 5   | 1000  |
| Hexavalent Chromium (CrVI) | mg/kg | n.d.             | 8   | 1000  |
| <b>Sum of PBBs</b>         | mg/kg | <b>n.d.</b>      | -   | 1000  |
| Monobromobiphenyl          | mg/kg | n.d.             | 50  | -     |
| Dibromobiphenyl            | mg/kg | n.d.             | 50  | -     |
| Tribromobiphenyl           | mg/kg | n.d.             | 50  | -     |
| Tetrabromobiphenyl         | mg/kg | n.d.             | 50  | -     |
| Hexabromobiphenyl          | mg/kg | n.d.             | 50  | -     |
| Pentabromobiphenyl         | mg/kg | n.d.             | 50  | -     |
| Heptabromobiphenyl         | mg/kg | n.d.             | 50  | -     |
| Octabromobiphenyl          | mg/kg | n.d.             | 50  | -     |
| Nonabromobiphenyl          | mg/kg | n.d.             | 50  | -     |
| Decabromobiphenyl          | mg/kg | n.d.             | 50  | -     |
| <b>Sum of PBDEs</b>        | mg/kg | <b>n.d.</b>      | -   | 1000  |
| Monobromodiphenyl ether    | mg/kg | n.d.             | 50  | -     |
| Dibromodiphenyl ether      | mg/kg | n.d.             | 50  | -     |
| Tribromodiphenyl ether     | mg/kg | n.d.             | 50  | -     |
| Tetrabromodiphenyl ether   | mg/kg | n.d.             | 50  | -     |
| Pentabromodiphenyl ether   | mg/kg | n.d.             | 50  | -     |
| Hexabromodiphenyl ether    | mg/kg | n.d.             | 50  | -     |
| Heptabromodiphenyl ether   | mg/kg | n.d.             | 50  | -     |
| Octabromodiphenyl ether    | mg/kg | n.d.             | 50  | -     |
| Nonabromodiphenyl ether    | mg/kg | n.d.             | 50  | -     |
| Decabromodiphenyl ether    | mg/kg | n.d.             | 50  | -     |

**Notes:**

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863. IEC 62321 series is equivalent to EN 62321 series

[http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)

- (2) Test has been performed on composite parts as per client's request

- (3) The result of Hexavalent Chromium (Cr(VI)) is "ND" as the result of Chromium (Cr) is "ND", and confirmation test of Hexavalent Chromium (Cr(VI)) is not required.

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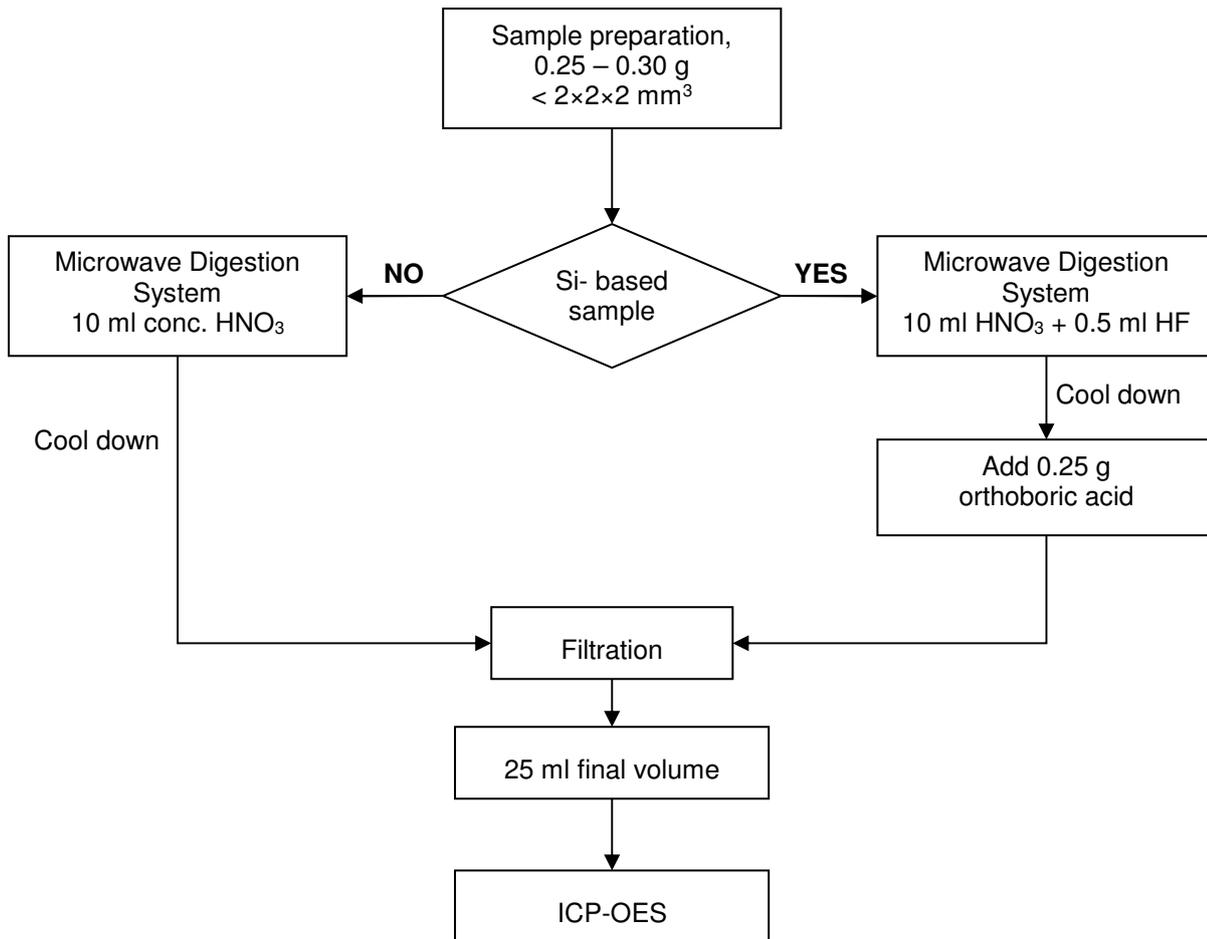
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(4) If the Chromium (Cr) content is greater than the MDL of Hexavalent Chromium (Cr(VI)), confirmation test of Hexavalent Chromium (Cr(VI)) is required.

### Process Flow for analysis of metal contents in plastics, metals and electronic components sample

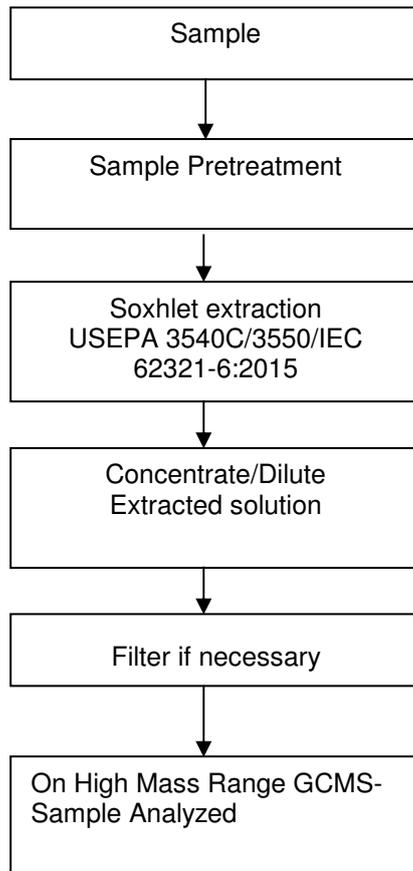


Analyzed By : Deepali Binawade

Checked By : Arjun Jagtap



**Process Flow for analysis of Flame Retardants in plastics, metals and electronic components sample**

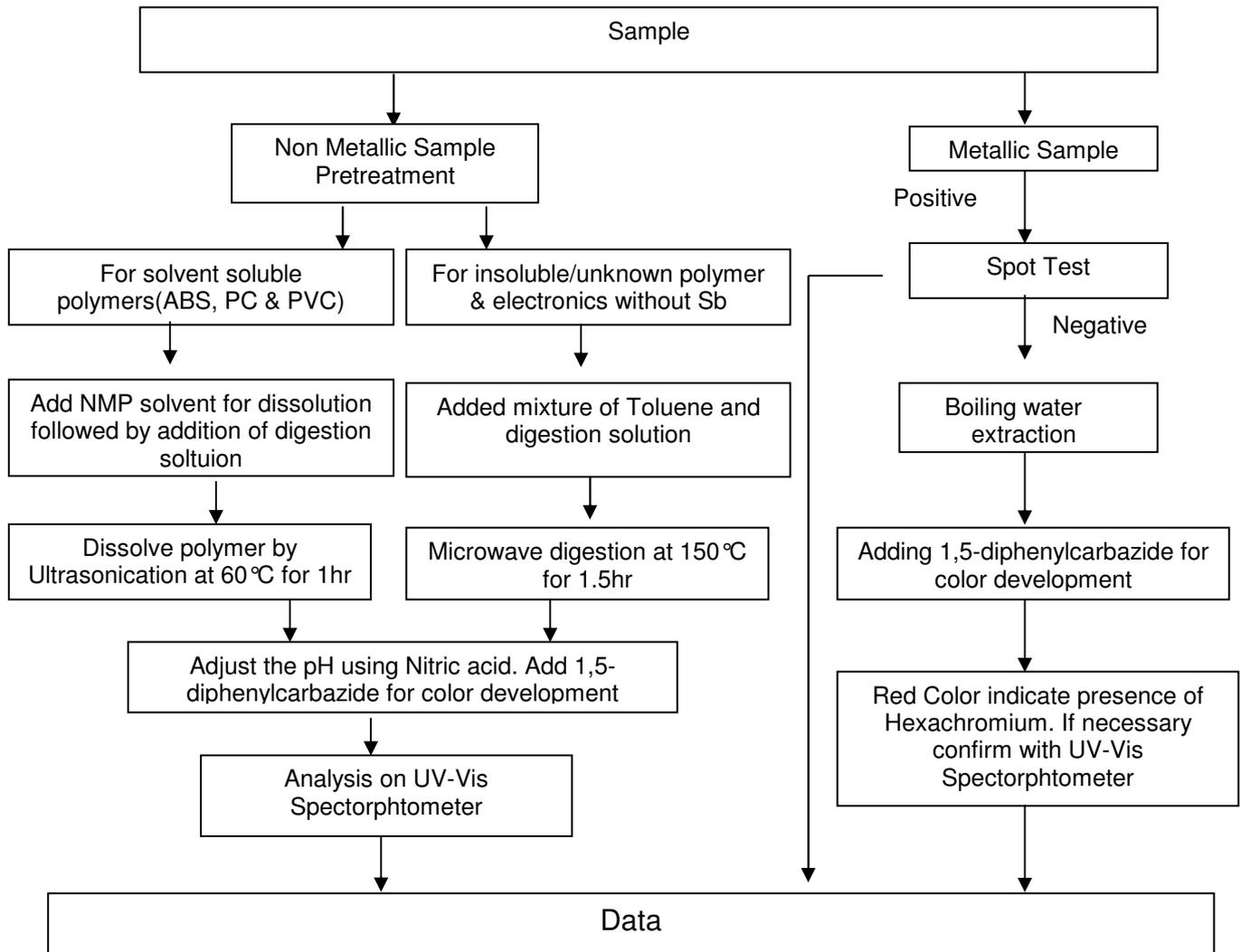


**Analyzed By : Deepali Binawade**

**Checked By : Arjun Jagtap**



**Process Flow for analysis of Hexavalent chromium contents in plastics, metals and electronic components sample**



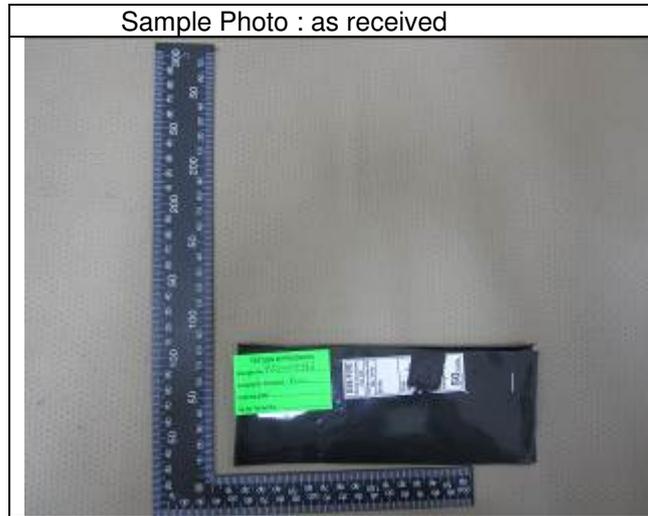
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**Note :** Test performed as per the conditions given by the client.  
Above test has been subcontracted to SGS Approved Lab

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