

**Test Report
(SVHC)**

No.: SHAEC23016030103

Date: Oct 12, 2023

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Remark :

1. The chemical analysis of specified SVHC is performed by means of currently available analytical techniques against the following SVHC related documents published by ECHA:
<http://echa.europa.eu/web/guest/candidate-list-table>
 These lists are under evaluation by ECHA and may subject to change in the future.

2. REACH obligation:

- 2.1 Concerning article(s):

- Communication:

- Article 33 of Regulation (EC) No 1907/2006 requires supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0.1% weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance in the Candidate List.

- Notification:

- In accordance with Regulation (EC) No 1907/2006, any EU producer or importer of articles shall notify ECHA, in accordance with paragraph 4 of Article 7, if a substance meets the criteria in Article 57 and is identified in accordance with Article 59(1) of the Regulation, if (a) the substance in the Candidate List is present in those articles in quantities totaling over one tonne per producer or importer per year; and (b) the substance in the Candidate List is present in those articles above a concentration of 0.1% weight by weight (w/w).

Companies supplying articles containing substances of very high concern (SVHCs) on the Candidate List in a concentration above 0.1% weight by weight (w/w) on the EU market must comply with the Waste Framework Directive 2008/98/EC requirement and submit SCIP notifications on these articles to ECHA, as from 5 January 2021.

- 2.2 Concerning material(s):

- Test results in this report are based on the tested sample. This report refers to testing result of tested sample submitted as homogenous material(s). In case such material is being used to compose an article, the results indicated in this report may not represent SVHC concentration in such article. If this report refers to testing result of composite material group by equal weight proportion, the material in each composite test group may come from more than one article.

If the sample is a substance or mixture, and it directly exports to EU, client has the obligation to comply with the supply chain communication obligation under Article 31 of Regulation (EC) No. 1907/2006 and the conditions of Authorization of substance of very high concern included in the Annex XIV of the Regulation (EC) No. 1907/2006.

- 2.3 Concerning substance and preparation:

- If a SVHC is found over 0.1% (w/w) and/or the specific concentration limit which is set in Regulation (EC) No 1272/2008 and its amendments, client is suggested to prepare a Safety Data Sheet (SDS) against the SVHC to comply with the supply chain communication obligation under Regulation (EC) No 1907/2006, in which:

- a substance that is classified as hazardous under the CLP Regulation (EC) No 1272/2008.
 - a mixture that is classified as hazardous under the CLP Regulation (EC) No 1272/2008, when it contains a substance with concentration equal to, or greater than the classification limit as set in Regulation (EC) No. 1272/2008; or
 - a mixture is not classified as hazardous under the CLP Regulation (EC) No 1272/2008, but contains either:



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- (a) a substance posing human health or environmental hazards in an individual concentration of 1 % by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures) or 0.2 % by volume for gaseous mixtures; or
- (b) a substance that is PBT, or vPvB in an individual concentration of 0.1 % by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures); or
- (c) a substance on the SVHC candidate list (for reasons other than those listed above), in an individual concentration of 0.1 % by weight for non-gaseous mixtures; or
- (d) a substance for which there are Europe-wide workplace exposure limits

3. If a SVHC is found over the reporting limit, client is suggested to identify the composite component which contains the SVHC and the exact concentration of the SVHC by requesting further quantitative analysis from the laboratory.

Test Sample:

Testing Group:

| Test Result ID | Description | Test Part ID | SGS Sample ID |
|----------------|------------------------|--------------|-------------------------|
| 001 | Colorful silicon wafer | A1 | SHA23-0160301-0001.C001 |

Test Method:

With reference to SGS In-House method, analysis was performed by ICP-OES, UV-VIS, GC-MS, HPLC-DAD/MS and Colorimetric Method.



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Test Results: (Substances in the Candidate List of SVHC)

| Batch | Substance Name | CAS No. | 001 Concentration (%) | RL (%) |
|-------|-----------------------------------|---------|--------------------------|--------|
| - | All tested SVHC in Candidate list | - | ND | - |

Test Results: (Potential SVHC)

| Batch | Substance Name | CAS No. | 001 Concentration (%) | RL (%) |
|-------|---------------------------|---------|--------------------------|--------|
| / | All tested Potential SVHC | - | ND | - |

Notes:

- (1) The table above only shows detected SVHC, and SVHC that below RL are not reported. Please refer to Appendix for the full list of tested SVHC.
- (2) RL = Reporting Limit (Test data will be shown if it > RL. RL is not regulatory limit.)
ND = Not detected (lower than RL), ND is denoted on the SVHC substance.



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Appendix

Full list of tested SVHC:

| Batch | No. | Substance Name | CAS No. | RL (%) |
|-------|-----|----------------------------------------------------------------------------------------------------|----------------------------------------|--------|
| I | 1 | 4,4'-Diaminodiphenylmethane(MDA) | 101-77-9 | 0.050 |
| I | 2 | 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene) | 81-15-2 | 0.050 |
| I | 3 | Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) | 85535-84-8 | 0.050 |
| I | 4 | Anthracene | 120-12-7 | 0.050 |
| I | 5 | Benzyl butyl phthalate (BBP) | 85-68-7 | 0.050 |
| I | 6 | Bis(2-ethylhexyl)phthalate (DEHP) | 117-81-7 | 0.050 |
| I | 7 | Bis(tributyltin)oxide (TBTO) | 56-35-9 | 0.050 |
| I | 8 | Cobalt dichloride* | 7646-79-9 | 0.005 |
| I | 9 | Diarsenic pentaoxide* | 1303-28-2 | 0.005 |
| I | 10 | Diarsenic trioxide* | 1327-53-3 | 0.005 |
| I | 11 | Dibutyl phthalate (DBP) | 84-74-2 | 0.050 |
| I | 12 | Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (-HBCDD, -HBCDD, -HBCDD) | - | 0.050 |
| I | 13 | Lead hydrogen arsenate* | 7784-40-9 | 0.005 |
| I | 14 | Sodium dichromate* | 10588-01-9 /7789-12-0 | 0.005 |
| I | 15 | Triethyl arsenate* | 15606-95-8 | 0.005 |
| II | 16 | 2,4-Dinitrotoluene | 121-14-2 | 0.050 |
| II | 17 | Acrylamide | 79-06-1 | 0.050 |
| II | 18 | Anthracene oil** | 90640-80-5 | 0.050 |
| II | 19 | Anthracene oil, anthracene paste** | 90640-81-6 | 0.050 |
| II | 20 | Anthracene oil, anthracene paste, anthracene fraction** | 91995-15-2 | 0.050 |
| II | 21 | Anthracene oil, anthracene paste, distn. Lights** | 91995-17-4 | 0.050 |
| II | 22 | Anthracene oil, anthracene-low** | 90640-82-7 | 0.050 |
| II | 23 | Diisobutyl phthalate | 84-69-5 | 0.050 |
| II | 24 | Lead chromate molybdate sulphate red (C.I. Pigment Red 104)* | 12656-85-8 | 0.005 |
| II | 25 | Lead chromate* | 7758-97-6 | 0.005 |
| II | 26 | Lead sulphochromate yellow (C.I. Pigment Yellow 34)* | 1344-37-2 | 0.005 |
| II | 27 | Pitch, coal tar, high temp. ** | 65996-93-2 | 0.050 |
| II | 28 | Tris(2-chloroethyl)phosphate | 115-96-8 | 0.050 |
| III | 29 | Ammonium dichromate* | 7789-09-5 | 0.005 |
| III | 30 | Boric acid* | - | 0.005 |
| III | 31 | Disodium tetraborate, anhydrous* | 12179-04-3 /1303-96-4 /1330-43-4 | 0.005 |
| III | 32 | Potassium chromate* | 7789-00-6 | 0.005 |
| III | 33 | Potassium dichromate* | 7778-50-9 | 0.005 |
| III | 34 | Sodium chromate* | 7775-11-3 | 0.005 |
| III | 35 | Tetraboron disodium heptaoxide, hydrate* | 12267-73-1 | 0.005 |



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| Batch | No. | Substance Name | CAS No. | RL (%) |
|-------|-----|--------------------------------------------------------------------------------------|----------|--------|
| III | 36 | Trichloroethylene | 79-01-6 | 0.050 |
| IV | 37 | 2-Ethoxyethanol | 110-80-5 | 0.050 |
| IV | 38 | 2-Methoxyethanol | 109-86-4 | 0.050 |
| IV | 39 | Chromic acid, Oligomers of chromic acid and de4B7 647.02 Tm0 g0 GT/F1 9.96 Tf1 .C | | |



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| Batch | No. | Substance Name | CAS No. | RL (%) |
|-------|-----|----------------------------------------------------------------------------------------------------------------------------|-------------|--------|
| VII | 73 | [4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) § | 548-62-9 | 0.050 |
| VII | 74 | 1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme) | 112-49-2 | 0.050 |
| VII | 75 | 1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME) | 110-71-4 | 0.050 |
| VII | 76 | 4,4'-bis(dimethylamino) benzophenone (Michler's Ketone) | 90-94-8 | 0.050 |
| VII | 77 | 4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol§ | 561-41-1 | 0.050 |
| VII | 78 | Diboron trioxide* | 1303-86-2 | 0.005 |
| VII | 79 | Formamide | 75-12-7 | 0.050 |
| VII | 80 | Lead(II) bis(methanesulfonate)* | 17570-76-2 | 0.005 |
| VII | 81 | N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base) | 101-61-1 | 0.050 |
| VII | 82 | TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione) | 2451-62-9 | 0.050 |
| VII | 83 | , -Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) § | 6786-83-0 | 0.050 |
| VII | 84 | -TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione) | 59653-74-6 | 0.050 |
| VIII | 85 | [Phthalato(2-)]dioxotrilead* | 69011-06-9 | 0.005 |
| VIII | 86 | 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear | 84777-06-0 | 0.050 |
| VIII | 87 | 1,2-Diethoxyethane | 629-14-1 | 0.050 |
| VIII | 88 | 1-Bromopropane | 106-94-5 | 0.050 |
| VIII | 89 | 3-Ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine | 143860-04-2 | 0.050 |
| VIII | 90 | 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated | - | 0.050 |
| VIII | 91 | 4,4'-Methylenedi-o-toluidine | 838-88-0 | |



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| Batch | No. | Substance Name | CAS No. | RL (%) |
|-------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------|
| VIII | 102 | Dibutyltin dichloride (DBTC) | 683-18-1 | 0.050 |
| VIII | 103 | Diethyl sulphate | 64-67-5 | 0.050 |
| VIII | 104 | Diisopentylphthalate | 605-50-5 | 0.050 |
| VIII | 105 | Dimethyl sulphate | 77-78-1 | 0.050 |
| VIII | 106 | Dinoseb | 88-85-7 | 0.050 |
| VIII | 107 | Dioxobis(stearato)trilead* | 12578-12-0 | 0.005 |
| VIII | 108 | Fatty acids, C16-18, lead salts* | 91031-62-8 | 0.005 |
| VIII | 109 | Furan | 110-00-9 | 0.050 |
| VIII | 110 | Henicosafuoroundecanoic acid | 2058-94-8 | 0.050 |
| VIII | 111 | Heptacosafuorotetradecanoic acid | 376-06-7 | 0.050 |
| VIII | 112 | Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride | - | 0.050 |
| VIII | 113 | Lead bis(tetrafluoroborate)* | 13814-96-5 | 0.005 |
| VIII | 114 | Lead cyanamidate* | 20837-86-9 | 0.005 |
| VIII | 115 | Lead dinitrate* | 10099-74-8 | 0.005 |
| VIII | 116 | Lead monoxide* | 1317-36-8 | 0.005 |
| VIII | 117 | Lead oxide sulfate* | 12036-76-9 | 0.005 |
| VIII | 118 | Lead tetroxide (orange lead)* | 1314-41-6 | 0.005 |
| VIII | 119 | Lead titanium trioxide* | | |



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|-------|-----|------------------------------------------------------------------------------------------------------------|-----------|--------|
| IX | 144 | Pentadecafluorooctanoic acid (PFOA) | 335-67-1 | 0.050 |
| X | 145 | Cadmium sulphide* | 1306-23-6 | 0.005 |
| X | 146 | Dihexyl phthalate | 84-75-3 | 0.050 |
| X | 147 | Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28) | 573-58-0 | 0.050 |
| X | 148 | Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6- | | |



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| XIV | 167 | Nitrobenzene | 98-95-3 | 0.050 |
| XIV | 168 | Perfluorononan-1-oic-acid and its sodium and ammonium salts | - | 0.050 |
| XV | 169 | Benzo[def]chrysene (Benzo[a]pyrene) | 50-32-8 | 0.050 |
| XVI | 170 | 4,4'-isopropylidenediphenol (bisphenol A) | 80-05-7 | 0.050 |
| XVI | 171 | 4-Heptylphenol, branched and linear | - | 0.050 |
| XVI | 172 | Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts | - | 0.050 |
| XVI | 173 | p-(1,1-dimethylpropyl)phenol | 80-46-6 | 0.050 |
| XVII | 174 | Perfluorohexane-1-sulphonic acid and its salts | - | 0.050 |
| XVIII | 175 | 1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus" TM) [covering any of its individual anti- and syn-isomers or any combination thereof] | - | 0.050 |
| XVIII | 176 | Benz[a]anthracene | 56-55-3 | 0.050 |
| XVIII | 177 | Cadmium nitrate* | 10325-94-7 | 0.005 |
| XVIII | 178 | Cadmium carbonate* | 513-78-0 | 0.005 |
| XVIII | 179 | Cadmium hydroxide* | 21041-95-2 | 0.005 |
| XVIII | 180 | Chrysene | 218-01-9 | 0.050 |
| XVIII | 181 | Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with 0.1% w/w 4-heptylphenol, branched and linear] | - | 0.050 |
| XIX | 182 | Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA) | 552-30-7 | 0.050 |
| XIX | 183 | Benzo[ghi]perylene | 191-24-2 | 0.050 |
| XIX | 184 | Decamethylcyclotetrasiloxane (D5) | 541-02-6 | 0.050 |
| XIX | 185 | Dicyclohexyl phthalate (DCHP) | 84-61-7 | 0.050 |
| XIX | 186 | Disodium octaborate* | 12008-41-2 | 0.005 |
| XIX | 187 | Dodecamethylcyclotetrasiloxane (D6) | 540-97-6 | 0.050 |
| XIX | 188 | Ethylenediamine (EDA) | 107-15-3 | 0.050 |
| XIX | 189 | Lead | 7439-92-1 | 0.005 |
| XIX | 190 | Octamethylcyclotetrasiloxane (D4) | 556-67-2 | 0.050 |
| XIX | 191 | Terphenyl, hydrogenated | 61788-32-7 | 0.050 |
| XX | 192 | 1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor) | 15087-24-8 | 0.050 |
| XX | 193 | 2,2-bis(4'-hydroxyphenyl)-4-methylpentane | 6807-17-6 | 0.050 |
| XX | 194 | Benzo[k]fluoranthene | 207-08-9 | 0.050 |
| XX | 195 | Fluoranthene | 206-44-0 | 0.050 |
| XX | 196 | Phenanthrene | 85-01-8 | 0.050 |
| XX | 197 | Pyrene | 129-00-0 | 0.050 |
| XXI | 198 | 2,3,3,3-tetrafluoro-2-(heptafluoroprop2 reBT/F1 9.96 Tf1 0 0 1 418. | | |



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| Batch | No. | Substance Name | CAS No. | RL (%) |
|-------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|
| XXI | 200 | 4-tert-butylphenol (PTBP) | 98-54-4 | 0.050 |
| XXI | 201 | Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with 0.1% w/w of 4-nonylphenol, branched and linear (4-NP) | - | 0.050 |
| XXII | 202 | 2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone | 119313-12-1 | 0.050 |
| XXII | 203 | 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one | 71868-10-5 | 0.050 |
| XXII | 204 | Diisohexyl phthalate | 71850-09-4 | 0.050 |
| XXII | 205 | Perfluorobutane sulfonic acid (PFBS) and its salts | - | 0.050 |
| XXIII | 206 | 1-vinylimidazole | 1072-63-5 | 0.050 |
| XXIII | 207 | 2-methylimidazole | 693-98-1 | 0.050 |
| XXIII | 208 | Butyl 4-hydroxybenzoate | 94-26-8 | 0.050 |
| XXIII | 209 | Dibutylbis(pentane-2,4-dionato-O,O')tin** | 22673-19-4 | 0.050 |
| XXIV | 210 | bis(2-(2-methoxyethoxy)ethyl) ether | 143-24-8 | 0.050 |
| XXIV | 211 | Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety** | - | 0.050 |
| XXV | 212 | 1,4-Dioxane | 123-91-1 | 0.050 |
| XXV | 213 | 2,2-bis(bromomethyl)propane1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA) | - | 0.050 |
| XXV | 214 | 2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers | - | 0.050 |
| XXV | 215 | 4,4'-(1-methylpropylidene)bisphenol; (bisphenol B) | 77-40-7 | 0.050 |
| XXV | 216 | Glutaral | 111-30-8 | 0.050 |
| XXV | 217 | Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17] | - | 0.050 |
| XXV | 218 | Orthoboric acid, sodium salt* | 13840-56-7 | 0.005 |
| XXV | 219 | Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP) | - | 0.050 |
| XXVI | 220 | (±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC) | - | 0.050 |
| XXVI | 221 | 6,6'-di-tert-butyl-2,2'-methylene-di-p-cresol (DBMC) | 119-47-1 | 0.050 |



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|-------|-----|------------------------------------------------------------------------------------------------------------------------|---------|--------|
| XXVI | 222 | S-(tricyclo[5.2.1.0'2,6]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2- | | |

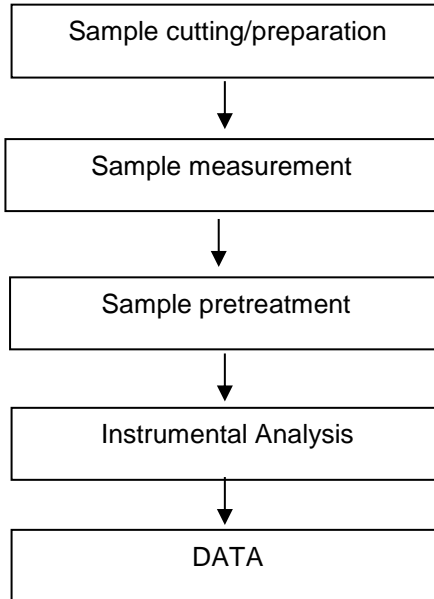


ATTACHMENTS

Testing Flow Chart

Name of the person who made testing: Jo Li/ Winnie Shi

Name of the person in charge of testing: Katie Huang



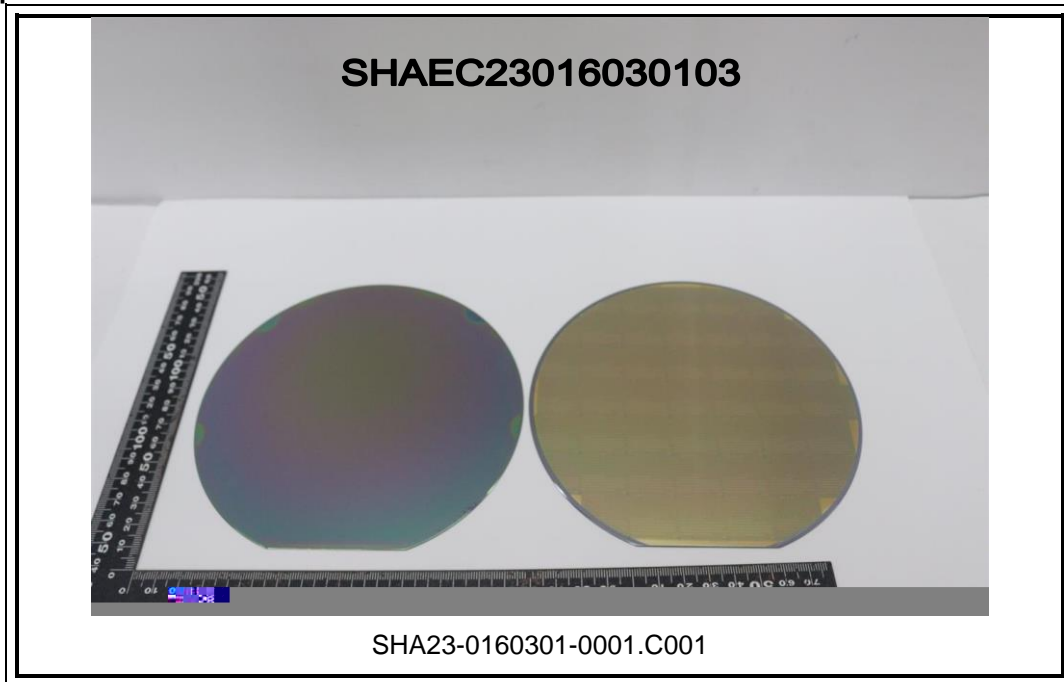
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Sample photos:



SGS authenticate the photo on original report only

*** End of Report ***

