

BEIJING ZHONGXING SHIQIANG CERAMIC BEARING CO., LTD.  
NO. A38#, WEISHANZHANG INDUSTRY DISTRICT, DAXING DISTRICT, BEIJING, CHINA

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

Sample Description : SI3N4(SILICON NITRIDE) PARTS  
SGS Ref No. : CANHG1521870501  
Manufacturer : BEIJING ZHONGXING SHIQIANG CERAMIC BEARING CO., LTD  
Supplier : BEIJING ZHONGXING SHIQIANG CERAMIC BEARING CO., LTD  
Sample Receiving Date : Dec 16, 2015  
Test Performing Date : Dec 16, 2015 to Dec 22, 2015

Test Requested : As requested by client, SVHC screening is performed according to:  
(i) Fifty five (55) inorganic substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) on and before Jun 15, 2015 regarding Regulation (EC) No 1907/2006 concerning the REACH.

Test Results : Please refer to next page(s).

### Summary :

According to the specified scope and analytical techniques, concentrations of tested SVHC are  $\leq 0.1\%$  (w/w) in the submitted sample. PASS

Signed for and on behalf of  
Guangzhou Branch  
SGS-CSTC Ltd.



Johnny Lee  
Approved Signatory



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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) Concerning article(s):

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).

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.

SGS adopts the interpretation of ECHA for SVHC in article unless indicated otherwise. Detail explanation is available at the following link:  
[http://webstage.contribute.sgs.net/corpreach/documents/SGS-CTS\\_SVHC-paper-EN-11.pdf](http://webstage.contribute.sgs.net/corpreach/documents/SGS-CTS_SVHC-paper-EN-11.pdf)

(3) 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.

(4) 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 No 790/2009, 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 dangerous according Dangerous Preparations Directive



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1999/45/EC or classified as hazardous under the CLP Regulation (EC) No 1272/2008, when their concentrations are equal to, or greater than, those defined in the Article 3(3) of 1999/45/EC or the lower values given in Part 3 of Annex VI of Regulation (EC) No. 1272/2008; or

- a mixture is not classified as dangerous under Directive 1999/45/EC, but contains either:
  - (a) a substance posing human health or environmental hazards in an individual concentration of  $\geq 1\%$  by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures) or  $\geq 0.2\%$  by volume for gaseous mixtures; or
  - (b) a substance that is PBT, or vPvB in an individual concentration of  $\geq 0.1\%$  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  $\geq 0.1\%$  by weight for non-gaseous mixtures; or
  - (d) a substance for which there are Europe-wide workplace exposure limits.

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

### Test Sample :

### Sample Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN15-218705.001	SI3N4(Silicon Nitride)patrs

### Test Method :

SGS In-House method-GZTC CHEM-TOP-092-01, Analyzed by ICP-OES, UV-VIS.



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### Test Result: (Substances in the Candidate List of SVHC)

Batch	Substance Name	CAS No.	001 Concentration (%)	RL (%)
-	All tested SVHC in candidate list	-	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. All RL are based on homogenous material.ND = Not detected (lower than RL), ND is denoted on the SVHC substance.
- 3.\*The test result is based on the calculation of selected element(s) / marker(s) and to the worst-case scenario. For detail information, please refer to the SGS REACH website: [www.reach.sgs.com/substance-of-very-high-concern-analysis-information-page.htm](http://www.reach.sgs.com/substance-of-very-high-concern-analysis-information-page.htm).
4. RL = 0.005% is evaluated for element (i.e. cobalt, arsenic, lead, chromium (VI), aluminum, zirconium, boron, strontium, zinc, antimony, titanium, cadmium and barium respectively), except molybdenum RL=0.0005%, boron RL=0.0025% (only for Lead bis(tetrafluoroborate)).
5. Calculated concentration of boric compounds are based on the water extractive boron by ICP-OES.



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### Appendix

#### Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)
I	1	Cobalt dichloride*	7646-79-9	0.005
I	2	Diarsenic pentaoxide*	1303-28-2	0.005
I	3	Diarsenic trioxide*	1327-53-3	0.005
I	4	Lead hydrogen arsenate*	7784-40-9	0.005
I	5	Sodium dichromate*	7789-12-0, 10588-01-9	0.005
II	6	Lead chromate*	7758-97-6	0.005
II	7	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)*	12656-85-8	0.005
II	8	Lead sulfochromate yellow (C.I. Pigment Yellow 34)*	1344-37-2	0.005
III	9	Ammonium dichromate*	7789-09-5	0.005
III	10	Boric acid*	10043-35-3, 11113-50-1	0.005
III	11	Disodium tetraborate, anhydrous*	1303-96-4, 1330-43-4, 12179-04-3	0.005
III	12	Potassium chromate*	7789-00-6	0.005
III	13	Potassium dichromate*	7778-50-9	0.005
III	14	Sodium chromate*	7775-11-3	0.005
III	15	Tetraboron disodium heptaoxide, hydrate*	12267-73-1	0.005
IV	16	Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid*	7738-94-5 - 13530-68-2	0.005
IV	17	Chromium trioxide*	1333-82-0	0.005
IV	18	Cobalt(II) carbonate*	513-79-1	0.005
IV	19	Cobalt(II) dinitrate*	10141-05-6	0.005
IV	20	Cobalt(II) sulphate*	10124-43-3	0.005
V	21	Strontium chromate*	7789-06-2	0.005
VI	22	Aluminosilicate Refractory Ceramic Fibres *	650-017-00-8 (Index no.)	0.005
VI	23	Arsenic acid*	7778-39-4	0.005
VI	24	Calcium arsenate*	7778-44-1	0.005



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Batch	No.	Substance Name	CAS No.	RL (%)
VI	25	Dichromium tris(chromate) *	24613-89-6	0.005
VI	26	Lead diazide, Lead azide*	13424-46-9	0.005
VI	27	Pentazinc chromate octahydroxide*	49663-84-5	0.005
VI	28	Potassium hydroxyoctaoxodizincatedichromate*	11103-86-9	0.005
VI	29	Trilead diarsenate*	3687-31-8	0.005
VI	30	Zirconia Aluminosilicate Refractory Ceramic Fibres*	650-017-00-8 (Index no.)	0.005
VII	31	Diboron trioxide*	1303-86-2	0.005
VIII	32	Lead bis(tetrafluoroborate)*	13814-96-5	0.005
VIII	33	Lead cyanamidate*	20837-86-9	0.005
VIII	34	Lead dinitrate*	10099-74-8	0.005
VIII	35	Lead monoxide*	1317-36-8	0.005
VIII	36	Lead oxide sulfate*	12036-76-9	0.005
VIII	37	Lead tetroxide (orange lead)*	1314-41-6	0.005
VIII	38	Lead titanium trioxide*	12060-00-3	0.005
VIII	39	Lead titanium zirconium oxide*	12626-81-2	0.005
VIII	40	Pentalead tetraoxide sulphate*	12065-90-6	0.005
VIII	41	Pyrochlore, antimony lead yellow*	8012-00-8	0.005
VIII	42	Silicic acid, barium salt, lead-doped*	68784-75-8	0.005
VIII	43	Silicic acid, lead salt*	11120-22-2	0.005
VIII	44	Sulfurous acid, lead salt, dibasic*	62229-08-7	0.005
VIII	45	Tetralead trioxide sulphate*	12202-17-4	0.005
VIII	46	Trilead bis(carbonate)dihydroxide (basic lead carbonate)*	1319-46-6	0.005
VIII	47	Trilead dioxide phosphonate*	12141-20-7	0.005
IX	48	Cadmium oxide*	1306-19-0	0.005
IX	49	Cadmium*	7440-43-9	0.005
X	50	Cadmium sulphide*	1306-23-6	0.005
XI	51	Cadmium chloride*	10108-64-2	0.005
XI	52	Sodium perborate; perboric acid, sodium salt*	-	0.005
XI	53	Sodium peroxometaborate*	7632-04-4	0.005



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Batch	No.	Substance Name	CAS No.	RL (%)
XII	54	Cadmium fluoride*	7790-79-6	0.005
XII	55	Cadmium sulphate*	10124-36-4, 31119-53-6	0.005

Sample photo:



CAN15-218705.001

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