

## REACH TEST REPORT

**Applicant:** SYSTEMMAG

**Address:** 20 rue BOUVIER, 75011 PARIS FRANCE

**Product Description:** NdFeB

**Product Model:** 6\*4\*1.5,N38,Cr3+Ag

**Column name:** N/A

**Test Engineer:** Eric liu

**Test Date:** Oct. 08, 2012

**Issuance Date:** Oct. 14, 2012

**Reviewed By:**   
Bruce wang - Engineer Manager

**Prepared By:** SHANGHAI HENGOU EQUIPMENT TESTING &  
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DISTRICT,SHANGHAI P.R.CHINA



**TEST REQUESTED:**

As specified by client, based on the list published by European chemicals agency (ECHA) on oct, 28, 2008, Jan. 13, 2010, mar. 30, 2010, Jun. 18, 2010 and Dec. 15, 2010 for public consultation regarding regulation (EC) No.1907/2006 concerning the REACH, to determine the 73 substances of Very High Concern (SVHC) content in the submitted sample.

**TEST METHODS**

Acid digestion and analyzed by ICP-OES

Solvent extraction and analyzed by GC-MS; HS-GC-MS; LC

Boiling-water-extraction (Metal), alkali digestion (Non-metal) analyzed by UV-VIS

Oxygen bomb burning analyzed by IC

\*\*\*\*\*FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE

(s)\*\*\*\*\*

**TEST RESULT(S):**

Please refer to next page(s)



## Test Report

NO.	Item	CAS No.	EC No.	MQL	Unit	Results	Reason
1	Anthracene	120-12-7	204-371-1	0.005	%	N.D.	PBT
2	4,4'-Diaminodiphenylmethane (MDA)	101-77-9	202-974-4	0.005	%	N.D.	CMR2
3	Dibutyl phthalate (DBP)	84-74-2	201-557-4	0.005	%	N.D.	CMR2
4	Benzyl butyl phthalate (BBP)	85-68-7	201-622-7	0.005	%	N.D.	CMR2
5	5-tert-butyl-2,4,6-trinitro-m-Xylene (musk xylene)	81-15-2	201-329-4	0.005	%	N.D.	vPvB
6	Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	204-211-0	0.005	%	N.D.	CMR2
7	Alpha- Hexabromocyclododecane Beta- Hexabromocyclododecane Gamma- Hexabromocyclododecane	25637-99-4	247-148-4 and 221-695-9 (134237-50-6) (134237-51-7) (134237-52-8)	0.005	%	N.D.	PBT
8	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	287-476-5	0.01	%	N.D.	PBT
9	Bis(tributyltin)oxide (TBTO)	56-35-9	200-268-0	0.005	%	N.D.	PBT
10	Cobalt dichloride	7646-79-9	231-589-4	0.005	%	N.D.	CMR2
11	Diarsenic pentaoxide	1303-28-2	215-116-9	0.005	%	N.D.	CMR1
12	Diarsenic trioxide	1327-53-3	215-481-4	0.005	%	N.D.	CMR1
13	Sodium dichromate	7789-12-0 10588-329-4	234-190-3	0.005	%	N.D.	CMR2
14	Lead hydrogen arsenate	7784-40-9	232-064-2	0.005	%	N.D.	CMR1
15	Triethyl arsenate	15606-95-8	427-700-2	0.005	%	N.D.	CMR1
16	Anthracene oil	90640-80-5	292-602-7	0.005	%	N.D.	PBT
17	Anthracene oil, anthracene paste, distn. Lights	91995-17-4	295-278-5	0.005	%	N.D.	PBT
18	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	0.005	%	N.D.	PBT
19	Anthracene oil, anthracene-low	90640-82-7	292-604-8	0.005	%	N.D.	PBT
20	Anthracene oil, anthracene paste	90640-81-6	292-603-2	0.005	%	N.D.	PBT
21	Diisobutyl phthalate	84-69-5	201-553-2	0.005	%	N.D.	CMR
22	2,4-Dinitrotoluene	121-14-2	204-450-0	0.005	%	N.D.	CMR



23	Coal tar pitch, high temperature	65996-93-2	266-028-2	0.005	%	N.D.	PBT, CMR	
24	Tris(2-chloroethyl)phosphate	115-96-8	204-118-5	0.005	%	N.D.	CMR	
25	Aluminosilicate, Refractory Ceramic Fibres	-	-	0.005	%	N.D.	CMR	
26	Zirconia Aluminosilicate	-	-	0.005	%	N.D.	CMR	
27	Lead sulfochromate yellow (C. I. Pigment Yellow 34)	1344-37-2	215-693-7	0.005	%	N.D.	CMR	
28	Lead chromate molybdate sulphate red (C. I. Pigment Red 104)	12656-85-8	235-759-9	0.005	%	N.D.	CMR	
29	Lead chromate	7758-97-6	231-846-0	0.005	%	N.D.	CMR	
30	Acrylamide	79-06-1	201-173-7	0.005	%	N.D.	CMR	
31	Trichloroethylene	79-01-6	201-167-4	0.005	%	N.D.	C2	
32	Boric acid	10043-35-3/ 11113-50-1	233-139-2/ 234-343-4	0.005	%	N.D.	R2	
33	Disodium tetraborate, anhydrous	1330-43-4 12179-04-3 1303-96-4	215-540-4	0.005	%	N.D.	R2	
34	Tetraboron disodium heptaoxide, hydrate	12267-73-1	235-541-3	0.005	%	N.D.	R2	
35	Sodium chromate	7775-11-3	231-889-5	0.005	%	N.D.	CMR2	
36	Potassium chromate	7789-00-6	232-140-5	0.005	%	N.D.	CM2	
37	Ammonium dichromate	7789-09-5	232-143-1	0.005	%	N.D.	CMR2	
38	Potassium dichromate	7778-50-9	231-906-6	0.005	%	N.D.	CMR2	
39	Cobalt( II ) sulphate	10124-43-3	233-334-2	0.005	%	N.D.	CMR	
40	Cobalt( II ) dinitrate	10141-05-6	233-402-1	0.005	%	N.D.	CMR	
41	Cobalt( II ) carbonate	513-79-1	208-169-4	0.005	%	N.D.	CMR	
42	Cobalt( II ) diacetate	71-48-7	200-755-8	0.005	%	N.D.	CMR	
43	2-Methoxyethanol	109-86-4	203-713-7	0.005	%	N.D.	CMR	
44	2-Ethoxyethanol	110-80-5	203-804-1	0.005	%	N.D.	CMR	
45	Chromium trioxide	1333-82-0	215-607-8	0.005	%	N.D.	CMR	
46	Acids generated from chromium trioxide and their oligomers	Chromic acid	7738-94-5	231-801-5	0.005	%	N.D.	CMR
		Dichromic acid	13530-68-2	236-881-5	0.005	%	N.D.	CMR
		Oligomers of chromic acid	-	-	0.005	%	N.D.	CMR



		and dichromic acid						
47	Cobalt dichloride		7646-79-9	231-589-4	0.005	%	N.D.	CMR
48	2-ethoxyethyl acetate		111-15-9	203-839-2	0.005	%	N.D.	CMR
49	strontium chromate		7789-6-2	232-142-6	0.005	%	N.D.	CMR
50	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters		68515-42-4	271-084-6	0.005	%	N.D.	CMR
51	Hydrazine		7803-57-8 302-01-2	206-114-9	0.005	%	N.D.	CMR
52	1-methyl-2-pyrrolidone	1-methyl-2-pyrrolidone	872-50-4	0.005	0.005	%	N.D.	CMR
		1,2,3-trichloropropane	96-18-4	0.005	0.005	%	N.D.	CMR
53	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich		71888-89-6	276-158-1	0.005	%	N.D.	CMR
54	Zr-RCF (Zirconia Aluminosilicate Refractory Ceramic Fibres) **		--	--	0.005	%	N.D.	CMR
55	(Aluminosilicate Refractory Ceramic Fibres (RCF)) **		-	--	0.005	%	N.D.	CMR
56	(Dichromium tris(chromate)) **		24613-89-6	246*356-2	0.005	%	N.D.	CMR
57	(Calcium arsenate) **		-		0.005	%	N.D.	CMR
58	(Potassium hydroxyoctaoxodizincatedi-chromate)		11103-86-9	234-329-8	0.005	%	N.D.	CMR
59	(Lead dipicrate) **		6477-64-1	229-335-2	0.005	%	N.D.	CMR
60	(Lead azide Lead diazide)		13424-46-9	236-542-1	0.005	%	N.D.	CMR
61	(Arsenic acid) **		7778-39-4	231-901-9	0.005	%	N.D.	CMR
62	(Trilead diarsenate) **		3687-31-8	222-979-5	0.005	%	N.D.	CMR
63	(Lead styphnate)		15245-44-0	239-290-0	0.005	%	N.D.	CMR
64	(Pentazinc chromate octahydroxide) **		49663-84-5	256-418-0	0.005	%	N.D.	CMR
65	Formaldehyde, oligomeric reaction products with aniline		25214-70-4	500-036-1	0.005	%	N.D.	CMR
66	Bis(2-methoxyethyl) phthalate		117-82-8	204-212-6	0.005	%	N.D.	CMR
67	2-Methoxyaniline; o-Anisidine		90-04-0	201-963-1	0.005	%	N.D.	CMR
68	4-(1,1,3,3-tetramethylbutyl)phenol		140-66-9	205-426-2	0.005	%	N.D.	CMR
69	1,2-dichloroethane		107-06-2	203-458-1	0.005	%	N.D.	CMR
70	Bis(2-methoxyethyl) ether		111-96-6	203-924-4	0.005	%	N.D.	CMR



71	N,N-dimethylacetamide	127-19-5	204-826-4	0.005	%	N.D.	CMR
72	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	202-004-7	0.005	%	N.D.	CMR
73	Phenolphthalein	77-09-8	201-004-7	0.005	%	N.D.	CMR

**Note:**

- mg/kg =ppm=10<sup>-6</sup>
- %=10000ppm
- N.D.=not detected(<MQL)
- MQL=Method Quantitation Limit
- The substance is calculated by using the test results of Tributyl Tin (testing instrument: GC-MS).
- The substance is calculated by using the test results of element (Ex. Arsenic, Lead, Cobalt, Sodium, Boron or Cr (VI) respectively (testing instrument: ICP-OES)). If the sample contains total Cobalt, it needs further test the Chlorine (testing instrument: IC) content to make sure whether it includes Cobalt dichloride or not.

- All refractory ceramic fibres are covered by index number 650-017-00-8 in Annex VI of the Regulation on Classification, Labeling and Packing of Chemical substances and mixtures, the so called CLP Regulation (Regulation (EC) No 1272/2008).
- The SVHC concentration is based on the assessment of the result and the characteristic of material.
- Carcinogenic, Mutagenic or toxic to Reproduction (CMR), meeting the criteria for classification in category 1 or 2 in accordance with Directive 67/548/EEC, Persistent, Bioaccumulative and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB) according to the criteria in Annex XIII of the REACH Regulation, and/or Identified, on a case-by-case basis, from scientific evidence as causing probable serious effects to human health or the environment of an equivalent level of concern as those above (e.g. endocrine disrupters)
- C2-Carcinogenic category 2; M2-Mutagenic category 2; R2-Toxic for reproduction category 2
- The admixture of specimen is tested as a whole (part) which according to the applicant's request, the result of report as an average value because of the whole specimen is regarded as constituting from the homogeneous material. The testing of specimen may have the obvious difference, and the result may exceed the number in this report. The applicant will undertake all differences and risk.

- a) The chemical analysis of 46 SVHC is performed by means of currently available analytical techniques against the list publishes by ECHA on Oct. 28, 2008, Jan. 13, 2010, Mar. 30, 2010, Jun. 18, 2010 and Dec. 15, 2010 and shall refer to [http://echa.europa.eu/chem\\_data/candidate\\_list\\_en.asp](http://echa.europa.eu/chem_data/candidate_list_en.asp) This is an up-to-date version of the list as well as background information on it and related obligations.

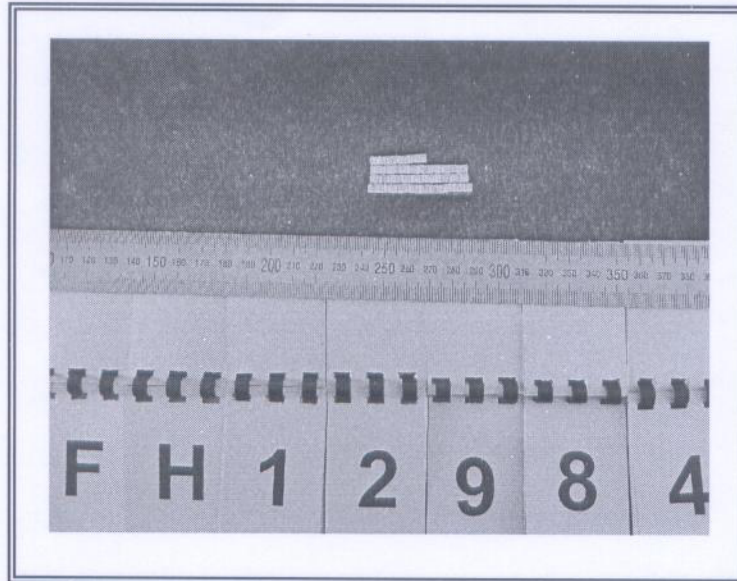


- b) In accordance with regulation (EC) No 1907/2006, any producer or importer of articles shall notify ECHA, in accordance with paragraph 4 of Article 7, if a substance meets the condition in Article 57 and is identified in accordance with Article 59(1) of the regulation, if (a) the substance is present in these articles in quantities totalling over one tonne per producer or importer per year and (b) the substance is present in those articles above & concentration of 0.1% weight by weight (w/w).
- c) . 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.
- d) The Test is issued by the Company subject to its General Conditions of Service printed overleaf or attached, and is performed by Global Power devices, Attention is drawn to the limitations of liability, indemnification and jurisdictional policies defined therein. The results shown in this Test Report refer only to the samples tested unless otherwise stated and such samples are retained for 30 days only. This Test Report shall not be reproduced except in full , without written approval of the Company.

**APPENDIX: TEST PICTURE**

**APPENDIX-PHOTOGRAPHS**

EUT-Picture 1



EUT-Picture 2



\*\*\*\*\*end of test\*\*\*\*\*



## Notice

1. This test report shall be invalidation without the cachet of the testing laboratory.
2. This copied report shall be invalidation without sealed the cachet of the testing laboratory.
3. This report shall be invalidation without tester signature.
4. This altered report shall be invalidation.
5. Client shall put forward demurrer within 15 days after received report. The testing laboratory shall refuse disposal if exceeded the time limit.
6. The test results presented in this report relate only to the object tested.