



# TEST REPORT

NO.: A001C110523021006A1

Date: Jun 01, 2011

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**Applicant:** Dynatron Corporation

**Address:** 41458 Christy Street Fremont, CA 94538 U.S.A

**Report on the submitted sample said to be**

**Sample name:** Cooler

**Model:** V31G V35G T052

**Item/Lot No.:** /

**Material:** /

**Buyer:** /

**Supplier:** /

**Manufacturer:** /

**Sample received date:** May 23, 2011

**Testing period:** From May 23, 2011 to May 27, 2011

## Testing Requested

As specified by client, based on the list published by European chemicals agency (ECHA) for public consultation regarding regulation (EC) No 1907/2006 concerning the REACH, to determine the forty-six(46) and twenty-four(24) Substances of Very High Concern (SVHC) content in the submitted sample.

## Testing method:

Please refer to next page(s)

## Testing instrument:

Please refer to next page(s)

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

Signed for and on behalf of  
Shenzhen AOV Testing Technology Co., Ltd

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**Test Method:**

| Code | Test Item   | CAS No.   | EC No.               | Pretreatment method /Measuring instrument | Unit  | MDL |
|------|---|---|----------------------|---|-------|-----|
| 1    | Bis(tributyltin)oxide**   | 56-35-9   | 200-268-0            | EPA 3052, ICP-OES                         | mg/kg | 5   |
| 2    | Diarsenic pentaoxide**  | 1303-28-2   | 215-116-9            |   | mg/kg | 5   |
| 3    | Diarsenic trioxide**  | 1327-53-3   | 215-481-4            |   | mg/kg | 5   |
| 4    | Triethyl arsenate**   | 15606-95-8  | 427-700-2            |   | mg/kg | 5   |
| 5    | Lead hydrogen arsenate**  | 7784-40-9   | 232-064-2            |   | mg/kg | 5   |
| 6    | Cobalt dichloride**   | 7646-79-9   | 231-589-4            | EPA 3052, ICP-OES                         | mg/kg | 5   |
| 7    | Sodium dichromate **  | 7789-12-0, 10588-01-9   | 234-190-3            | EPA 3060A, UV-VIS                         | mg/kg | 2   |
| 8    | Anthracene  | 120-12-7  | 204-371-1            | ZEK 01.2-08, GC-MS                        | mg/kg | 0.2 |
| 9    | 4,4'-Diaminodiphenylmethane   | 101-77-9  | 202-974-4            | EPA 3540C, GC-MS                          | mg/kg | 5   |
| 10   | Dibutyl phthalate(DBP)  | 84-74-2   | 201-557-4            | EPA 3540C, GC-MS                          | mg/kg | 30  |
| 11   | Benzyl butyl phthalate (BBP)  | 85-68-7   | 201-622-7            | EPA 3540C, GC-MS                          | mg/kg | 30  |
| 12   | 5-tert-butyl-2,4,6-trinitro-m-xylene(musk xylene)                       | 81-15-2   | 201-329-4            | EPA 3540C, GC-MS                          | mg/kg | 5   |
| 13   | Bis(2-ethyl(hexyl)phthalate) (DEHP)                                     | 117-81-7  | 204-211-0            | EPA 3540C, GC-MS                          | mg/kg | 30  |
| 14   | Hexabromocyclododecane(HBCDD) and all major diastereoisomers identified | 25637-99-4 and 3194-55-6(134237-50-6,134237-51-7,134237-52-8) | 247-148-4, 221-695-9 | EPA 3540C, GC-MS                          | mg/kg | 50  |
| 15   | Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)             | 85535-84-8  | 287-476-5            | EPA 3540C, GC-MS                          | mg/kg | 50  |
| 16   | Anthracene oil  | 90640-80-5  | 292-602-7            | ZEK 01.2-08, GC-MS                        | mg/kg | 0.2 |
| 17   | Anthracene oil, anthracene paste, distn. lights                         | 91995-17-4  | 295-278-5            |   | mg/kg | 0.2 |
| 18   | Anthracene oil, anthracene paste, anthracene fraction                   | 91995-15-2  | 295-275-9            |   | mg/kg | 0.2 |
| 19   | Anthracene oil, anthracene-low  | 90640-82-7  | 292-604-8            | ZEK 01.2-08, GC-MS                        | mg/kg | 0.2 |
| 20   | Anthracene oil, anthracene paste  | 90640-81-6  | 292-603-2            |   | mg/kg | 0.2 |
| 21   | Pitch, coal tar, high temp.   | 65996-93-2  | 266-028-2            | Distilment                                | mg/kg | /   |
| 22   | Acrylamide  | 79-06-1   | 201-173-7            | EPA 3550C, GC-MS                          | mg/kg | 50  |
| 23   | Aluminosilicate Refractory Ceramic Fibres **                            | --  | --                   | EPA 3052, ICP-OES                         | mg/kg | 5   |
| 24   | Zirconia Aluminosilicate, Refractory Ceramic Fibres **                  | --  | --                   |   | mg/kg | 5   |
| 25   | 2,4-Dinitrotoluene  | 121-14-2  | 204-450-0            | EPA 3540C, GC-MS                          | mg/kg | 10  |

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| Code | Test Item  | CAS No.  | EC No.                   | Pretreatment method /Measuring instrument | Unit              | MDL   |   |
|------|--|--|--------------------------|---|-------------------|-------|---|
| 26   | Diisobutyl phthalate (DIBP)                                    | 84-69-5  | 201-553-2                | EPA 3540C, GC-MS                          | mg/kg             | 30    |   |
| 27   | Lead chromate**  | 7758-97-6                                      | 231-846-0                | EPA 3052, ICP-OES                         | mg/kg             | 5     |   |
| 28   | Lead chromate molybdate sulphate red (C.I. Pigment Red 104) ** | 12656-85-8                                     | 235-759-9                |   | mg/kg             | 5     |   |
| 29   | Lead sulphochromate yellow (C.I.Pigment Yellow 34) **          | 1344-37-2                                      | 215-693-7                |   | mg/kg             | 5     |   |
| 30   | tris(2-chloroethyl)phosphate                                   | 115-96-8                                       | 204-118-5                | EPA 3540C, GC-MS                          | mg/kg             | 10    |   |
| 31   | Trichloroethylene  | 79-01-6  | 201-167-4                | EPA 3540C, GC-MS                          | mg/kg             | 50    |   |
| 32   | Boric acid**   | 10043-35-3/<br>11113-50-1                      | 233-139-2 /<br>234-343-4 | EPA 3052, ICP-OES                         | mg/kg             | 5     |   |
| 33   | Disodium tetraborate, anhydrous**                              | 1330-43-4/<br>12179-04-3/<br>1303-96-4         | 215-540-4                |   | mg/kg             | 5     |   |
| 34   | Tetraboron disodium heptaoxide, hydrate**                      | 12267-73-1                                     | 235-541-3                |   | mg/kg             | 5     |   |
| 35   | Sodium chromate**  | 7775-11-3                                      | 231-889-5                | EPA 3060A, UV-VIS                         | mg/kg             | 2     |   |
| 36   | Potassium chromate**   | 7789-00-6                                      | 232-140-5                |   | mg/kg             | 2     |   |
| 37   | Ammonium dichromate**  | 7789-09-5                                      | 232-143-1                |   | mg/kg             | 2     |   |
| 38   | Potassium dichromate**   | 7778-50-9                                      | 231-906-6                |   | mg/kg             | 2     |   |
| 39   | Cobalt(II) sulphate**  | 10124-43-3                                     | 233-334-2                | EPA 3052, ICP-OES                         | mg/kg             | 5     |   |
| 40   | Cobalt(II) dinitrate**   | 10141-05-6                                     | 233-402-1                |   | mg/kg             | 5     |   |
| 41   | Cobalt(II) carbonate**   | 513-79-1                                       | 208-169-4                |   | mg/kg             | 5     |   |
| 42   | Cobalt(II) diacetate**   | 71-48-7  | 200-755-8                |   | mg/kg             | 5     |   |
| 43   | 2-Methoxyethanol   | 109-86-4                                       | 203-713-7                | EPA 8260C,                                | mg/kg             | 5     |   |
| 44   | 2-Ethoxyethanol  | 110-80-5                                       | 203-804-1                | HS-GC-MS                                  | mg/kg             | 5     |   |
| 45   | Chromium trioxide**  | 1333-82-0                                      | 215-607-8                | EPA 3060A, UV-VIS                         | mg/kg             | 2     |   |
| 46   | Acids generated from chromium trioxide and their oligomers     | Chromic acid**                                 | 7738-94-5                | 231-801-5                                 | EPA 3060A, UV-VIS | mg/kg | 2 |
|      |  | Dichromic acid**                               | 13530-68-2               | 236-881-5                                 |                   | mg/kg | 2 |
|      |  | Oligomers of chromic acid and dichromic acid** | --                       | --  |                   | mg/kg | 2 |

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## Test Result:

| Code | Test Item  | Unit  | A    | B    | C    | D    |
|------|--|-------|------|------|------|------|
| 1    | Bis(tributyltin)oxide**  | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 2    | Diarsenic pentaoxide**   | mg/kg | N.D. | N.D. | N.D. | N.D. |
| 3    | Diarsenic trioxide**   | mg/kg | N.D. | N.D. | N.D. | N.D. |
| 4    | Triethyl arsenate**  | mg/kg | N.D. | N.D. | N.D. | N.D. |
| 5    | Lead hydrogen arsenate**   | mg/kg | N.D. | N.D. | N.D. | N.D. |
| 6    | Cobalt dichloride**  | mg/kg | N.D. | N.D. | N.D. | N.D. |
| 7    | Sodium dichromate **   | mg/kg | N.D. | N.D. | N.D. | N.D. |
| 8    | Anthracene   | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 9    | 4,4'-Diaminodiphenylmethane  | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 10   | Dibutyl phthalate(DBP)   | mg/kg | N.C. | 569  | N.D. | N.D. |
| 11   | Benzyl butyl phthalate (BBP)   | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 12   | 5-tert-butyl-2,4,6-trinitro-m-xylene(musk xylene)                        | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 13   | Bis(2-ethyl(hexyl)phthalate) (DEHP)                                      | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 14   | Hexabromocyclododecane(HBCDD) and all maj or diastereoisomers identified | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 15   | Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)              | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 16   | Anthracene oil   | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 17   | Anthracene oil, anthracene paste, distn. lights                          | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 18   | Anthracene oil, anthracene paste, anthracene fraction                    | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 19   | Anthracene oil, anthracene-low   | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 20   | Anthracene oil, anthracene paste   | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 21   | Pitch, coal tar, high temp.  | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 22   | Acrylamide   | mg/kg | N.C. | N.D. | N.D. | N.D. |
| 23   | Aluminosilicate Refractory Ceramic Fibres **                             | mg/kg | N.D. | N.D. | N.D. | N.D. |
| 24   | Zirconia Aluminosilicate, Refractory Ceramic Fibres **                   | mg/kg | N.D. | N.D. | N.D. | N.D. |
| 25   | 2,4-Dinitrotoluene   | mg/kg | N.C. | N.D. | N.D. | N.D. |

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| Code | Test Item  | Unit   | A     | B    | C    | D    |      |
|------|--|--|-------|------|------|------|------|
| 26   | Diisobutyl phthalate (DIBP)                                    | mg/kg  | N.C.  | 226  | N.D. | N.D. |      |
| 27   | Lead chromate**  | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 28   | Lead chromate molybdate sulphate red (C.I. Pigment Red 104) ** | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 29   | Lead sulfochromate yellow (C.I.Pigment Yellow 34) **           | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 30   | tris(2-chloroethyl)phosphate                                   | mg/kg  | N.C.  | N.D. | N.D. | N.D. |      |
| 31   | Trichloroethylene  | mg/kg  | N.C.  | N.D. | N.D. | N.D. |      |
| 32   | Boric acid**   | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 33   | Disodium tetraborate, anhydrous**                              | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 34   | Tetraboron disodium heptaoxide, hydrate**                      | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 35   | Sodium chromate**  | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 36   | Potassium chromate**   | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 37   | Ammonium dichromate**  | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 38   | Potassium dichromate**   | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 39   | Cobalt(II) sulphate**  | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 40   | Cobalt(II) dinitrate**   | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 41   | Cobalt(II) carbonate**   | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 42   | Cobalt(II) diacetate**   | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 43   | 2-Methoxyethanol   | mg/kg  | N.C.  | N.D. | N.D. | N.D. |      |
| 44   | 2-Ethoxyethanol  | mg/kg  | N.C.  | N.D. | N.D. | N.D. |      |
| 45   | Chromium trioxide**  | mg/kg  | N.D.  | N.D. | N.D. | N.D. |      |
| 46   | Acids generated from chromium trioxide and their oligomers     | Chromic acid**                                 | mg/kg | N.D. | N.D. | N.D. | N.D. |
|      |  | Dichromic acid**                               | mg/kg | N.D. | N.D. | N.D. | N.D. |
|      |  | Oligomers of chromic acid and dichromic acid** | mg/kg | N.D. | N.D. | N.D. | N.D. |

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## Specimen Description:

| Code | Sample name                   | Description                   |
|------|-------------------------------|-------------------------------|
| A    | Radiator(blue metal)          | Radiator(blue metal)          |
| B    | Wire material                 | Wire material                 |
| C    | Electric material(inside fan) | Electric material(inside fan) |
| D    | Plastic material              | Plastic material              |

## Note:

- mg/kg =ppm= $10^{-6}$
- N.D.= not detected(<MDL)
- MDL=Method Detection Limit
- N.C.= Not Conduct, because the product is metal , it can't have the organic compound, it needn't to be tested.
- \*\*The substance is calculated by using the test results of element (Ex. Tin, Arsenic, Lead, Cobalt or Cr (VI), Molybdenum, Aluminum, Silicon, Zirconium, Boron respectively). If the sample contains total Cobalt, it needs further test the Chlorine content to make sure whether it includes Cobalt dichloride or not.
- The SVHC concentration is based on the assessment of the testing results, the characteristic of the material and the characteristic of the SVHC.
- The results of sample B/C/D refer to the results of sample A/B/C in the test report A001C110523021003.
- The test report A001C110523021006A1 supersedes the test report A001C110523021006 which is withdrawn.
- Photo is included

## Photographs of Samples



Model: V35G



Model: T052

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## Photograph of Sample



Model:V31G

Cooler

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