

# **Certificate of Composition**

European Union Directive 2002/95EC - RoHS

Bergquist Product: Hi-Flow 225F-AC

The Bergquist Company hereby certifies that, as of the date indicated below, to the best of our knowledge and belief, the above-named product is in compliance with European Union Directive 2002/95/EC (Restrictions on Hazardous Substances). In addition, none of our processes would allow these substances to appear in the final product.

Due to our corporate documentation preparation standards, requests for certification beyond the parameters of the RoHS Directive will only be prepared upon presentation of a demonstrated business need. In addition, requests for full composition information will *not* be fulfilled as this could compromise our intellectual property rights. United States import and export regulations also may place licensing and other restrictions on the dissemination of proprietary information.

Attached to this statement is the third-party testing report for this product. If you have further questions, please contact your sales representative.

The Bergquist Company

Sincerely,

Jerry Schmitz Product Manager

The Bergquist Company Telephone: 952.835.2322 Toll free in U.S. 800.347.4572 Thermal Products Group

Dated: August 17, 2006



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Client: The Bergquist Company

**18930 West 78 th Street** Chanhassen MN 55317 U.S.A.

The below sample submitted by client as:

Sample Description : Hi-Flow 225F-AC

Sample No. : 1242558

Sample Condition : As per attached photograph

Date Received : 10-Aug-2006 Date Commenced: 10-Aug-2006

**Test Results** : Please see the attached sheet.

> Signed for and on behalf of SGS (Thailand) Limited

> Pornpana Lirathpong **Hardlines Testing Manager**



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### **TEST RESULTS**

#### With reference to Directive 2002/95/EC

Analysis	Method	Instrument	Unit	DL	Result
Lead (Pb)	EPA 3050B hot plate acid digested	ICP-OES	ppm	2	N.D.
Cadmium (Cd)	BS EN 1122 Method B	ICP-OES	ppm	2	N.D.
Mercury (Hg)	EPA 3052	ICP-OES	ppm	2	N.D.
Hexavalent Chromium (Cr VI)	EPA 3060A, 7196A	UV-VIS Spectrometer	ррт	2	N.D.

Remarks: 1. Results shown are based on the total weight of dry sample.

2. ppm = part per million = mg/kg

3. DL = detection limit

4. N.D. = not detected at the detection limit

5. Result of metal / black rubber clear plastic / grey rubber (Hi-Flow 225F-AC)



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### **TEST RESULTS**

Analysis	Method	Instrument	Unit	DL	Result
Polybrominated biphenyls (PBBs)	-	-	-	-	-
- Bromobiphenyl	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Dibromobiphenyl	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Tribromobiphenyl	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Tetrabromobiphenyl	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Pentabromobiphenyl	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Hexabromobiphenyl	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Heptabromobiphenyl	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Octabromobiphenyl	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Nonabromobiphenyl	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ррт	5	N.D.
- Decabromobiphenyl	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.

Remarks: 1. Results shown are based on the total weight of dry sample.

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5. Result of metal / black rubber (Hi-Flow 225F-AC)



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### **TEST RESULTS**

Analysis	Method	Instrument	Unit	DL	Result
Polybrominated diphenyl ethers (PBDEs)	-	-	-	-	-
- Bromodiphenyl ether	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Dibromodiphenyl ether	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Tribromodiphenyl ether	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Tetrabromodiphenyl ether	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Pentabromodiphenyl ether	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Hexabromodiphenyl ether	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Heptabromodiphenyl ether	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Octabromodiphenyl ether	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Nonabromodiphenyl ether	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.
- Decabromodiphenyl ether	With reference to US EPA 3540C	GC-ECD/GC-MS/ LC-MS	ppm	5	N.D.

Remarks: 1. Results shown are based on the total weight of dry sample.

2.	ppm	= part	per	million	_ = mg/	kg

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<sup>3.</sup> DL = detection limit

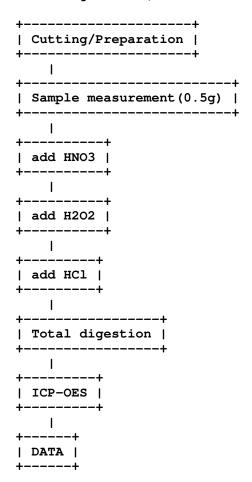
<sup>4.</sup> N.D. = not detected at the detection limit

<sup>5.</sup> Result of metal / black rubber (Hi-Flow 225F-AC)



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Flow chart of digestion (EPA 3050 for Pb)



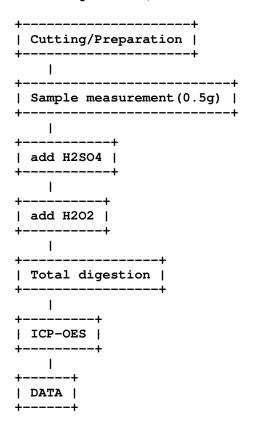
The samples were dissolved totally by pre-conditioning method according to above flow chart.

Operator : Saksit Iadsang Section Chief: Wanwisa Saekow



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Flow chart of digestion (EN 1122 for Cd)



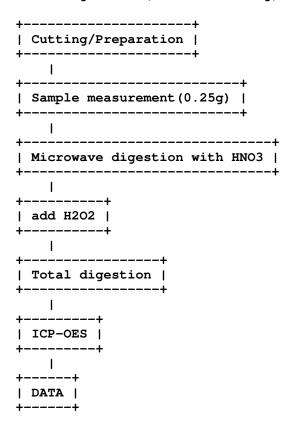
The samples were dissolved totally by pre-conditioning method according to above flow chart.

Operator : Saksit Iadsang Section Chief: Wanwisa Saekow



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Flow chart of digestion (EPA 3052 for Hg)



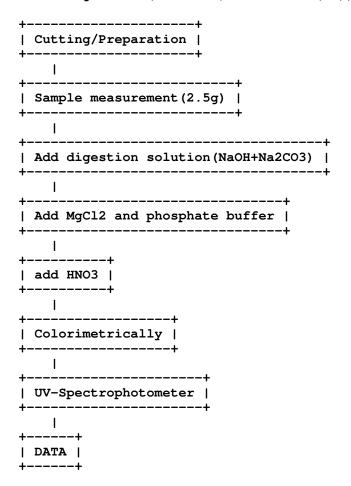
The samples were dissolved totally by pre-conditioning method according to above flow chart.

Operator : Saksit Iadsang Section Chief: Wanwisa Saekow



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Flow chart of digestion (EPA 3060,7196 for Cr(VI))



Operator : Jintanarat Lummoon Section Chief: Wanwisa Saekow



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## **SAMPLE PICTURE**

