



March 13, 2006

Re: RoHS Restricted substances

To whom it may Concern,

This letter is to confirm that Echo RPPC20/2 black polypropylene compound does not intentionally contain any of the following hazardous substances that are restricted by Directive 2002/95/EC (RoHS): hexavalent chromium, ~~lead,~~ cadmium, mercury, PBBs or PBDEs.

We do not specifically run any analysis on our raw materials or end products to measure for these restricted materials.

As a supplier of the material, we cannot make any statement with regard to the final molded components manufactured from this material since this may be process dependent.

If you have any questions or need further assistance, please do not hesitate to contact me.

Regards,

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Client: Ravago Manufacturing Americas  
Job No: 104261

### Calibration Summary

Sample ID: Laboratory Control Standard (1.00 ppm Second Source Standard)

<u>Analyte</u>	<u>Result</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Fluoride	1.01	101	90-110
Chloride	1.01	101	90-110
Bromide	1.00	100	90-110

Standard Curves (n=6)  $r^2 \geq 0.999$

Date Analyzed: 04-16-08

### Quality Control Summary

Sample ID: ECHO RPPC 2012 BK  
Units: Percent w/w

<u>Analyte</u>	<u>Sample Result</u>	<u>Duplicate Result</u>	<u>Average Result</u>	<u>RPD</u>
Fluoride	ND	ND	ND	N/A
Chloride	0.140	0.139	0.140	1
Bromide	0.0012	0.0013	0.0013	8

Sample ID: Blank Spike With Known Compounds

<u>Analyte</u>	<u>Compound</u>	<u>Target %</u>	<u>Result %</u>	<u>% of Target</u>
Fluoride	Na Trifluoroacetate	41.1	38.6	94
Chloride	2,6 Dichloroindophenol, Na	23.8	21.7	91
Bromide	Bromphenol Blue	47.7	46.1	97

QC Guidelines have not been determined for this method and matrix

Client: RAVAGO MANUFACTURING AMERICAS  
 Job Number: 104261

## Quality Control Summary

Sample: ECHO RPPC20/2 BK

Parts Per Million ( $\mu\text{g/g}$ )

Analyte	Sample Result	Duplicate Result	Average Result	Sample RPD	Spike Conc	Spike Result	Spike % Rec
Antimony	11.5	9.44	10.5	19.7	86	97.3	101
Arsenic	0.88	0.75	0.82		86	120	139
Beryllium	ND	ND	ND		86	93.2	108
Bismuth	0.27	0.21	0.24		86	92.3	107
Cadmium	0.53	0.56	0.55		86	85.1	98
Chromium	2.3	3.5	2.9		86	104	118
Cobalt	0.27	0.27	0.27		86	102	118
Lead	5.32	5.57	5.45	4.6	86	97.3	107
Manganese	4.87	4.62	4.75	5.3	86	103	114
Mercury	ND	ND	ND		8.6	8.23	96
Molybdenum	3.75	1.80	2.78		86	99.4	112
Nickel	3.60	4.41	4.01	20.2	86	112	126
Tin	120	121	121	0.8	86	218	113

Date Analyzed: 03-31-08

High duplicate precision may be due to sample nonhomogeneity.

Client: RAVAGO MANUFACTURING AMERICAS  
Job Number: 104261

## Quality Control Summary

Sample: Laboratory Fortified Blank (LFB)

Parts Per Million ( $\mu\text{g/g}$ )

<u>Analyte</u>	<u>Blank Result</u>	<u>Spike Conc</u>	<u>Spike Result</u>	<u>Spike % Rec</u>
Antimony	ND	100	76	76
Arsenic	ND	100	95.4	95
Beryllium	ND	100	133	133
Bismuth	ND	100	103	103
Cadmium	ND	100	104	104
Chromium	ND	100	109	109
Cobalt	ND	100	107	107
Lead	ND	100	102	102
Manganese	0.14	100	102	102
Mercury	ND	10	9.89	99
Molybdenum	0.34	100	107	107
Nickel	ND	100	111	111
Tin	ND	100	99.3	99

Date Analyzed: 03-31-08

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Job No: 104261

Chlorine as Chloride, Bromine as Bromide and Fluorine as Fluoride  
by Parr Bomb Combustion/SOP 4020, Rev 8  
Ion Chromatography-Suppressed Conductivity

Column: Dionex AS9-SC/AG9-SC  
Eluent: 2mM Na<sub>2</sub>CO<sub>3</sub>, 0.75 mM NaHCO<sub>3</sub>  
Flow: 2.00mL/min  
Injection: 300µL  
Detection: Suppressed Conductivity

A portion of the sample was oxidized in a Parr bomb. The combustion products were trapped in a sodium bicarbonate solution and brought to 100 mL with water. A method blank was prepared in the same manner. The sample, duplicate, blank matrix spike and a blank were analyzed for chloride, fluoride and bromide by Ion Chromatography. The method blank had detectable chloride and fluoride. The detection limits are based on the amount of sample oxidized adjusted for the blank.

## Chlorine as Chloride

<u>Sample ID</u>	<u>Micrograms</u>	<u>Percent (w/w) Blank-Corrected</u>	<u>Sample Weight (mg)</u>	<u>Detection Limit Percent (w/w)</u>
ECHO RPPC 2012 BK	475	0.140	326.1	0.003
ECHO RPPC 2012 BK Duplicate	451	0.139	309.6	0.003
Method Blank	20	NA	NA	NA
Date Analyzed:	04-18-08			

## Fluorine as Fluoride

<u>Sample ID</u>	<u>Micrograms</u>	<u>Percent (w/w) Blank-Corrected</u>	<u>Sample Weight (mg)</u>	<u>Detection Limit Percent (w/w)</u>
ECHO RPPC 2012 BK	9	ND	326.1	0.002
ECHO RPPC 2012 BK Duplicate	ND	ND	309.6	0.002
Method Blank	4	NA	NA	NA

## Bromine as Bromide

<u>Sample ID</u>	<u>Micrograms</u>	<u>Percent (w/w) Blank-Corrected</u>	<u>Sample Weight (mg)</u>	<u>Detection Limit Percent (w/w)</u>
ECHO RPPC 2012 BK	4	0.0012	326.1	0.0006
ECHO RPPC 2012 BK Duplicate	4	0.0013	309.6	0.0006
Method Blank	ND	NA	NA	NA

Client: RAVAGO MANUFACTURING AMERICAS  
Job Number: 104261

Selected Metals by SOP 7040, Rev 9  
Quantitative Analysis Report  
Inductively Coupled Plasma - Mass Spectrometry

Parts Per Million ( $\mu\text{g/g}$ )

<u>Element</u>	<u>ECHO RPPC20/2 BK</u>	<u>Detection Limit</u>
Antimony	11.5	0.09
Arsenic	0.88	0.1
Beryllium	ND	0.09
Bismuth	0.27	0.09
Cadmium	0.53	0.09
Chromium	2.3	0.7
Cobalt	0.27	0.09
Lead	5.32	0.09
Manganese	4.9	0.2
Mercury	ND	0.09
Molybdenum	3.8	0.6
Nickel	3.60	0.09
Tin	120	0.5

Date Analyzed: 03-31-08