

TEST REPORT



Your Ref:

Date: 2003-03-24

Our Ref: **57S031015-Part 2a**

Page: Page 1 of 3

DID: 68851304

Fax: 67784301

NOTE: This Report is issued subject to the "Terms and Conditions Governing Technical Services" set out in the "Request for Technical Services" form. The terms and conditions governing the issue of this report are set out overleaf.

Subject

Chemical Analysis for Sample "N4000-6"

Client

Nelco Products Pte Ltd
4 Gul Crescent,
Jurong
Singapore 629520

Attn: Mr Ranjith Menon

Sample Description

One sample labelled as "N4000-6" was received on 13th March 2003.

Date of Analysis

17th March 2003 – 21st March 2003

Method of Test

1. **Elemental Analysis for Cadmium (Cd)**

The sample was analysed according to BS EN 1122:2001, Method B.

2. **Detection of Polybromobiphenyl (PBBs), Polybromodiphenyl Ether (PBDEs), Polychlorinated Biphenyls (PCBs), Polychlorinated Naphthalenes Analysis**

The sample was extracted with organic solvent followed by analysis using Gas Chromatograph with Mass Selective Detector (GC-MSD).

3. **Determination of Extractable Organic Tin Compounds**

The sample was extracted with organic solvent. The organic extract was then analysed by Gas Chromatograph with Mass Selective Detector (GC-MS) and Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES).



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Method of Test (Cont'd)**4. Detection of Asbestos**

The sample was analysed by microscopy, based on the United States National Institute for Occupational Safety and Health (NIOSH) Method, 9002 - Asbestos (bulk) by PLM.

5. Detection of Organic Aryl Amines released from Azo Compounds

The sample was extracted with an appropriate solution. The extract was then reduced by Sodium Dithionite. The released Aryl Amines were analysed by Gas Chromatograph with Mass Selective Detector (GC-MSD).

Results**Table 1: The Elemental Analysis results for Sample "N4000-6"**

Test	Results
Cadmium Content (Cd)	< 5 ppm, w/w

Table 2: The GC-MS Analysis results for Sample "N4000-6"

Test	Results
Polybromo Biphenyls (PBBs)	Not Detected*
Polybromo Diphenyl Ethers (PBDEs)	Not Detected*
Polychlorinated Biphenyls (PCBs)	Not Detected*
Polychlorinated Naphthalenes	Not Detected*

*The method detection limit was 10 ppm.

Table 3: The Extractable Organic Tin Analysis results for Sample "N4000-6"

Test	Results
Extractable Organic Tin, as Tin Content (including Tributyl Tin and Triphenyl Tin)	< 5 ppm, w/w

Table 4: The Asbestos Analysis results for Sample "N4000-6"

Test	Results
Asbestos Analysis	No Asbestos fibre of the Amphibole group was detected

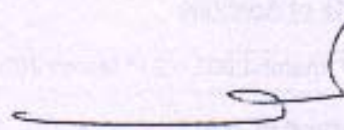
Result (Cont'd)**Table 5: The Analytical results for Organic Amines released from Azo Compounds**

Chemical Names	CAS Number	Results
o-Anisidine	090-04-0	Not Detected*
2-Naphthylamine	091-59-8	Not Detected*
3,3-Dichlorobenzidine	091-94-1	Not Detected*
4-Aminodiphenyl	092-87-1	Not Detected*
Benzidine	092-87-5	Not Detected*
o-Toluidine	095-83-4	Not Detected*
4-Chloro-2-methylaniline	095-69-2	Not Detected*
2,4-Toluenediamine	095-80-7	Not Detected*
o-Aminoazotoluene	097-56-3	Not Detected*
5-Nitro-o-toluidine	099-55-8	Not Detected*
3,3'-Dichloro-4,4'-diaminodiphenylmethane	101-14-4	Not Detected*
4,4'-methylenedianiline	101-77-9	Not Detected*
4,4'-diaminodiphenylether	101-80-4	Not Detected*
p-Chloroaniline	106-47-8	Not Detected*
o-Dianisidine and its salts	119-90-4	Not Detected*
3,3'-Dimethylbenzidine	119-93-7	Not Detected*
2-Methoxy-5-methylaniline	120-71-8	Not Detected*
2,4,5-Trimethylaniline	137-17-7	Not Detected*
4,4'-Diaminodiphenylsulfide	139-65-1	Not Detected*
2,4-Diaminoanisoie	615-05-4	Not Detected*
4,4'-Diamino0-3,3'-dimethyldiphenylmethane	838-88-0	Not Detected*

*The method detection limit was 10 ppm.



LAM MEI LENG KAREN (MS)
TECHNICAL EXECUTIVE



DR LIN JIANHUA
 ASSISTANT VICE PRESIDENT
MICROCONTAMINATION DIAGNOSIS
TESTING GROUP

TEST REPORT



Your Ref:

Date: 2003-03-24

Our Ref: 57S031015-Part 2b

Page: Page 1 of 2

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Client

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4 Gul Crescent,
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Attn: Mr Ranjith Menon

Sample Description

One sample labelled as "N4000-6" was received on 13th March 2003.

Date of Analysis

17th March 2003 – 21st March 2003

Method of Test

1. Elemental Analysis for Lead (Pb)

The sample was digested by inorganic acid followed by analysis using Inductively Coupled Plasma Atomic Emission Spectroscopy.

2. Elemental Analysis for Mercury (Hg)

The sample was digested by inorganic acid followed by analysis using Atomic Absorption Spectroscopy – Cold Vapour.

3. Chromium, Hexavalent Analysis (Cr⁶⁺)

The sample was digested by inorganic acid followed by analysis using Inductively Coupled Plasma Atomic Emission Spectroscopy.

4. Detection of PolyVinyl Chloride (PVC)

The sample was analysed by Fourier Transform Infrared Spectrophotometer coupled with Microscope.



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Method of Test (Cont'd)**5. Detection of Volatile Brominated Organic Compounds**

By Headspace-Gas Chromatography with Mass Selective Detector (HS-GC-MSD).

Results**Table 1: The Elemental Analysis results for Sample "N4000-6"**

Test	Results
Lead Content (Pb)	< 5 ppm, w/w
Mercury Content (Hg)	< 5 ppm, w/w
Chromium, Hexavalent Content (Cr ⁶⁺)	< 5 ppm, w/w


Table 2: The FTIR Analysis results for Sample "N4000-6"

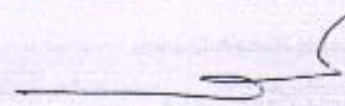
Test	Results
PolyVinyl Chloride (PVC)	Not Detected

Table 3: The Analytical Results for Volatile Brominated Organic Compounds

Test	Results
Volatile Brominated Organic Compounds	Not Detected*

* The method detection limit was 10 ppm.


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Subject

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Client

Nelco Products Pte Ltd
4 Gul Crescent,
Jurong
Singapore 629520

Attn: Mr Ranjith Menon

Sample Description

One sample labelled as "N4000-6" was received on 13th March 2003.

Date of Analysis

17th March 2003 – 21st March 2003

Method of Test

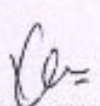
1. Determination of Released Formaldehyde Content

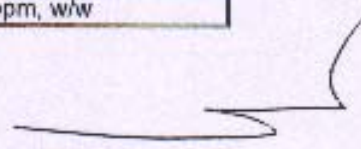
The sample was analysed according to BS EN 12149:1997 Method.

Results

Table 1: The Formaldehyde Released Content results for Sample "N4000-6"

Test	Results
Formaldehyde Released Content	< 0.1 ppm, w/w


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MICROCONTAMINATION DIAGNOSIS
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TEST REPORT



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Our Ref: **57S031015-Part 2d**

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Client

Nelco Products Pte Ltd
4 Gul Crescent,
Jurong
Singapore 629520

Attn: Mr Ranjith Menon

Sample Description

One sample labelled as "N4000-6" was received on 13th March 2003.

Date of Analysis

17th March 2003 – 21st March 2003

Method of Test

1. Detection of Ozone Depleting Substances and Chlorine Organic Solvents

The sample was analysed by Headspace-Gas Chromatography with Mass Selective Detector (HS-GC-MSD).




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Results**Table 1: The Ozone Depleting Substances Analysis results for Sample "N4000-6"**

Chemical Names	CAS Number	Results
Chlorofluorocarbons	-	Not Detected
Hydrochlorofluorocarbons	-	Not Detected
Methyl bromide	074-83-9	Not Detected
1,1,1-Trichloroethane	071-55-6	Not Detected
Carbon tetrachloride	056-23-5	Not Detected

Table 2: The Chlorine Organic Solvent Analysis results for Sample "N4000-6"

Chemical Names	CAS Number	Results
1,1,2-Trichloroethane	079-00-5	Not Detected
1,2-Dichloroethane	107-06-2	Not Detected
1,1-Dichloroethylene	075-35-4	Not Detected
1,2-Dichloroethylene	156-59-2	Not Detected
Methylene chloride	075-09-2	Not Detected
Chloroform	067-66-3	Not Detected
Tetrachloroethylene	127-18-4	Not Detected
Trichloroethylene	201-167-4	Not Detected


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