



# Test Report

No.: ETR24B02831

Date: 22-Nov-2024

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MITSUBISHI GAS CHEMICAL CO., INC. ELECTRONICS MATERIAL DIVISION  
5-2, MARUNOUCHI 2-CHOME, CHIYODA-KU, TOKYO 100-8324, JAPAN

The following sample(s) was/were submitted and identified by the applicant as:


Sample Submitted By : MITSUBISHI GAS CHEMICAL CO., INC. ELECTRONICS MATERIAL DIVISION  
Sample Name : COPPER CLAD LAMINATES & PREPREGS  
Style/Item No. : CCL-HL830NS(WITHOUT COPPER FOIL), CCL-HL830NS(TYPE-HX)  
(WITHOUT COPPER FOIL), CCL-HL830NS(TYPE-EX)(WITHOUT  
COPPER FOIL), CCL-HL830NS(TYPE-LC)(WITHOUT COPPER FOIL),  
CCL-HL830NS(TYPE-LD)(WITHOUT COPPER FOIL), CCL-HL830NS  
(TYPE-HD)(WITHOUT COPPER FOIL), CCL-HL832NS(WITHOUT  
COPPER FOIL), CCL-HL832NS(TYPE-HX)(WITHOUT COPPER FOIL),  
CCL-HL832NS(TYPE-EX)(WITHOUT COPPER FOIL), CCL-HL832NS  
(TYPE-LC)(WITHOUT COPPER FOIL), CCL-HL832NS(TYPE-LD)  
(WITHOUT COPPER FOIL), CCL-HL832NS(TYPE-HD)(WITHOUT  
COPPER FOIL), GHPL-830NS, GHPL-830NS(TYPE-LC), GHPL-830NS  
(TYPE-LD), GHPL-830NS(TYPE-HD), GHPL-832NS, GHPL-832NS  
(TYPE-LC), GHPL-832NS(TYPE-LD), GHPL-832NS(TYPE-HD)

Lot No. : MGC 2024-014

Sample Receiving Date : 18-Nov-2024  
Testing Period : 18-Nov-2024 to 22-Nov-2024

Test Requested : As specified by client, to test Halogen-Fluorine, Chlorine, Bromine, Iodine in the submitted sample.

Test Results : Please refer to following pages.

  
Troy Chang / Department Manager  
Signed for and on behalf of  
SGS TAIWAN LTD.  
Chemical Laboratory - Taipei



PIN CODE: 314ADF89

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## Test Part Description

No.1 : BLACK SHEET

## Test Result(s)

Test Item(s)	Method	Unit	MDL	Result
				No.1
Fluorine (F) (CAS No.: 14762-94-8)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	1090
Chlorine (Cl) (CAS No.: 22537-15-1)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	73.5
Bromine (Br) (CAS No.: 10097-32-2)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	n.d.
Iodine (I) (CAS No.: 14362-44-8)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	n.d.

## Note :

1. mg/kg = ppm ; 0.1wt% = 0.1% = 1000ppm
2. MDL = Method Detection Limit
3. n.d. = Not Detected ( Less than MDL)

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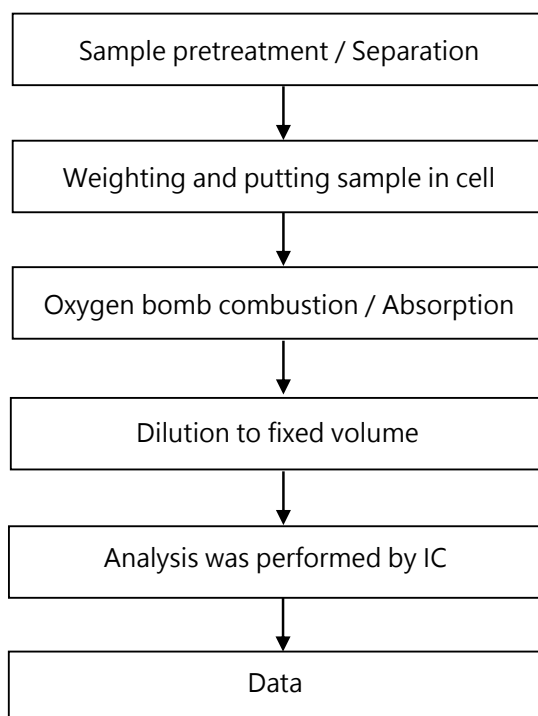
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## Analytical flow chart - Halogen



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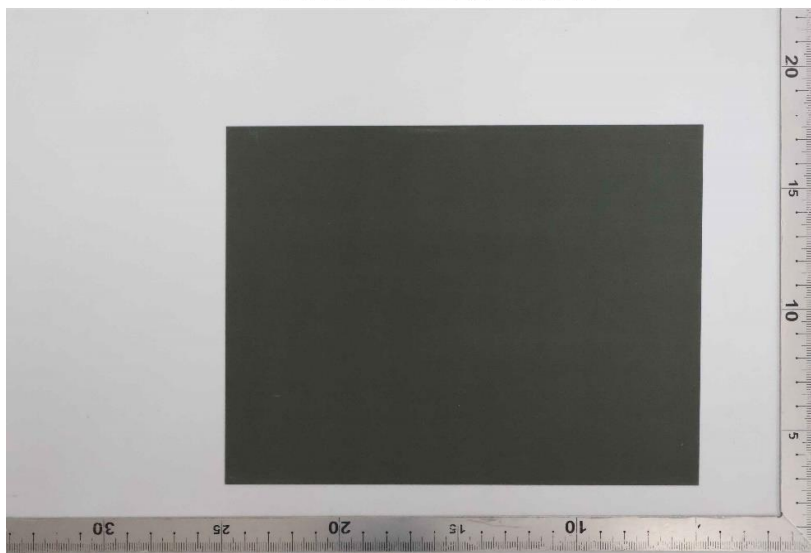
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\* The tested sample / part is marked by an arrow if it's shown on the photo. \*

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\*\* End of Report \*\*

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