



Test Report

No.: ETR23201011

Date: 08-Feb-2023

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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

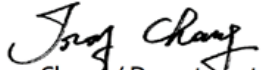
Style/Item No. : CCL-HL830NS(WITHOUT COPPER FOIL),
 CCL-HL830NS(TYPE-HX)(WITHOUT COPPER FOIL),
 CCL-HL830NS(TYPE-EX)(WITHOUT COPPER FOIL),
 CCL-HL830NS(TYPE-LC)(WITHOUT COPPER FOIL),
 CCL-HL830NS(TYPE-LD)(WITHOUT COPPER FOIL),
 CCL-HL830NS(TYPE-HD)(WITHOUT COPPER FOIL),
 CCL-HL832NS(WITHOUT COPPER FOIL),
 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 2023-015

=====
 Sample Receiving Date : 03-Feb-2023
 Testing Period : 03-Feb-2023 to 08-Feb-2023

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: 9D68869E

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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	835
Chlorine (Cl) (CAS No.: 22537-15-1)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	76.2
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.

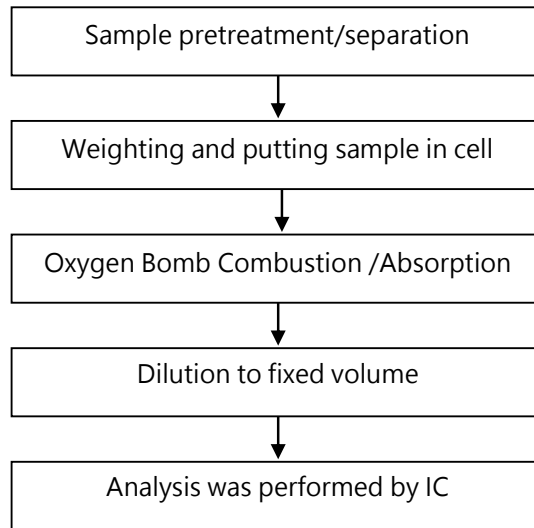
Note :

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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Analytical flow chart of Halogen



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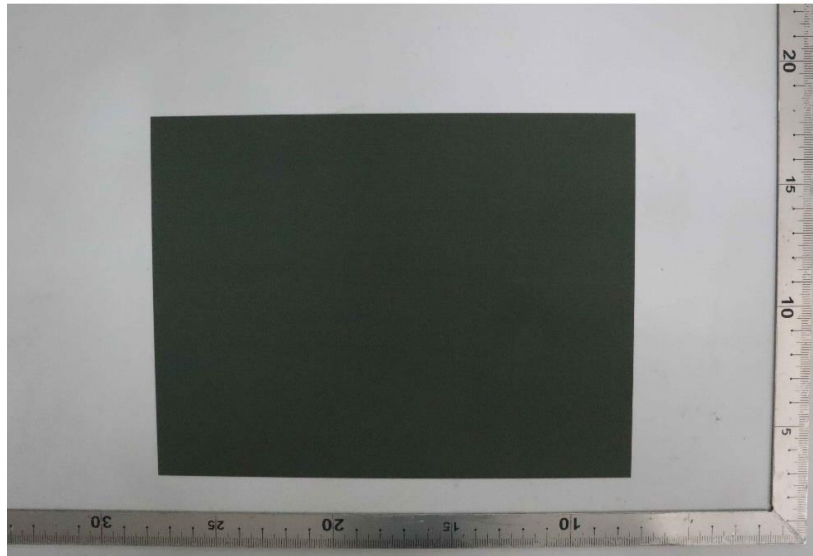
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* The tested sample / part is marked by an arrow if it's shown on the photo. *

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** End of Report **

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