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Date: 2020/04/06

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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/on behalf of the applicant as:

Sample Submitted By

: MITSUBISHI GAS CHEMICAL CO., INC. ELECTRONICS MATERIAL DIVISION

Sample Description

: 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)

: MGC 2020-038 Buyer/Order No.

Sample Receiving Date 2020/03/26

Testing Period 2020/03/26 to 2020/04/06

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

submitted sample(s).

Test Method : Please refer to following pages.

Test Result(s) : Please refer to following pages.

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



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Test Result(s)

PART NAME No.1 : BLACK SHEET

Test Item(s)	Unit	Method	MDL	Result No.1
Halogen				
Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg	With reference to BS EN 14582 (2016). Analysis was performed by IC.	50	n.d.
Halogen-Chlorine (CI) (CAS No.: 22537-15-1)	mg/kg		50	65.0
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg		50	n.d.
Halogen-lodine (I) (CAS No.: 14362-44-8)	mg/kg		50	n.d.

Note:

1. mg/kg = ppm; 0.1wt% = 1000ppm2. MDL = Method Detection Limit

3. n.d. = Not Detected

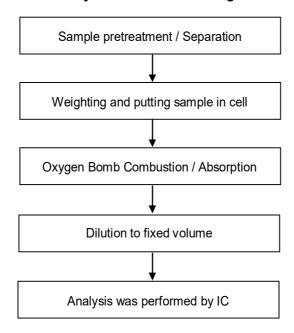


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Analytical flow chart - Halogen



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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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