MITSUBISHI ELECTRIC

TECHNICAL BULLETIN

[Issue No.] GOT-A-0002-P

[Title] Precautions for Transport Recommendations on Lithium Batteries for Japanese Market

[Date of Issue] January 2003 (Ver. P: January 2023)

[Relevant Models] GOT2000 Series, GOT1000 Series

Thank you for your continued support of Mitsubishi Electric Graphic Operation Terminal (GOT).
Regarding the transport recommendations on lithium batteries (hereinafter UN Recommendations), the corresponding part of the IATA Dangerous Goods Regulations has been changed to the 60th Edition.
This technical bulletin summarizes how to transport lithium batteries in compliance with the UN Recommendations by air.
A customer who transports lithium batteries is responsible for the package. Therefore, the UN Recommendations must be always checked.
In the UN Recommendations, lithium batteries are classified into dangerous goods (Class 9) and non-dangerous goods according to the amount of lithium. Packaging methods of the batteries depend on the classification.

Contents

MITSUBISHI ELECTRIC CORPORATION
HEAD OFFICE: TOKYO BLDG., 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
NAGOYA WORKS: 1-14, YADA-MINAMI 5-CHOME, HIGASHI-KU, NAGOYA 461-8670, JAPAN

1. Models subject to the UN Recommendations

The following shows the GOT2000/1000 series products that are subject to the UN Recommendations.
For the transport guidelines, refer to Chapter 3.

Table 1-1 Products subject to the UN Recommendations (Lithium batteries packed by themselves)

Product	Model	Lithium content	Battery weight	Type	Transport classification
Battery	GT11-50BAT	0.15g	7.2g	Lithium metal battery (cell)	Non-dangerous goods
	GT15-BAT	0.57g *2	17g *2		Dangerous goods *1

*1 Batteries or cells with a lithium content of more than 0.3g are classified as dangerous goods (Class 9) according to packing instructions.
*2 From the August 2017 production, the lithium content will be 0.57 g and the battery weight will be 17 g.
For the details, refer to the following.
➞ Changes to the GOT1000 Series Battery GT15-BAT (GOT-A-0118)

Table 1-2 Products subject to the UN Recommendations (Lithium batteries contained in equipment)

Series	Model	Model	Type	Transport classification
GOT2000 *1	GT2715-XTBA, GT2715-XTBD, GT2712-STBA, GT2712-STWA, GT2712-STBD, GT2712-STWD, GT2710-STBA, GT2710-STBD, GT2710-VTBA, GT2710-VTWA, GT2710-VTBD, GT2710-VTWD, GT2708-STBA, GT2708-STBD, GT2708-VTBA, GT2708-VTBD, GT2705-VTBD, GT2512-STBA, GT2512-STBD, GT2512F-STNA, GT2512F-STND, GT2510-VTBA, GT2510-VTBD, GT2510-VTWA, GT2510-VTWD, GT2510F-VTNA, GT2510F-VTND, GT2508-VTBA, GT2508-VTBD, GT2508-VTWA, GT2508-VTWD, GT2508F-VTNA, GT2508F-VTND, GT2505-VTBD, GT2512-WXTBD, GT2512-WXTSD, GT2510-WXTBD, GT2510-WXTSD, GT2507-WTBD, GT2507-WTSD, GT2507T-WTSD, GT2505HS-VTBD, GT2107-WTBD, GT2107-WTSD, GT2105-QTBDS, GT2105-QMBDS, GT2104-RTBD, GT2104-PMBD, GT2104-PMBDS, GT2104-PMBDS2, GT2104-PMBLS	GT11-50BAT (1 pc)	Lithium batteries contained in equipment	Non-dangerous goods
	GT2506HS-VTBD	GT15-BAT (1 pc)		
GOT1000	GT1695M-XTBA, GT1695M-XTBD, GT1685M-STBA, GT1685M-STBD, GT1675M-STBA, GT1675M-STBD, GT1675M-VTBA, GT1675M-VTBD, GT1675-VNBA, GT1675-VNBD, GT1672-VNBA, GT1672-VNBD, GT1665M-STBA, GT1665M-STBD, GT1665M-VTBA, GT1665M-VTBD, GT1662-VNBA, GT1662-VNBD, GT1665HS-VTBD	GT15-BAT (1 pc)		
	GT1655-VTBD, GT1455-QTBD, GT1455-QTBDE, GT1450-QLBD, GT1450-QLBDE, GT1450-QMBD, GT1450-QMBDE, GT1455HS-QTBDE, GT1450HS-QMBDE, GT1155-QTBD, GT1155-QTBDQ, GT1155-QTBDA, GT1155-QSBD, GT1155-QSBDQ, GT1155-QSBDA, GT1150-QLBD, GT1150-QSBDQ, GT1150-QLBDA, GT1155HS-QSBD, GT1150HS-QLBD, GT1055-QSBD, GT1050-QBBD, GT1045-QSBD, GT1040-QBBD, GT1030-LBD, GT1030-LBD2, GT1030-LBDW, GT1030-LBDW2, GT1030-LBL, GT1030-LBLW, GT1030-LWD, GT1030-LWD2, GT1030-LWDW, GT1030-LWDW2, GT1030-LWL, GT1030-LWLW, GT1030-HBD, GT1030-HBD2, GT1030-HBDW, GT1030-HBDW2, GT1030-HWD, GT1030-HWD2, GT1030-HWDW, GT1030-HWDW2, GT1030-HBL, GT1030-HBLW, GT1030-HWL, GT1030-HWLW	GT11-50BAT (1 pc)		

*1 The models of the CC-Link IE Field Network communication unit set are also subject to the UN Recommendations.
For the models of the CC-Link IE Field Network communication unit set, refer to the following.
➞ GOT2000 series catalog (L(NA)08274ENG)

2. Effective dates of the UN Recommendations

Table 2-1 shows the dates when the UN Recommendations are taken effect in each transport.

Table 2-1 Enforcement status of the UN Recommendations

Transport	UN Recommendations	Enforcement status
Air transport (ICAO *1/IATA *2)	Controlled	Enforced
Sea transport (IMDG Code *3)	Controlled	Enforced
Land transport (domestic)	Not controlled	Not determined
Land transport (international)	Depends on regulations of each country.	Depends on regulations of each country. United States: Enforced Europe: Enforced

*1 ICAO: International Civil Aviation Organization
*2 IATA: International Air Transport Association
*3 IMDG Code: International Maritime Dangerous Goods Code specified by IMO (International Maritime Organization)

3. Transport guidelines for the models subject to the UN Recommendations

When transporting the GOT products, note the following points.

3.1 Transport of lithium batteries packed by themselves

(1) GT11-50BAT

Packaging	Classification	Requirements	Reference
The net weight of batteries is 2.5 kg or less in one package.	UN3090 PI968 Section II	・ Capable of withstanding a 1.2 m drop test ・ Bearing the lithium battery handling label (Dimensions: 120 x 110 mm)	Figure 1 in Section 3.2

(2) GT15-BAT

Packaging	Classification	Requirements	Reference
The number of batteries is 8 or less in one package.	UN3090 PI968 Section II	・ Capable of withstanding a 1.2 m drop test ・ Bearing the lithium battery handling label (Dimensions: 120 x 110 mm)	Figure 1 in Section 3.2
The number of batteries is 9 or more in one package.	UN3090 PI968 Section IB	・ Capable of withstanding a 1.2 m drop test ・ Bearing the lithium battery handling label (Dimensions: 120 x 110 mm)	Figure 1 in Section 3.2
		・ Handled as dangerous goods (Class 9), such as bearing the Class 9 hazard label	Figure 2 in Section 3.2

As of January 1, 2015, lithium metal batteries packed by themselves are forbidden for transport as cargo on passenger aircraft.
However, such lithium metal batteries can still be transported by vessel or cargo aircraft after January 1, 2015.

3.2 Transport of lithium batteries contained in or packed with equipment

(1) Lithium batteries contained in equipment (UN3091) must be transported in accordance with Section II of Packing Instruction 970.
However, no special handling is required in the following cases:
- The number of batteries is 4 or less in one package.
- The net weight of batteries is 5 kg or less in one package.

(2) Lithium batteries packed with equipment (UN3091) must be transported in accordance with Section II of Packing Instruction 969.

Lithium batteries packed with or contained in equipment can be transported by passenger aircraft.

PRECAUTIONS

- An overpack must bear the lithium battery handling label (Figure 1) as well.
- The above requirements and actions are specified by Mitsubishi Electric, and they may differ depending on the carrier. For details, contact the carrier.
- All lithium batteries are required to have passed the United Nations safety tests.
  All the batteries used in our GOT products shown below have passed the battery safety tests, and no action needs to be taken by the customers.

  ➟ 1. Models subject to the UN Recommendations

  When transporting a lithium battery, obtain the document on which you can refer to the summary of the UN recommended tests (Test Summary) from our company.
  (Required from January 1, 2020)

*: Represents the UN number.
**: Represents the phone number for obtaining more information.

Figure 1 Example of the lithium battery handling label

Figure 2 Example of the Class 9 label

REVISIONS

Version	Print Date	Revision
-	January 2003	- First edition
A	March 2007	- Models are added to Table 1.
B	May 2007	- Models are added to Table 1.
C	May 2009	- Descriptions are revised because of the revision of the IATA Dangerous Goods Regulations.
D	June 2010	- Models are added to Table 1.
E	February 2011	- Models are added to Table 1.
F	-	- Amendment of Dangerous Goods Regulations IATA, reviewing the content of the description. - Models are added to Table 1.
G	-	- GOT2000 series are added.
H	July 2015	- Amendment of Dangerous Goods Regulations IATA, reviewing the content of the description. - Table 1 is modified, and models are added.
I	March 2017	- Models are added to Table 1-2.
J	May 2017	- Amendment of Dangerous Goods Regulations IATA, reviewing the content of the description. - Models are added to Table 1-2.
K	July 2017	- POINT has been deleted. - The lithium content and battery weight in Table 1-1 have been changed.
L	May 2018	- Amendment of Dangerous Goods Regulations IATA, reviewing the content of the description. - Models are added to Table 1-2.
M	May 2020	- Amendment of Dangerous Goods Regulations IATA, reviewing the content of the description.
N	July 2021	- Models are added to Table 1-2.
P	January 2023	- Some corrections