



Transportation of Dangerous Goods Directorate
L'Esplanade Laurier
300 Laurier Avenue West
Ottawa, Ontario
K1A 0N5

Direction générale du transport des marchandises dangereuses
L'Esplanade Laurier
300, avenue Laurier Ouest
Ottawa (Ontario)
K1A 0N5



Equivalency Certificate (Approval issued by the competent authority of Canada)

Certificate Number: SU 13436
Certificate Type: N/A
Certificate Holder: Americase, LLC
Mode of Transport: Road, Rail, Marine
Effective Date: October 16, 2020
Expiry Date: October 31, 2025

LEGEND

For the purposes of this equivalency certificate, documents referred to by an abbreviation have the following meaning:

TDG Act: *Transportation of Dangerous Goods Act, 1992*

TDG Regulations: *Transportation of Dangerous Goods Regulations*

49 CFR: *Parts 171 to 180 of Title 49 of the "Code of Federal Regulations" of the United States, as amended from time to time*

NOTES

Note 1: Subsection 31(4) of the *TDG Act* stipulates that any non-compliance with the conditions of this equivalency certificate causes the provisions of the *TDG Act* and *TDG Regulations* to apply as though this equivalency certificate did not exist.

Note 2: This equivalency certificate provides no regulatory relief other than specifically stated herein. Therefore, all other requirements of the *TDG Act* and the *TDG Regulations* apply.

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PURPOSE

This equivalency certificate allows **any person** to handle, offer for transport, transport, or import dangerous goods in a standardized means of containment manufactured by **Americase, LLC** in accordance with the conditions of this equivalency certificate, in a manner that does not comply with:

- Part 3 (Documentation) of the *TDG Regulations*,
- Part 4 (Dangerous Goods Safety Marks) of the *TDG Regulations*,
- Part 6 (Training) of the *TDG Regulations*, and

The dangerous goods are transported by road vehicle, railway vehicle or by vessel on a domestic voyage only. The lithium ion cells, batteries or equipment can be transported in four different types of packaging that are rated to withstand the effects of a lithium battery fire. There are three models of “4G” boxes, with one model using an ACASE thermal containment envelope, which is designed to contain the cell, battery or the battery powered equipment. The fourth model is a “4B” aluminum box.

The maximum watt-hour (Wh) ratings for the cells and batteries placed in the “4G” boxes does not exceed 1500 Wh. However, the maximum Wh rating for each “ACASE” thermal containment envelope does not exceed 100 Wh. The “4B” aluminum box may contain up to a maximum of 5700 Wh of cell and/or batteries.

If the box contains cells or batteries that exceed 20 Wh or 100 Wh respectively, the lithium battery label as described in Appendix to Part 4 of the *TDG Regulations* and all other required information must be displayed. However, when the box contains lithium ion cells with a Watt-hour (Wh) that does not exceed 20 Wh or batteries that do not exceed 100 Wh, the box may display the lithium battery mark in accordance with section 4.24 of the *TDG Regulations* instead of the lithium battery label.



Lithium Battery Label



Lithium Battery Mark

CONDITIONS

This equivalency certificate authorizes **any person** to handle, offer for transport, transport, or import dangerous goods in a standardized means of containment manufactured by **Americase, LLC** in accordance with the conditions of this equivalency certificate, in a manner that does not comply with:

- Part 3 (Documentation) of the *TDG Regulations*,
- Part 4 (Dangerous Goods Safety Marks) of the *TDG Regulations*, and
- Part 6 (Training) of the *TDG Regulations*, and

if the following conditions are met:

1) General

- a) The dangerous goods are transported by road vehicle, railway vehicle or by vessel on a domestic voyage only.
- b) The dangerous goods are lithium ion cells or batteries or equipment containing lithium ion cells and batteries that are damaged, defective or subject to a recall.

2) Classification

- a) The dangerous goods are classified as:
 - i) UN3480, LITHIUM ION BATTERIES, Class 9
 - ii) UN3481, LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, Class 9
 - iii) UN3481, LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, Class 9
- b) The dangerous goods that are damaged, defective or subject to a recall do not conform to subsection 2.43.1(2) of Part 2 (Classification) of the TDG Regulations.

3) Means of Containment

- a) The means of containment is a thermally insulated UN standardized packaging that is either a UN 4G box or 4B box that meets the performance requirements for packing group I;
- b) In the event of a thermal runaway event of a lithium ion cell or battery, the means of containment shall be capable of meeting the following requirements:
 - (i) No flames exit the package;
 - (ii) No projectiles exit the package;
 - (iii) The outside surface temperature of the means of containment shall not have a temperature of more than 100°C, with the exception of a momentary spike up to 200°C; and
 - (iv) The structural integrity of the means of containment shall be maintained.
- c) Each cell and battery is packed in inner packaging that completely encloses the cell or battery and protects against short circuits;
- d) Equipment containing cells or batteries will be protected from inadvertent activation;
- e) The thermally insulated UN packaging is either:
 - (i) a UN 4G box identified with one of the following model numbers:
 - (1) ENG-FBLIB-9100,
 - (2) ENG-FBLIB-9200,
 - (3) ENG-FBLIB-9300 with ACASE thermal containment envelope, or
 - (ii) a UN 4B aluminum box with model number ENG-ATLIB-9100;
- f) When a UN packaging with model number ENG-FBLIB-9100, ENG-FBLIB-9200 or ENG-ATLIB-9100 is used each cell, battery and equipment containing the cells or batteries must be individually packed in a non-metallic inner packaging and surrounded by non-conductive cushioning material to help prevent damage that is likely to occur during normal conditions of transport.
- g) When a UN packaging with model number ENG-FBLIB-9300 is used, the cells, batteries or equipment containing the cells or batteries must be packed a laminated, flame proof, electrically non-conductive ACASE envelope.

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- h) The maximum watt-hour (Wh) for the cells and batteries placed in the UN packaging shall not exceed the limits described in the table below.

| Packaging Model Number | Maximum Watt-hour (Wh) rating of individual cell or battery | Maximum Watt-hour (Wh) rating per package |
|-------------------------------|--|--|
| ENG-FBLIB-9100 | 1500 Wh | 1500 Wh |
| ENG-FBLIB-9200 | 1500 Wh | 1500 Wh |
| ENG-FBLIB-9300 | 100 Wh for each thermal containment envelope | 1500 Wh |
| ENG-ATLIB-9100 | 1500 Wh | 5700 Wh |

- i) The means of containment is loaded and secured on the means of transport in such a way as to prevent, under normal conditions of transport, damage to the means of containment or to the means of transport that could lead to an accidental release of the dangerous goods;
- j) The means of containment is able to pass thermal runaway containment test that was supplied with the initial application and is on file with the Executive Director, Regulatory Frameworks and International Engagement, Regulatory Affairs Branch, Transportation of Dangerous Goods Directorate, Transport Canada.

4) Safety marks – Marking, Labelling and Placarding

- a) The means of containment is marked with the following information in a manner that is easy to identify, legible, and in characters that are at least 6 mm high:
- i) **“Equivalency Certificate SU 13346”**, or **“Certificat e d’équivalence SU 13346”**; and
 - ii) **“DAMAGED / DEFECTIVE LITHIUM ION BATTERIES – FORBIDDEN FOR TRANSPORT BY AIRCRAFT – GROUND AND VESSEL SHIPMENT ONLY”**,
or
“PILES AU LITHIUM IONIQUE ENDOMMAGÉES / DÉFECTUEUSES - INTERDITES AU TRANSPORT PAR AÉRONEF - ENVOI PAR VOIE TERRESTRE OU NAVIRE SEULEMENT”

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- b) When the means of containment contains lithium ion cells or batteries that have a Watt-hour (Wh) rating of not more than 20 Wh or 100 Wh respectively, the means of containment shall be marked with the lithium battery mark described and all other relevant information described in section 4.24 of the TDG Regulations or be marked with the lithium battery label, UN number and the appropriate shipping name required by condition 4)c) of this equivalency certificate;



Note:

- * Replace with UN number(s)
- ** Replace with telephone number for additional information

- c) When the means of containment contains lithium ion cells or batteries that have a Watt-hour (Wh) rating of more than 20 Wh or 100 Wh respectively, the means of containment shall be marked with:
- i) The lithium battery label illustrated below and described in Appendix to Part 4 of the *TDG Regulations*;



- ii) The appropriate UN number and shipping name for the dangerous goods placed in the means of containment.

5) Documentation

- a) Included with each means of containment are clear closure instructions on how to package the lithium ion cells or batteries, or the equipment containing cells or batteries.

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Signature of Issuing Authority

David Lamarche, P. Eng., ing.

David Lamarche, P. Eng., ing.
Chief, Approvals and Special Regulatory Projects

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| <u>Legend for Certificate Number</u> | |
| SH - Road, SR - Rail, SA - Air, SM - Marine SU - More than one Mode of Transport Ren - Renewal | |