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 13896 (Ren. 1)

Certificate Type: 48D

Certificate Holder: CellBlock FCS, LLC

Mode of Transport: Road, Rail, Marine

Effective Date: August 31, 2023

Expiry Date: February 28, 2028

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**:** *Title 49 of the "Code of Federal Regulations" of the United States*

CGSB-43.145: *National Standard of Canada CGSB-43.145, "Design, manufacture and use of large packagings for the transportation of dangerous goods, classes 3, 4, 5, 6.1, 8, and 9", April 2019, published by the Canadian General Standards Board (CGSB)*

CGSB-43.150: *National Standard of Canada CGSB-43.150, "Design, manufacture and use of UN Standardized drums, jerricans, boxes, bags, combination packaging, composite packaging and other packagings for the transport of dangerous goods, classes 3, 4, 5, 6.1, 8, and 9", March 2020, published by the Canadian General Standards Board (CGSB)*

UN Recommendations**:** "*Recommendations on the Transport of Dangerous Goods*", published by the United Nations (UN), as amended from time to time

***ICAO Technical Instructions*:** "*Technical Instructions for the Safe Transport of Dangerous Goods by Air*", published by the International Civil Aviation Organization (ICAO), as amended from time to time

***IMDG Code*:** Volumes 1 and 2 of the "*International Maritime Dangerous Goods Code*", published by the International Maritime Organization (IMO), 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.

Note 3: No person shall use or apply this equivalency certificate, including the display of its number, when the equivalency certificate has expired or is otherwise no longer in effect. Any alteration of this equivalency certificate renders it invalid. Visit the Transport Canada website for the latest version of this equivalency certificate.

PURPOSE

(The following is for information purposes only and is not part of the certificate.)

Part A - Small to medium-sized lithium-ion or lithium metal cells and batteries

Part A of this equivalency certificate pertains to:

- Lithium-ion cells with a Watt-hour rating of not more than 60 Wh and lithium-ion batteries with a Watt-hour (Wh) rating of not more than 300 Wh, and/or
- Lithium metal cells with a lithium content of not more than 5 g and lithium metal batteries with a lithium content of not more than 25 g,

that are damaged, defective or subject to a recall. This includes batteries that are liable to disassemble rapidly, react dangerously, produce a flame or a dangerous evolution of heat, or produce a dangerous emission of toxic, corrosive, or flammable gases or vapours.

The consignor and the carrier are exempt from Part 3 (Documentation) and Part 6 (Training) since detailed instructions on how to package and ship the cells or batteries are provided by **CellBlock FCS, LLC.** This equivalency certificate also authorizes the display of the Lithium Battery Mark instead of the Lithium Battery Label for small to medium-sized lithium-ion or lithium metal cells and batteries.

Lithium Battery Label

Lithium Battery Mark

Part B - Large cells and batteries

Part B of this equivalency certificate pertains to cells or batteries that exceed the thresholds specified in Part A and that are damaged, defective or subject to a recall. This includes batteries that are liable to disassemble rapidly, react dangerously, produce a flame or a dangerous evolution of heat, or produce a dangerous emission of toxic, corrosive, or flammable gases or vapours. The means of containment are designed to withstand the effects of a battery fire. Except for batteries that are liable to disassemble rapidly, react dangerously, produce a flame or a dangerous evolution of heat, or produce a dangerous emission of toxic, corrosive, or flammable gases or vapours, the consignor and the carrier are exempted from Part 3 (Documentation) and Part 6 (Training) since detailed instructions on how to package and ship the cells or batteries are provided by **CellBlock FCS, LLC.**

The equivalency certificate also allows alternative dangerous goods safety mark requirements that are based on the requirements for IBCs in Part 4 of the *TDG Regulations* and the *49 CFR*. However, the conditions of this equivalency certificate do not exactly match the requirements of the *49 CFR*.

Conditions - Part A (Small to medium sized cells and batteries)

Damaged, defective and recalled batteries, and

Damaged, defective and recalled batteries that are liable to disassemble rapidly, react dangerously, produce a flame or a dangerous evolution of heat, or produce a dangerous emission of toxic, corrosive or flammable gases or vapours

This equivalency certificate authorizes **any person** to handle, offer for transport, transport, or import, by road vehicle, railway vehicle, or by vessel in Canada, dangerous goods that are:

UN Number	Shipping Name and Description	Class	Packing Group
UN3090	LITHIUM METAL BATTERIES (including lithium alloy batteries)	9	N/A
UN3091	LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT (including lithium alloy batteries); or LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT (including lithium alloy batteries)	9	N/A
UN3480	LITHIUM ION BATTERIES (including lithium ion polymer batteries)	9	N/A
UN3481	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT (including lithium ion polymer batteries); or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (including lithium ion polymer batteries)	9	N/A

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
- Special Provision 137, subsections (4) and (5) of the *TDG Regulations*,

if the following conditions are met:

1) General

a) The dangerous goods are lithium metal or lithium-ion cells or batteries or equipment containing lithium metal or lithium-ion cells or batteries that are damaged, defective and/or subject to a recall;

***Note**: This includes batteries that are liable to disassemble rapidly, react dangerously, produce a flame or a dangerous evolution of heat, or produce a dangerous emission of toxic, corrosive or flammable gases or vapours.*

b) The lithium content is not more than:

i) 5 g for a lithium metal or lithium alloy cell, and

ii) 25 g for a lithium metal or lithium alloy battery;

c) The watt-hour (Wh) rating is not more than:

i) 60 Wh for a lithium-ion cell, and

ii) 300 Wh for a lithium-ion battery;

d) Detailed instructions on how to package and ship the cells or batteries are provided by **CellBlock FCS, LLC.** to any person preparing shipments under the conditions of this equivalency certificate;

e) Any person using this equivalency certificate must follow the instructions provided by **CellBlock FCS, LLC.** to properly prepare the dangerous goods for transport in accordance with the conditions of this equivalency certificate;

f) The maximum watt-hour (Wh) ratings for all the cells and batteries placed in the means of containment shall not exceed the rated capacity for which the means of containment was tested;

g) Within 15 days of a written request by an inspector, **CellBlock FCS, LLC.** shall make available, to the inspector who made the request, a test report indicating that the means of containment was tested at or above the rated capacity in Wh.

2) Means of Containment

Damaged, defective and recalled batteries

a) The cells or batteries that are damaged, defective, and/or subject to a recall are transported in accordance with Packing Instruction:

i) 908 of *CGSB-43.150*,

ii) P908 of the *UN Recommendations*, or

iii) P911 of the *UN Recommendations*;

b) The cells or batteries that are liable to disassemble rapidly, react dangerously, produce a flame or a dangerous evolution of heat, or produce a dangerous emission of toxic, corrosive or flammable gases or vapours, are;

   i) transported in accordance with Packing Instruction P911 of the *UN Recommendations*, and

   ii) Packaged with **"CellBlock EX"** which surrounds each cell or battery;

c) The **CellBlock EX** is a thermally insulating fire suppressant capable of:

   i) suppressing lithium cell and battery fires, heat, smoke,

   ii) absorbing the smoke, gases, flammable vapor during a thermal runaway incident, and

   iii) offering protection from the effect of shock, vibration, or movement of the cells and batteries that could occur under normal conditions of transport.

3) Safety marks – Marking, Labelling and Placarding

a) The means of containment is marked with the appropriate Lithium Battery Handling Mark in accordance with:

   i) section 5.2.1.9 of the *UN Recommendations*,

   ii) section 5.2.1.10 of the *IMDG Code*, or

   iii) section 2.4.16 of Chapter 2 of Part 5 of the *ICAO Technical Instructions*;

   Note: *The UN Recommendations, the ICAO Technical Instructions and the IMDG Code now require that each side of the Lithium Battery Handling Mark be 100 mm in length. However, if the size of the package so requires, the mark may be reduced to not less than 100 mm wide × 70 mm high. The telephone number for additional information on the Lithium Battery Handling Mark is no longer required.*

b) The means of containment shall be marked with the following information in a manner that is easy to identify and legible and in characters that are at least 6 mm in height when the gross mass of the means of containment is 30 kg or less, and at least 12 mm in height when the gross mass of the means of containment is over 30 kg:

i) "**SU 13896**",

ii) **"DAMAGED / DEFECTIVE LITHIUM METAL OR ION BATTERIES – FORBIDDEN FOR TRANSPORT BY AIRCRAFT**", or

"**PILES AU LITHIUM MÉTAL OU IONIQUE ENDOMMAGÉES / DÉFECTUEUSES - INTERDITES AU TRANSPORT PAR AÉRONEF".**

4) Training

a) The certificate holder or any person using this equivalency certificate must ensure that their personnel who handle, offer for transport, or transport the dangerous goods are trained in regards to the conditions of this equivalency certificate that relate directly to the person's duties.

Conditions - Part B (Large cells and batteries)

Damaged, defective and recalled batteries, and

Damaged, defective and recalled batteries that are liable to disassemble rapidly, react dangerously, produce a flame or a dangerous evolution of heat, or produce a dangerous emission of toxic, corrosive or flammable gases or vapours

This equivalency certificate authorizes **any person** to handle, offer for transport, transport, or import, by road vehicle, railway vehicle, or by vessel in Canada, dangerous goods that are:

UN Number	Shipping Name and Description	Class	Packing Group
UN3090	LITHIUM METAL BATTERIES (including lithium alloy batteries)	9	N/A
UN3091	LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT (including lithium alloy batteries); or LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT (including lithium alloy batteries)	9	N/A
UN3480	LITHIUM ION BATTERIES (including lithium ion polymer batteries)	9	N/A
UN3481	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT (including lithium ion polymer batteries); or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (including lithium ion polymer batteries)	9	N/A

in a manner that does not comply with:

- Part 3 (Documentation) of the *TDG Regulations*,
- Part 6 (Training) of the *TDG Regulations*, and
- Special Provision 137, subsections (4) and (5) of the *TDG Regulations*,

if the following conditions are met:

1) General

a) The dangerous goods are lithium metal or lithium-ion cells or batteries or equipment containing lithium metal or lithium-ion cells or batteries that are damaged, defective or subject to a recall;

***Note**: This includes batteries that are liable to disassemble rapidly, react dangerously, produce a flame or a dangerous evolution of heat, or produce a dangerous emission of toxic, corrosive or flammable gases or vapours.*

b) The lithium content exceeds:

i) 5 g for a lithium metal or lithium alloy cell, and

ii) 25 g for a lithium metal or lithium alloy battery;

c) The watt-hour (Wh) rating exceeds:

i) 60 Wh for a lithium-ion cell, and

ii) 300 Wh for a lithium-ion battery;

d) Detailed instructions on how to package and ship the cells or batteries are provided by **CellBlock FCS, LLC.** to any person preparing shipments under the conditions of this equivalency certificate;

e) Any person using this equivalency certificate must follow the instructions provided by **CellBlock FCS, LLC.** to properly prepare the dangerous goods for transport in accordance with the conditions of this equivalency certificate;

f) The maximum watt-hour (Wh) ratings for all the cells and batteries placed in the means of containment shall not exceed the rated capacity for which the means of containment was tested;

g) Despite condition 1)f) of Part B of this equivalency certificate, if the maximum watt-hour (Wh) ratings for the cells and batteries placed in the means of containment exceeds the rated capacity for which the means of containment was tested, the cells or batteries must be reduced to:

i) a state of charge (SOC) that is 5% or less,

ii) a voltage reading on the cell or battery terminals that is 0.5 volts or less, or

iii) a percentage below the Wh rated capacity of the means of containment, when the rated capacity of the means of containment is divided by the maximum Wh rating of the cells or batteries and multiplied by 100;

***Example:** If a means of containment was tested to 25 kWh, a 131 kWh battery must be reduced to a 19%* state of charge *or less.*
(25 kWh / 131 kWh) x 100 = 19 % state of charge

h) Within 15 days of a written request by an inspector, **CellBlock FCS, LLC** shall make available, to the inspector who made the request, a test report indicating that the means of containment was tested at or above the rated capacity in Wh.

2) Means of Containment

Damaged, defective and recalled batteries

Small packaging with a volume of 450 L or less

a) The cells or batteries that are damaged, defective, or subject to a recall are transported in accordance with Packing Instruction:

i) 908 of *CGSB-43.150*,

ii) P908 of the *UN Recommendations*, or

iii) P911 of the *UN Recommendations*;

Large packaging with a volume over 450 L

b) The cells or batteries that are damaged, defective, or subject to a recall are transported in accordance with Packing Instruction:

i) LP904 of *CGSB-43.145*,

ii) LP904 of the *UN Recommendations,* or

iii) LP906 of the *UN Recommendations*;

Damaged, defective and recalled batteries that are liable to disassemble rapidly, react dangerously, produce a flame or a dangerous evolution of heat, or produce a dangerous emission of toxic, corrosive or flammable gases or vapours

Small packaging with a volume of 450 L or less

c) The cells or batteries that are liable to disassemble rapidly, react dangerously, produce a flame or a dangerous evolution of heat, or produce a dangerous emission of toxic, corrosive or flammable gases or vapours, are:

i) transported in accordance with Packing Instruction P911 of the *UN Recommendations,* and

ii) Packaged with **"CellBlock EX"** which surrounds each cell or battery;

Large packaging with a volume over 450 L

d) The cells or batteries that are liable to disassemble rapidly, react dangerously, produce a flame or a dangerous evolution of heat, or produce a dangerous emission of toxic, corrosive or flammable gases or vapours, are:

i) transported in accordance with Packing Instruction LP906 of the *UN Recommendations*;

ii) Packaged with **"CellBlock EX"** which surrounds each cell or battery.

e) The **CellBlock EX** is a thermally insulating fire suppressant capable of:

i) suppressing lithium cell and battery fires, heat, smoke,

ii) absorbing the smoke, gases, flammable vapor during a thermal runaway incident, and

iii) offering protection from the effect of shock, vibration, or movement of the cells and batteries that could occur under normal conditions of transport.

3) Safety marks – Marking, Labelling and Placarding

Volume less than or equal to 450 L

a) When the volume of the means of containment containing the cells or batteries is less than or equal to 450 L, the means of containment must display:

i) the Class 9, lithium battery label, in accordance with paragraph 4.10(1)(b.1) of the *TDG Regulations*,

ii) the shipping name in accordance with section 4.11 of the *TDG Regulations,* and

iii) the UN number in accordance with section 4.12 of the *TDG Regulations*;

Volume of 450 L or more

b) When the volume of the battery or the means of containment containing the cells or batteries is greater than 450 L, the means of containment or the battery itself shall display the class 9 placards in accordance with Part 4 of the *TDG Regulations*;

c) Despite section 4.15.2, the appropriate UN number may also be displayed on or next to the class 9 placard in accordance with 4.8(2) of the *TDG Regulations*;

Volume greater than 450 L but less than 3785 L (US 1000 gallons)

d) Instead of displaying placards in accordance with subsection 4.15(1) of the *TDG Regulations*, when the volume of the battery or the means of containment containing the cells or batteries is greater than 450 L but less than 3785 L (US 1000 gallons), the means of containment or the battery itself may display on two opposite sides:

i) the class 9 placard and UN number in accordance with subsection 4.8(2) of the *TDG Regulations*, or

ii) the class 9 lithium battery label, the UN Number in accordance with section 4.8(1) of the *TDG Regulations***,** and the shipping name in accordance with section 4.11 of the *TDG Regulations*.

e) The means of containment shall be marked with the following information in a manner that is easy to identify and legible and in characters that are at least 12 mm in height:

i) "**SU 13896**",

ii) **"DAMAGED / DEFECTIVE LITHIUM METAL OR ION BATTERIES – FORBIDDEN FOR TRANSPORT BY AIRCRAFT**", or

"**PILES AU LITHIUM MÉTAL OU IONIQUE ENDOMMAGÉES / DÉFECTUEUSES - INTERDITES AU TRANSPORT PAR AÉRONEF"**

4) Documentation

a) The requirements of Part 3 of the *TDG Regulations* apply to the transportation of cells and batteries that are damaged, defective and recalled and that are liable to disassemble rapidly, react dangerously, produce a flame or a dangerous evolution of heat, or produce a dangerous emission of toxic, corrosive or flammable gases or vapours. The shipping document must accompany the dangerous goods and contain the following information, legibly and indelibly printed:

i) "**Equivalency Certificate SU 13896 (Ren. 1)**", or

ii) "**Certificat d'équivalence SU 13896 (Ren. 1)**".

5) Training

a) The certificate holder and any person using this equivalency certificate on behalf of the certificate holder ensure that the personnel handling, offering for transport or transporting the dangerous goods are trained regarding the conditions of this equivalency certificate that relate directly to the person's duties;

b) The requirements of Part 6 of the *TDG Regulations* apply to the transportation of batteries that are damaged, defective and recalled and that are liable to disassemble rapidly, react dangerously, produce a flame or a dangerous evolution of heat, or produce a dangerous emission of toxic, corrosive or flammable gases or vapours. Any person handling, offering for transport or transporting these batteries must be trained in accordance with Part 6 of the *TDG Regulations* and hold a valid training certificate.

Signature of Issuing Authority

David Lamarche, P.Eng., ing.

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

Canada

(The following is for information purposes only and is not part of the certificate.)

Contact Person:	Dylan Vandemark CellBlock FCS, LLC 387, Danforth Portland, Maine 04102 USA
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Legend for Certificate Number

SH - Road, SR - Rail, SA - Air, SM - Marine
SU - More than one Mode of Transport
Ren - Renewal

For more information:

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