

Dangerous Goods Regulation Update 2021

Intellisense® Battery for Powerheart® Automated External Defibrillator (AED)



Lithium metal batteries are dangerous goods (hazardous materials), UN No. 3090, therefore they are generally subject to transport regulations, depending on transport mode.



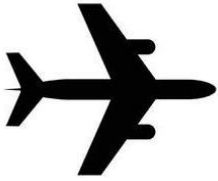
AED model	Part Number (P/N) Series type	# of cells inside battery	Total Lithium Content grams per battery	Battery Manufacturer (SAFT) Test Summary Report #
G3 and G3 Elite	9145-X, and 9146-X	4	9.2	TC-199 *
G5	XBTAED001A	4	9.2	TC-230 *
G5 TSO	XBTAED005A	4	9.2	TC-230 *
G3 TSO	9147-201-TSO	6	13.8	TC-137 *

The SAFT **Battery Information Sheet** and corresponding **Test Summary Report** * must be referenced for shippers to correctly identify and classify lithium metal batteries for transportation. [Lithium metal batteries are measured and classified by lithium content.](#)

[All shippers of AEDs and batteries should present this safety documentation when tendering shipments to their freighter forwarder, airline, shipping line or trucking company as this will help to prevent any confusion or delay in acceptance and transport.](#)

* Meets standards of part III, sub-section 38.3 of United Nations Manual of Test and Criteria.

Air Shipment – Intellisense® Battery for Powerheart® AED



To determine acceptance for international shipment of Cardiac Science Powerheart AEDs or spare lithium batteries via FedEx Express and UPS, check their websites.

<https://www.fedex.com/en-us/service-guide/dangerous-goods/international-locations.html>

https://www.ups.com/ship/dg?loc=en_US

DHL Express and the U.S. Postal Service cannot accept our batteries for air transport. The following *International Air Transport Association (IATA) Dangerous Goods Regulations Packing Instructions (P.I.)* must be used to ship Cardiac Science batteries:

UN3090 Lithium Metal Batteries, 9, P.I. 968 Section IA *

UN3091 Lithium Metal Batteries Packed with Equipment, 9, P.I. 969 Section I **

Air shipments restricted to certain destinations by parcel express carriers may be given to a freight forwarder for possible acceptance on an IATA cargo airline service under either cargo IMP codes: **RBM *** (UN3090) or **RLM **** (UN3091)

These regulated hazardous materials (dangerous goods) cannot be offered to airlines as general cargo or declared as “not restricted”.



AEDs or spare batteries for air shipment must be correctly prepared and declared on the IATA Shipper's Declaration of Dangerous Goods (DGD).

- * Stand-alone replacement / spare battery
- ** Automated external defibrillator (factory packaged)

Air Shipment – Intellisense® Battery for Powerheart® AED (continued)



It is forbidden for an individual air traveler or business to transport a Cardiac Science Powerheart AED with battery or a spare Intellisense® AED battery in their baggage.

The International Air Transport Association (IATA) for Crew and Passenger (PAX) guidance (which is derived from International Civil Aviation Organization Rulings) has a table referencing lithium batteries with a **2 g or under lithium content** level.

IATA DGR 62 edition states in table 2.3.A ...carried by PAX and Crew

- Spare lithium batteries exceeding **2 g** cannot be put in checked or carry-on baggage
- Lithium battery powered electronics – installed- (including medical electronics) exceeding **2 g** cannot be put in checked or carry-on baggage
- See IATA DGR 2.3.5.8.4

The U.S. Department of Transportation (DOT) which is the regulating body for flights originating in the United States (TSA screening) states lithium metal with a **2 g or under lithium content level** is allowed (see below) however **Intellisense® batteries** exceed that threshold level.

If the travel originates in the United States, then the U.S. DOT Hazardous Materials Regulations must be followed. See: www.PHSMA.dot.gov.safetravel

***Individual airlines** – understand that **each passenger and cargo airline can set their own limitations for acceptance of lithium batteries** if they comply with the law of the state (i.e. United States) or IATA/IACO whichever is more restrictive.



U.S. Ground Parcel Shipment – Intellisense® Battery for Powerheart® AED



Parcel - See U.S. DOT Hazardous Materials Regulations **49 CFR 173.185**.



**LITHIUM BATTERIES
FORBIDDEN FOR TRANSPORT ABOARD
AIRCRAFT AND VESSEL**

Note: Parcel shipments within the continental United States of AED or spare batteries are not required to be declared on U.S. DOT “shipping papers” as fully regulated hazardous materials if the shipment is correctly prepared and offered by a trained “hazmat” employee. Each package cannot weight more than 66 lbs.

The U.S. Postal Service cannot accept our batteries for parcel transport.

U.S. Ground Truck Shipment – Intellisense® Battery for Powerheart® AED



Less than Truckload (LTL) - palletized

U.S. DOT Hazardous Material Table Basic Description **49 CFR 172.202 (b)**:

UN3090 Lithium Metal Batteries, 9

UN3091 Lithium Metal Batteries Packed with Equipment, 9

Truck shipments should be prepared as fully regulated and declared on U.S. DOT “shipping papers”.

Ocean Shipment - Intellisense® Battery for Powerheart® AED



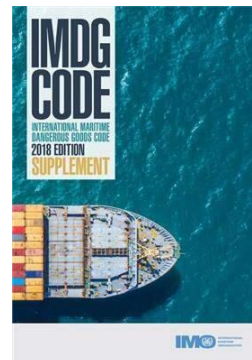
The International Maritime Organization Dangerous Goods Code, Chapter 3.2, Dangerous Goods List classifies our batteries as:

UN3090 Lithium Metal Batteries, 9

UN3091 Lithium Metal Batteries Packed with Equipment, 9

No changes to the *International Maritime Organization Dangerous Goods Code 2018 Edition Packing Instruction 903*.

It should be noted that many ocean carriers require [pre-approval for dangerous goods bookings](#) and require special formatting for dangerous goods declarations (a.k.a. IMO or Multimodal Dangerous Goods Form).



Frequently Asked Questions:

1-My business is not in the United States. Do these dangerous goods regulations apply?

Answer: Yes. Shipments including lithium must be handled correctly to ensure everyone's safety. Regulations such as ADR, IATA, IMO, and TDG all regulate the transport of lithium batteries. If you have further questions, contact the transportation agency or ministry of transport in your country for guidance about lithium batteries.

Frequently Asked Questions (continued):

2-Can Cardiac Science Corporation (USA)/ ZOLL provide dangerous goods declarations for a shipment that is not the original sale transaction from the factory?

Answer: No. Legally we cannot intervene to ship dangerous goods on your behalf. If a customer does not have staff with dangerous goods training credentials (IATA, IMDG and 49 CFR) then they need to hire a “trained” contractor to act on their behalf.

3-Can a shipper change the lithium metal battery (UN3090 and UN3091) classification?

Answer: No. The 9.2 or 13.8 grams of lithium content drives the battery’s classification.

4-Can Cardiac Science provide the actual UN 38.3 testing records to a carrier?

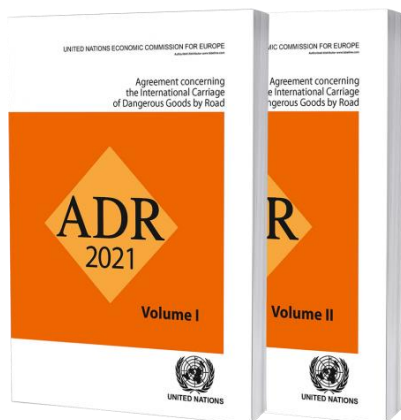
Answer: No. The battery manufacturers actual test records are proprietary information; therefore, Cardiac Science’s provides the **Test Summary Report** and **Battery Information Sheet** to customers, freight forwarders and carriers.

5-Why does Cardiac Science (ZOLL) provide a Battery Information Sheet versus a Safety Data Sheet (formerly MSDS)?

Answer: According to the U.S. Occupational Safety Health Administration (OSHA) batteries are considered “articles” therefore they do not have to comply with the SDS requirement under the Global Harmonized System (GHS) classification for chemicals. See Battery Information Sheet supplied by SAFT for further explanation.

6-Can I use the Special Provision 188 (ADR and IMDG or Special Provision 230 (IMDG) to transport these batteries?

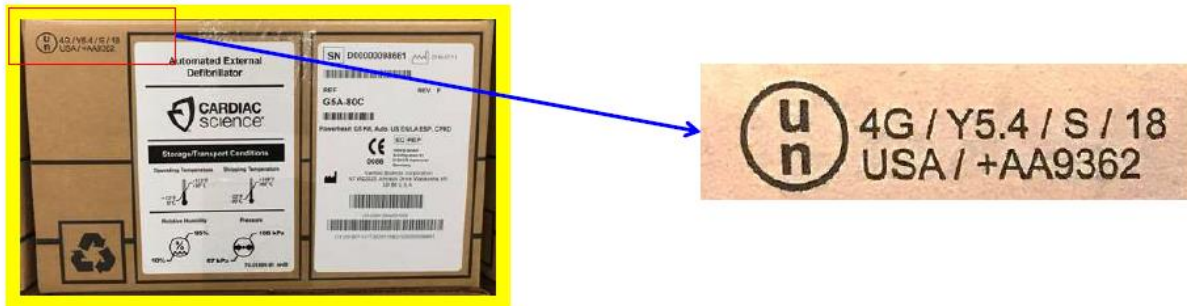
Answer: No. Powerheart AED batteries are over the lithium content threshold defined in SP188 (road and ocean transport) and SP 230 (ocean transport) therefore these special provisions cannot be used as exceptions for dangerous goods shipment.



Frequently Asked Questions (continued):

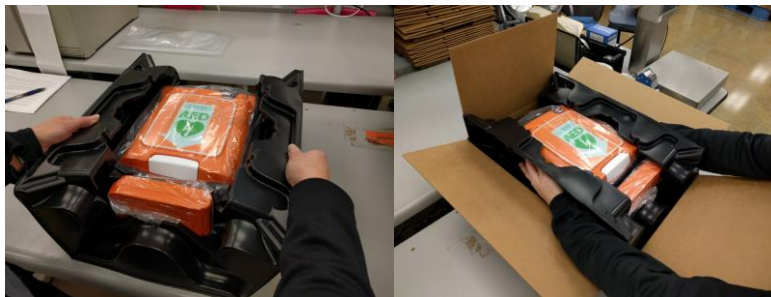
7-How does Cardiac Science package its dangerous goods?

Answer: For shipments of AEDs and replacement lithium batteries Cardiac Science uses **UN Specification packaging 4G** (Fiberboard) that meets packaging group II standards. For U.S. ground parcel shipments of replacement batteries, we use a fiberboard box that meets the 1.2-meter drop-test requirement of 49 CFR 173.185.



8-Can Cardiac Science (ZOLL) or a third party unpack an AED carton and remove the battery before it arrives at an end user?

Answer: No. For traceability purposes the U.S. Food and Drug Administration (FDA) requires that medical devices (UN3091) sold in commerce must remain in the original factory packaging. It cannot be opened and have the lithium battery removed prior to delivery at an end user.



9-For used lithium batteries how do I transport and dispose of them?

Answer: Dispose (recycle) lithium batteries in accordance with local laws and regulations. Check the Battery Information Sheet for guidance. Used batteries are regulated for transport the same way as new batteries. **Never ship damaged and/or defective batteries by air.** You cannot use the U.S. Postal Service to ship our batteries (new or old).

This update is only provided as a job aid. Correct up to date information regarding the shipment of dangerous goods from governing regulatory bodies, carriers and the manufacturer's technical references must be checked. Only trained individuals should handle and ship dangerous goods.