

Date: 15th Jan 2014

## 2014 update of the air transport regulations for rechargeable lithium ion

The following guide is a summary of the regulations in force regarding the air transport of rechargeable lithium ion batteries. For more detailed information, please consult:

<http://www.iata.org/whatwedo/cargo/dgr/Documents/Lithium-Battery-Guidance-2014.pdf>

<http://www.iata.org/whatwedo/cargo/dgr/Documents/Lithium-Battery-Packing-Instructions-965-970-EN.pdf>

Always consult the carrier concerned for the procedure to apply and the documentation to produce,

### **Preliminary conditions:**

The batteries to be transported need to have passed tests in accordance with the air transport safety regulations ONU UN38.3 (T1-T9), and need to be originating from a manufacturing facility with adequate quality controls practices in place.

*BLUESHAPE declares that all its manufactured batteries conform to "UN Regulations on the transport of dangerous goods, Manual of Test and Criteria sub-section 38.3", and are manufactured in an ISO 9001:2008 manufacturing facility*

### **Classification**

IATA regulations list "lithium rechargeable battery products" in **Class 9** (miscellaneous dangerous goods) and classifies them as:

- UN3480 – Lithium ion rechargeable batteries
  - UN3481 – Lithium ion rechargeable batteries contained (installed) in equipment, or
  - UN3481 – Lithium ion rechargeable batteries packed with equipment
- depending on how these are presented at the time of transport.

## 1. Transport of batteries as air cargo

### **UN3480 – Lithium Ion rechargeable batteries**

Follow this rule in the case of transport of lithium ion batteries only

*BLUESHAPE recommends you retain the original packing boxes supplied with the batteries and use these in all future shipments.*

There are 3 conditions to be observed, based on the energy content of the batteries and the weight of the packaging that is being presented at the time of transport:

#1. Lithium batteries **above 100Wh** fall under **Packing Instructions 965 Section 1A:**

- Contents and weight of the package:
  - If the box is transported in a passenger aircraft:- max 5Kg of net battery weight per box
  - If the box is transported exclusively in cargo aircraft - max 35Kg of net battery weight per box
- Labelling  
Each box needs to be labelled with the "Class 9", sticker "CAO" (cargo aircraft



only) but only in those cases of boxes above 5Kg net, with the label showing "UN3480 Lithium Ion batteries", the net weight of the batteries contained, together with references of the sender and receiver

- Boxes: homologated 4G carton boxes are to be used
- Documents: Sender needs to compile the DGD (dangerous goods declaration)

#2. Lithium batteries **up to 100Wh** fall under **Packing Instructions 965 Section 1B:**

- Content package weight : max 10Kg gross per package regardless if passenger or cargo aircraft
- Labelling: boxes labelled with sticker "Class 9" and specific Li-ion label
- Boxes: generic boxes made out of strong cardboard are to be used
- Documents: A DGD is not required but a declaration is needed that confirms that Li-Ion batteries <100Wh are being transported according to PI965 Section 1B



#3. Lithium batteries **up to 100Wh** can follow **Packing Instructions 965 Section 2**, but only under these conditions:

- Package contents: not more than 2 batteries per box regardless of passenger or cargo aircraft
- Labelling: boxes labelled with specific Li-Ion label
- Boxes: generic boxes made out of strong cardboard are to be used
- Documents: A DGD is not required but a declaration is needed that confirms that Li-Ion batteries <100Wh are being transported according to PI965 Section 2



### UN3481 – Rechargeable lithium ion batteries carried (installed) with equipment

Follow this rule in the case of transport of equipment containing lithium ion batteries

*BLUESHAPE recommends you retain the original packing boxes supplied with the batteries and use these in all future shipments.*

There are 2 conditions to be considered, on the basis of the energy density of the contents

#1. Lithium batteries **above 100Wh** fall under **Packing Instructions 967 Section 1:**

- Contents and weight of the package:
  - If the contents are transported by passenger aircraft: max 5Kg of net battery content per box
  - If the contents are transported exclusively by cargo aircraft: max 35Kg of net battery content per boxThe stated limits exclude the weight of the equipment

- Labelling:  
Each box needs to be labelled with the "Class 9", sticker "CAO" (cargo aircraft only) but only in those cases of boxes above 5Kg net, with the label showing "UN3481 Lithium Ion batteries", the net weight of the batteries contained, together with references of the sender and receiver



- Boxes: Strong cardboard boxes need to be used that offer security to the equipment and batteries that are contained inside. The batteries need to be individually packed and in such way as to prevent damage or short circuit

of the battery terminals

- Documents: The sender needs to compile a DGD (dangerous goods declaration)

#2. Lithium batteries up to 100Wh fall under le Packing Instructions 967 Section 2:

- Contents and weight of the package: max 5Kg of net battery content per box, regardless whether passenger or cargo aircraft. This limit excludes the weight of equipment
- Labelling: boxes labelled with specific Li-Ion label
- Boxes: Strong cardboard boxes need to be used that offer security to the equipment and batteries that are contained inside. The batteries need to be individually packed and in such way as to prevent damage or short circuit of the battery terminals
- Documents: A DGD is not required but a declaration is needed that confirms that Li-Ion batteries <100Wh, contained or installed on equipment, are being transported according to PI967 Section 2



### UN3481 – Rechargeable lithium ion batteries packed with equipment

Follow this rule in the case of transport of equipment and lithium batteries in the same box

*BLUESHAPE recommends you retain the original packing boxes supplied with the batteries and use these in all future shipments.*

There are 2 conditions to be observed based on the energy content of the batteries

#1. Lithium batteries above 100Wh, fall under Packing Instructions 966 Section 1:

- Contents and weight of the package:
  - If the boxes are transported by passenger aircraft: max 5Kg of net battery content per box
  - If the boxes are transported exclusively by cargo aircraft: max 35Kg of net battery content per boxThe stated limits exclude the weight of the equipment

- Labelling:  
Each box needs to be labelled with the "Class 9", sticker "CAO" (cargo aircraft only) but only in those cases of boxes above 5Kg net, with the label showing "UN3481 Lithium Ion batteries packed with equipment", the net weight of the batteries contained, together with references of the sender and receiver



- Boxes: Strong cardboard boxes need to be used that offer security to the equipment and batteries that are contained inside. The batteries need to be individually packed and in such way as to prevent damage or short circuit of the battery terminals
- Documents: A DGD is required

#2. Lithium batteries up to 100Wh fall under Packing Instructions 966 Section 2:

- Contents and weight of the package:- max 5Kg of net battery content per box regardless whether the goods are being transported by passenger or cargo aircraft The stated limits exclude the weight of the equipment..The maximum number of batteries in the box is the number of required batteries needed together with 2 spare batteries
- Labelling: boxes labelled with specific Li-Ion label



- Boxes: Strong cardboard boxes need to be used that offer security to the equipment and batteries that are contained inside. The batteries need to be individually packed and in such way as to prevent damage or short circuit of the battery terminals
- Documents: A DGD is not required but a declaration is needed that confirms that Li-Ion batteries <100Wh, contained or installed on equipment, are being transported according to PI966 Section 2

## 2. Transport of batteries if carried by passengers

Passengers that need to carry rechargeable lithium ion batteries on a flight need to abide to the following regulations: There are 3 conditions to be observed, based on the energy content of the batteries

:

### Lithium batteries up to 100Wh

- There is no limitation on the number that can be carried but in hand carriage only and assuming that all of them are individually protected to avoid damage and accidental short circuits.  
*BLUESHAPE recommends you retain the original packing boxes supplied with the batteries and use these in all future shipments.*
- Only in the case when the batteries are physically installed or attached to the camera can they be transported in the hold as registered luggage (checked-in baggage).

### Batteries above 100Wh but inferior to 160Wh

- Up to only 2 batteries can be carried in hand carriage only and assuming that all of them are individually protected to avoid damage and accidental short circuits.  
*BLUESHAPE recommends you retain the original packing boxes supplied with the batteries and use these in all future shipments.*
- Only in the case when the batteries are physically installed or attached to the camera can they be transported in the hold as registered luggage (checked-in baggage)

### Batteries above 160Wh

It is forbidden carry these batteries in all types of luggage and they can only be transported by cargo aircraft.

### **3. Declarations for the purpose of transport**

We provide transport declarations for each single of BLUESHAPE battery operated product.  
Please visit our Web site in the download section.

In the following page:

- Summary showing the restrictions on transport of BLEUSHAPE products

### Transportability of BLUESHAPE products

Model	Capacity (Wh)	Type of Shipment			
		Cargo			Passengers
		Batteries only UN3480	Included with Equipment UN3481	Packed with Equipment UN3481	
BUBBLEPACK	65	PI965 Section 2 Limit: 2 pcs/box or PI965 Section 1B Limit: 10Kg /box	PI967 Section 2 Limit: 5Kg/box	PI966 Section 2 Limit: 5Kg/box	No limitation, can be carried in hand luggage only.  Can be transported in the luggage hold if installed on equipment
BV065	65				
BV075	75				
BV090	90				
BV100	94				
BV100HD	92				
BV150	150	PI965 Section 1A Limit PAX: 5Kg/box Limit CAO: 35Kg/box	PI967 Section1 Limit PAX: 5Kg/box Limit CAO: 35Kg/box	PI966 Section 1 Limit PAX: 5Kg/box Limit CAO: 35Kg/box	Each person is allowed 2 pieces in hand luggage only  Can be transported in the luggage hold if installed on equipment
BV180	180				
BV187	187				
BV225	225				
BV190HD	190				
BV270HD	270				
MVQUICK	22	PI965 Section 2 Limit: 2 pcs/box or PI965 Section 1B Limit: 10Kg/box	PI967 Section 2 Limit: 5Kg/box	PI966 Section 2 Limit: 5Kg/box	No limitation, can be carried in hand luggage only. Can be transported in the luggage hold if installed on equipment
MVQUICKAB	22				
MVQUICKAL	22				
MVQUICKR	22				