Changes to the ICAO Technical Instructions for 2013 Pertaining to Shipment of Lithium Batteries

In February 2012, members of the International Civil Aviation Organization’s Dangerous Goods Panel developed new safety requirements for air shipment of lithium batteries and associated equipment. A full report on the February working group meeting is available via http://www.icao.int/safety/DangerousGoods/Pages/Working-Group-of-the-Whole-on-Lithium-Batteries.aspx.

The new requirements have been approved by the ICAO Council, will be included in the 2013-2014 Edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air and will take effect in most ICAO member states on January 1, 2013. The new requirements are more stringent than regulations that have been in place in most ICAO member states since 2009.

In summary, the changes are:

- Restriction of the exceptions (Section 2) from full regulation under Class 9 to genuinely small quantities and small packages of lithium cells and batteries

- Creation of a new section (Section 1B) in the packing instructions for to bring some small shipments of lithium metal (965) and lithium ion (968) cells and batteries under Class 9 but to provide some relief from full Class 9 requirements that apply to bulk shipments

- Placing a net weight limit per package on lithium cells and/or batteries packed with or contained in equipment.

Restrictions on Exceptions for Class 9 Regulation

New Section 2 lithium ion (PI 965) and lithium metal (PI 968) cell and batteries quantity limits per package

Packaging Instruction 965 (Lithium Ion and Lithium Polymer) – Section 2 – Package Limits Table

<table>
<thead>
<tr>
<th>Contents</th>
<th>Lithium ion cells and/or batteries with a Watt-hour rating not more than 2.7 Wh</th>
<th>Lithium ion cells with a Watt-hour rating more than 2.7 Wh, but not more than 20 Wh</th>
<th>Lithium ion batteries with a Watt-hour rating more than 2.7 Wh, but not more than 100 Wh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum number of cells / batteries per package</td>
<td>No limit</td>
<td>8 cells</td>
<td>2 batteries</td>
</tr>
<tr>
<td>Maximum net quantity (mass) per package</td>
<td>2.5 kg</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>
Packing Instruction 968 (Lithium Metal) – Section 2 – Package Limits Table

<table>
<thead>
<tr>
<th>Contents</th>
<th>Lithium metal cells and/or batteries with a lithium content not more than 0.3 g</th>
<th>Lithium metal cells with a lithium content more than 0.3 g but not more than 1 g</th>
<th>Lithium metal batteries with a lithium content more than 0.3 g but not more than 2 g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum number of cells / batteries per package</td>
<td>No limit</td>
<td>8 cells</td>
<td>2 batteries</td>
</tr>
<tr>
<td>Maximum net quantity (mass) per package</td>
<td>2.5 kg</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

New Section “1B” for Lithium Ion (PI 965) and Lithium Metal (PI 968) Cells and Batteries

- Packages of cells or batteries that exceed the limits indicated in the tables above must be shipped as Class 9. However these Section 1B packages
  - do not require UN specification packaging
  - do not require a Shipper’s Declaration provided that alternative written documentation or electronic information describing the contents is given to the carrier (see next bullet below)
  - do require a dangerous goods acceptance check
  - do require a Class 9 hazard label AND the ICAO lithium battery handling label to distinguish them from other lithium battery packages
- Shippers must provide their carrier with the following information:
  - name and address of the shipper and consignee
  - appropriate proper shipping name and UN number
  - number of packages and gross mass of each package
- Dangerous goods training is required for personnel involved in the transport of Section 1B cells and/or batteries.

Weight Limits for Lithium Cells or Batteries Packed With or Contained in Equipment

- The net quantity of lithium ion or lithium metal batteries packed with or contained in equipment per package is limited to 5 kg under Section 1 and Section 2. This quantity limit remains in place for Class 9 shipments (Section 1) but is now to be applied to Section 2 shipments as well.

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