Shipping Information for Transportation of Ultracapacitors

Maxwell Technologies® BOOSTCAP® ultracapacitor products contain Acetonitrile, which is identified as UN1648, Acetonitrile, Class 3 (Flammable). Ultracapacitors as articles are not specifically listed nor exempted from dangerous goods transportation regulations. Maxwell Technologies has elected to handle its large cell ultracapacitor product line as UN1648. As such, transportation of BOOSTCAP large cell ultracapacitors should conform to regulations applicable to UN1648, including labeling, packaging, and provisions for excepted and limited quantities. Maxwell Technologies ships all large cell ultracapacitor products in accordance with these regulations.

Once the ultracapacitors have been integrated in a system or an appliance, customers or transporters will need to know the quantity in litres of Acetonitrile contained in the used product (see the Maxwell product matrix in exhibit 2) and refer to the regulations for a given transportation mode as listed below in this document.

Note: PC and HC product lines are packaged in sufficiently small quantities that these dangerous goods regulations do not apply under either UN1648 or UN3363 (see Exhibit 3).
1. AIR FREIGHT

International Air Transport Association (IATA):

All above-mentioned products are considered as Dangerous Goods, per regulations of IATA. However, the rules differ from UN 1648 to UN 3363. Shipping information is as follows:

**UN 1648**

A) Identification UN number: 1648  
B) Proper shipping name: Acetonitrile  
C) Hazard Class description: Class 3 (Flammable)  
D) Subsidiary Risk: none  
E) Hazard label required: 3 + UN 1648  
F) Packing group: II  
G) Packing Inst. Passenger & cargo aircraft: Y305  
H) Limited quantity: 1 liter  
I) Packing Inst. Passenger & cargo aircraft: 305  
J) Maximal quantity into parcel: 5 liter  
K) Packing Inst. cargo aircraft: 307  
L) Maximal quantity into parcel: 60 liter  
M) Particular disposition: none  
N) Identification code: 3L

**UN 3363**

A) Identification UN number: 3363  
B) Proper shipping name: Dangerous Goods in Apparatus  
C) Hazard Class description: 9 (Miscellaneous)  
D) Subsidiary Risk: none  
E) Hazard label required: 9  
F) Packing group: ---  
G) Packing Inst. Passenger & cargo aircraft: See 916  
H) Limited quantity: see 2.7 and table 2.7.A  
I) Packing Inst. Passenger & cargo aircraft: see 916  
J) Maximal quantity into parcel: see 916  
K) Packing Inst. cargo aircraft: see 916  
L) Maximal quantity into parcel: see 916  
M) Particular disposition: A48 + A107  
N) Identification code: 9L

916: if qty of Acetonitrile per box is less < 0.5 litre, then UN3363 is applicable, otherwise it is UN1648
2. BOAT TRANSPORTATION:
The International Maritime Dangerous Goods (IMDG):
All above-mentioned products are considered as Dangerous Goods, per regulations of IMDG. However, the rules differ from UN 1648 to UN 3363. Shipping information is as follows:

**UN 1648**
1) Identification UN number: UN 1648
2) Proper shipping name: Acetonitrile
3) Hazard Class number & description: Class 3 (Flammable)
   Hazard label required: Class 3 (flammable)
4) Subsidiary risk: none
5) Packing group: II
6) Specials dispositions: none
7) Limited Quantities: 1 liter
8) Packing instruction: P001
9) Specials dispositions: none
10) GRV packing instruction: IBC002
11) GRV disposition: none
12) – 14) ---- Container + Tank only
15) Security: FE, - SD
16) Stowing and separately storage: Category B
17) Property and observation: Highly flammable (flashpoint less than +23°C)
   Leaking liquid evaporates - risk of explosion Vapours may be narcotic, high concentration may lead to unconsciousness May decompose in a fire giving off toxic fumes. The effect of inhalation may be delayed. May form explosive mixtures with air, particularly in empty un-cleaned receptacles Heating will cause pressure rise - with risk of bursting and explosion Possible hazards to surface waters and purification plants.

**UN 3363**
1) Identification UN number: UN 3363
2) Proper shipping name: Dangerous Goods in Apparatus
3) Hazard Class number & description: 9 (Miscellaneous)
   Hazard label required: 9
4) Subsidiary risk: none
5) Packing group: ---
6) Specials dispositions: 301
7) Limited Quantities: none
8) Packing instruction: P907
9) Specials dispositions: none
10) GRV packing instruction: ---
11) GRV disposition: ---
12) – 14) ---- Container + Tank only
13) Security: F-A, - S-P
14) Stowing and separately storage: Category A
15) Property and observation: Dangerous good in limited quantities only
16) Packing instruction: 301
301: if qty of Acetonitrile per apparatus is less < 1 litre, then UN3363 is applicable, otherwise it is UN1648
### 3. ROAD / RAIL TRANSPORTATION

**European Agreement concerning the International carriage of Dangerous Goods by Road (ADR)**  
– also applicable for transport by rail (RID):

Only products that are UN 1648 are subject to this agreement. UN 3363 is exempted from this agreement. Shipping information is as follows:

<table>
<thead>
<tr>
<th>UN 1648</th>
<th>UN 3363</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Identification UN number:</strong></td>
<td>1648</td>
</tr>
<tr>
<td><strong>Proper shipping name:</strong></td>
<td>Acetonitrile</td>
</tr>
<tr>
<td><strong>Hazard Class number &amp; description:</strong></td>
<td>Class 3 (Flammable)</td>
</tr>
<tr>
<td><strong>Code of classification:</strong></td>
<td>F1</td>
</tr>
<tr>
<td><strong>Packing group:</strong></td>
<td>II</td>
</tr>
<tr>
<td><strong>Hazard label required:</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Limited quantities:</strong></td>
<td>LQ 4 (3 liter / max gross weight = 30kg per parcel) / (Pal.1 liter/30 liter)</td>
</tr>
<tr>
<td><strong>Packing instruction:</strong></td>
<td>P001 IBC02 R001</td>
</tr>
<tr>
<td><strong>Special packing disposition:</strong></td>
<td>---</td>
</tr>
<tr>
<td><strong>Packing disposition (Common):</strong></td>
<td>MP19</td>
</tr>
<tr>
<td><strong>Transport category and Tunnel:</strong></td>
<td>2 (DIE)</td>
</tr>
<tr>
<td><strong>Special dispositions:</strong></td>
<td>---</td>
</tr>
<tr>
<td><strong>Exploitation:</strong></td>
<td>S2 S20</td>
</tr>
<tr>
<td><strong>Dangererous code:</strong></td>
<td>33</td>
</tr>
</tbody>
</table>

**NOT CLASSIFIED AS DANGEROUS GOODS**

Proper shipping name:  
Hazard Class number & description:  
UN Identification number:  
Packing group:  
Hazard label required:  

Exhibit 1 - Hazard labels:

- UN 1648
- UN 3363
- UN 1648
- UN 3363
## Exhibit 2 - Product matrix for the quantity of Acetonitrile per unit:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>ACN content (Litre)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HC Cell Family</strong></td>
<td></td>
</tr>
<tr>
<td>BCAP0025 P270</td>
<td>0.002</td>
</tr>
<tr>
<td>BCAP0050 P270</td>
<td>0.004</td>
</tr>
<tr>
<td>BCAP0100 P270</td>
<td>0.007</td>
</tr>
<tr>
<td>BCAP0150 P270</td>
<td>0.009</td>
</tr>
<tr>
<td><strong>D-cell Family Cells</strong></td>
<td></td>
</tr>
<tr>
<td>D-Cell BCAP0350 E250</td>
<td>0.025</td>
</tr>
<tr>
<td>D-Cell BCAP0310 P250</td>
<td>0.025</td>
</tr>
<tr>
<td>D-Cell BCAP0350 E270</td>
<td>0.025</td>
</tr>
<tr>
<td>D-Cell BCAP0310 P270</td>
<td>0.025</td>
</tr>
<tr>
<td><strong>MC Family Cells</strong></td>
<td></td>
</tr>
<tr>
<td>BCAP0650 E270 T0x</td>
<td>0.050</td>
</tr>
<tr>
<td>BCAP0650 P270 T0x</td>
<td>0.050</td>
</tr>
<tr>
<td>BCAP1200 E270 T0x</td>
<td>0.089</td>
</tr>
<tr>
<td>BCAP1200 P270 T0x</td>
<td>0.089</td>
</tr>
<tr>
<td>BCAP1500 E270 T0x</td>
<td>0.099</td>
</tr>
<tr>
<td>BCAP1500 P270 T0x</td>
<td>0.099</td>
</tr>
<tr>
<td>BCAP2000 E270 T0x</td>
<td>0.14</td>
</tr>
<tr>
<td>BCAP2000 P270 T0x</td>
<td>0.14</td>
</tr>
<tr>
<td>BCAP2600 E270 T0x</td>
<td>0.15</td>
</tr>
<tr>
<td>BCAP2600 P270 T0x</td>
<td>0.15</td>
</tr>
<tr>
<td>BCAP3000 E270 T0x</td>
<td>0.20</td>
</tr>
<tr>
<td>BCAP3000 P270 T0x</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>K2 Family Cells</strong></td>
<td></td>
</tr>
<tr>
<td>BCAP0650 P270 K0x</td>
<td>0.050</td>
</tr>
<tr>
<td>BCAP1200 P270 K0x</td>
<td>0.089</td>
</tr>
<tr>
<td>BCAP1500 P270 K0x</td>
<td>0.099</td>
</tr>
<tr>
<td>BCAP2000 P270 K0x</td>
<td>0.14</td>
</tr>
<tr>
<td>BCAP3000 P270 K0x</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>15V Modules</strong></td>
<td></td>
</tr>
<tr>
<td>BMOD/BPAK 0052</td>
<td>0.15</td>
</tr>
<tr>
<td>BMOD/BPAK 0058</td>
<td>0.15</td>
</tr>
<tr>
<td>BPAK 0020 and 23</td>
<td>0.066</td>
</tr>
<tr>
<td><strong>16V Modules</strong></td>
<td></td>
</tr>
<tr>
<td>BMOD0110 E016 B01 02</td>
<td>0.32</td>
</tr>
<tr>
<td>BMOD0110 P016 B01 02</td>
<td>0.32</td>
</tr>
<tr>
<td>BMOD0250 E016 B01 02</td>
<td>0.60</td>
</tr>
<tr>
<td>BMOD0250 P016 B01 02</td>
<td>0.60</td>
</tr>
<tr>
<td>BMOD0500 E016 B01 02</td>
<td>1.22</td>
</tr>
<tr>
<td>BMOD0500 P016 B01 02</td>
<td>1.22</td>
</tr>
<tr>
<td><strong>48V Modules</strong></td>
<td></td>
</tr>
<tr>
<td>BMOD0083 E048 B01 02</td>
<td>1.79</td>
</tr>
<tr>
<td>BMOD0083 P048 B01 02</td>
<td>1.79</td>
</tr>
<tr>
<td>BMOD0110 E048 B01 02</td>
<td>2.55</td>
</tr>
<tr>
<td>BMOD0110 P048 B01 02</td>
<td>2.55</td>
</tr>
<tr>
<td>Part Number</td>
<td>ACN content (Litre)</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>BMOD0145 E048 B01</td>
<td>2.70</td>
</tr>
<tr>
<td>BMOD0145 P048 B01</td>
<td>2.70</td>
</tr>
<tr>
<td>BMOD0145 E048 B02</td>
<td>2.70</td>
</tr>
<tr>
<td>BMOD0165 E048 B01</td>
<td>3.65</td>
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<tr>
<td>BMOD0165 P048 B01</td>
<td>3.65</td>
</tr>
<tr>
<td><strong>75V Modules</strong></td>
<td></td>
</tr>
<tr>
<td>BMOD0094 E075</td>
<td>6.48</td>
</tr>
<tr>
<td><strong>HTM modules</strong></td>
<td></td>
</tr>
<tr>
<td>390V HTM</td>
<td>21.9</td>
</tr>
<tr>
<td>125V HTM</td>
<td>9.72</td>
</tr>
</tbody>
</table>
Exhibit 3. Product matrix for the quantity of Acetonitrile per unit for products which do not require “dangerous goods” declaration and packaging as shipped by Maxwell Technologies.

<table>
<thead>
<tr>
<th></th>
<th>ACN content (ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PC Family</strong></td>
<td></td>
</tr>
<tr>
<td>PC-5</td>
<td>0.6</td>
</tr>
<tr>
<td>PC-10 all models</td>
<td>1</td>
</tr>
<tr>
<td><strong>HC Family</strong></td>
<td></td>
</tr>
<tr>
<td>BCAP0001 P270</td>
<td>0.12</td>
</tr>
<tr>
<td>BCAP0003 P270</td>
<td>0.36</td>
</tr>
<tr>
<td>BCAP0005 P270</td>
<td>0.6</td>
</tr>
<tr>
<td>BCAP0010 P270</td>
<td>1</td>
</tr>
</tbody>
</table>