Apple Products Information Sheet

The products referenced herein are "articles" under 29 CFR 1910.1200. The European Classification and Labelling Regulation (EC) No 1272/2008 (CLP) and the Globally Harmonized System (GHS) of Classification and Labelling of Chemicals exempt articles from the Safety Data Sheet requirements. This Product Information Sheet is provided as a service to our customers.

Product: Lithium ion single cell batteries (Li-ion) **Watt Hours:** ≤ 20
(For purpose of transport regulations, a single cell battery is considered a "cell" for classification purposes)

Models: Lithium ion single cell batteries found in authentic Apple products - iPad mini, iPod, iPhone and Bluetooth headsets manufactured after January 1, 2007

Edition Date: August 12, 2014
Version: 14-01

GENERAL SAFETY

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use may it present potential health and safety hazards.

FIRST AID

Ingestion: Ingestion of a Li-ion battery is highly unlikely in the workplace, as the contents of a Li-ion battery are mostly solid, and any free liquid (ester-based electrolyte) that might drip out of a damaged battery is limited to a few drops. However, care should be taken not to touch fingers to mouth while handling a damaged battery to avoid any ingestion of contents. Do not induce vomiting. Wash out mouth with water. Get medical attention following exposure or if feeling unwell.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if feeling unwell.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse.

Eye Contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists.

HANDLING & STORAGE

Handling – Do not expose cells to excessive physical shock or vibration. Do not disassemble. Should an individual cell become ruptured, do not allow contact with water.

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Storage – Store in a cool, well ventilated area. Storage above 100 degrees can result in loss of cell performance, leakage, or rust. Do not expose battery to open flame.

FIRE SAFETY

In case of fire where lithium ion batteries are stored, flood the area with water as needed to control the fire on nearby ordinary combustibles. If any batteries are involved, water may not extinguish them, but will cool the adjacent batteries and control the spread of fire. Fire fighters should wear self-contained breathing apparatus.

To control/stop a thermal battery event where only the battery is involved, plentiful clean/dry sand is effective at immediately smothering the thermal reaction and reducing smoke, if applied to cover the battery, especially in the first few seconds of the event. CO2, dry chemical, and foam extinguishers may also be used for small fires in areas where Li-ion batteries are stored, but may not extinguish the involved lithium ion batteries themselves. LITH-X (powdered graphite) or copper powder fire extinguishers, dry ground dolomite or soda ash may also be used (these materials also act as smothering agents).

DISPOSAL

Apple's Lithium ion cells contain recyclable materials and should not be put into the municipal waste stream. Refer to the following websites for battery replacement and recycling options (http://www.apple.com/batteries/replacements.html, http://www.apple.com/recycling/). Do not dispose of in fire.

TRANSPORTATION

Apple's lithium ion cells have been successfully tested and comply with the UN Model Regulations, Manual of Test and Criteria, Part III, subsection 38.3. Cells have been manufactured under a quality management program as specified in 2.9.4 of the UN Model Regulations.

PERFORMED TESTS			RESULTS
38.3.4.1	T1	Altitude Simulation	Pass
38.3.4.2	T2	Thermal Test	Pass
38.3.4.3	T3	Vibration	Pass
38.3.4.4	T4	Shock	Pass
38.3.4.5	T5	External Short Circuit	Pass
38.3.4.6	T6	Impact / Crush	Pass
38.3.4.7	T7	Overcharge	Pass
38.3.4.8	T8	Forced Discharge	Pass

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Apple's Lithium ion cells are rated at 20 Watt-hours (1.5g ELC) or less and meet the requirements for transportation under:

- UN Model Regulations 18th revised edition Special Provisions 188 and 230
- International Civil Aviation Organization (ICAO) Technical Instructions and the International Air Transport Association (IATA) Dangerous Goods Regulations Packing Instructions:
  - 965 Section IB or Section II (UN3480, Lithium ion batteries)
  - 966 Section II (UN3481, Lithium ion batteries packed with equipment)
  - 967 Section II (UN3481, Lithium ion batteries contained in equipment)
- International Maritime Organization (IMO) Special Provisions 188 and 230
- European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) Special Provisions 188 and 230
- U.S. Department of Transportation (DOT) 49 CFR 173.185 and Special Provision 188

The following table provides Apple Product Limits for Air Freight

Apple Products Limits for Air Freight	UN Codes UN3481: Lithium ion batteries contained in equipment UN3480 : Lithium ion batteries (only)	Max number per multipack/ clusterpack NO Li-Ion labels required	Cannot ship more than the higher number in a Multipack / Clusterpack (to stay under 5 kg) Li-ion label, marks and doc required	Cells per Battery Pack 1 battery per product	Watt-Hours per Battery	Packing Instruction	Equivalent Lithium Content (ELC)	Lithium Ion battery weight only (heaviest per family) KG
iPad mini	UN3481	4	5 - 53	1	≤ 20	PI967 Sec. II	≤ 1.5 g	0.094
iPod touch	UN3481	4	5 - 238	1	≤ 20	PI967 Sec. II	≤ 1.5 g	0.0195
iPod nano	UN3481	4	5 - 500	1	≤ 20	PI967 Sec. II	≤ 1.5 g	0.021
iPod classic	UN3481	4	5 - 161	1	≤ 20	PI967 Sec. II	≤ 1.5 g	0.031
iPod shuffle	UN3481	4	5 - 416	1	≤ 20	PI967 Sec. II	≤ 1.5 g	0.012
iPhone	UN3481	4	5 - 166	1	≤ 20	PI967 Sec. II	≤ 1.5 g	0.06
Stand alone single cell battery (iPod nano, classic and shuffle)	UN3480	NA	2.5 kg	1	≤ 2.7	PI965 Sec. II	≤ .21 g	**See specific product above for battery weight**
Stand alone single cell Battery (iPod touch and iPhone)	UN3480	NA	1 - 8	1	> 2.7 but ≤ 20	PI965 Sec. II	≤ 1.5g	

REGULATORY INFORMATION

If hazardous materials are present in the workplace, Safety Data Sheets (SDS) are required by various national and international occupational worker safety regulations. However, SDSs are not required for articles. An article is defined as a manufactured item other than a fluid or particle; (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g. minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.

GENERAL RECOMMENDATIONS

CAUTION: Under extreme conditions, a risk of fire, explosion and burns exists. Do not short-circuit, crush, puncture, heat, incinerate or disassemble cells.

Notice: The information, certification of compliance, and recommendations contained in this document are accurate at the date of preparation. Always consult the most recent version from the Apple XXXX website for the most up to date revision.

Apple Products Information Sheet

The products referenced herein are "articles" under 29 CFR 1910.1200. The European Classification and Labelling Regulation (EC) No 1272/2008 (CLP) and the Globally Harmonized System (GHS) of classification and Labelling of Chemicals exempt articles from the Safety Data Sheet requirements. This Product Information Sheet is provided as a service to our customers.

Product: Lithium ion multi-cell batteries (Li-ion) **Watt Hours:** ≤ 100
(For purpose of transport regulations, a multi cell battery is considered a "battery" for classification purposes)

Models: Lithium ion multi-cell batteries found in authentic Apple products - portable computers, iPad Air and iPads manufactured after January 1, 2007

Edition Date: August 12, 2014
Version: 14-01

GENERAL SAFETY

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use may it present potential health and safety hazards.

FIRST AID

Ingestion: Ingestion of a Li-ion battery is highly unlikely in the workplace, as the contents of a Li-ion battery are mostly solid, and any free liquid (ester-based electrolyte) that might drip out of a damaged battery is limited to a few drops. However, care should be taken not to touch fingers to mouth while handling a damaged battery to avoid any ingestion of contents. Do not induce vomiting. Wash out mouth with water. Get medical attention following exposure or if feeling unwell.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if feeling unwell.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse.

Eye Contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists.

HANDLING & STORAGE

Handling – Do not expose battery to excessive physical shock or vibration. Do not disassemble. Should an individual cell within a battery become ruptured, do not allow contact with water.

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Storage – Store in a cool, well ventilated area. Storage above 100 degrees can result in loss of battery performance, leakage, or rust. Do not expose battery to open flame.

FIRE SAFETY

In case of fire where lithium ion batteries are stored, flood the area with water as needed to control the fire on nearby ordinary combustibles. If any batteries are involved, water may not extinguish them, but will cool the adjacent batteries and control the spread of fire. Fire fighters should wear self-contained breathing apparatus.

To control/stop a thermal battery event where only the battery is involved, plentiful clean/dry sand is effective at immediately smothering the thermal reaction and reducing smoke, if applied to cover the battery, especially in the first few seconds of the event. CO2, dry chemical, and foam extinguishers may also be used for small fires in areas where Li-ion batteries are stored, but may not extinguish the involved lithium ion batteries themselves. LITH-X (powdered graphite) or copper powder fire extinguishers, dry ground dolomite or soda ash may also be used (these materials also act as smothering agents).

DISPOSAL

Apple's Lithium ion batteries contain recyclable materials and should not be put into the municipal waste stream. Refer to the following websites for battery replacement and recycling options (http://www.apple.com/batteries/replacements.html, http://www.apple.com/recycling/). Do not dispose of in fire.

TRANSPORTATION

Apple's lithium ion batteries have been successfully tested and comply with the UN Model Regulations, Manual of Test and Criteria, Part III, subsection 38.3. Batteries have been manufactured under a quality management program as specified in 2.9.4 of the UN Model Regulations.

PERFORMED TESTS			RESULTS
38.3.4.1	T1	Altitude Simulation	Pass
38.3.4.2	T2	Thermal Test	Pass
38.3.4.3	T3	Vibration	Pass
38.3.4.4	T4	Shock	Pass
38.3.4.5	T5	External Short Circuit	Pass
38.3.4.6	T6	Impact / Crush	Not applicable
38.3.4.7	T7	Overcharge	Pass
38.3.4.8	T8	Forced Discharge	Not applicable

Notice: The information, certification of compliance, and recommendations contained in this document are accurate at the date of preparation. Always consult the most recent version from the Apple XXXX website for the most up to date revision.

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Apple's Lithium ion batteries are rated at 100 Watt-hours (8g ELC) or less and meet the requirements for transportation under:

- UN Model Regulations 18th revised edition Special Provisions 188 and 230
- International Civil Aviation Organization (ICAO) Technical Instructions and the International Air Transport Association (IATA) Dangerous Goods Regulations Packing Instructions:
  - 965 Section IB or Section II (UN3480, Lithium ion batteries)
  - 966 Section II (UN3481, Lithium ion batteries packed with equipment)
  - 967 Section II (UN3481, Lithium ion batteries contained in equipment)
- International Maritime Organization (IMO) Special Provisions 188 and 230
- European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) Special Provisions 188 and 230
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The following table provides Apple Product Limits for Air Freight

Apple Products Limits for Air Freight	UN Codes UN3481: Lithium ion batteries contained in equipment UN3480 : Lithium ion batteries (only)	Max number per multipack/ clusterpack NO Li-Ion labels required	Cannot ship more than the higher number in a Multipack/ clusterpack (to stay under 5 kilos) Li-ion label, marks and doc required	Cells per Battery Pack 1 battery per product	Watt-Hours per Battery	Packing Instruction	Equivalent Lithium Content (ELC)	Lithium Ion battery weight only (heaviest per family) KG
MacBook Pro	UN3481	2	3 - 5	Multi-cell	≤ 100	PI967 Sec. II	≤ 8 g	0.9
MacBook Air	UN3481	2	3 -16	Multi-cell	≤ 100	PI967 Sec. II	≤ 8 g	0.312
MacBook	UN3481	2	3 - 5	Multi-cell	≤ 100	PI967 Sec. II	≤ 8 g	0.9
iPad	UN3481	2	3 - 23	Multi-cell	≤ 100	PI967 Sec. II	≤ 8 g	0.214
iPad Air	UN3481	2	3 - 23	Multi-cell	≤ 100	PI967 Sec. II	≤ 8 g	0.214
MacBook stand-alone battery	UN3480	NA	1 - 2	Multi-cell	> 2.7 but ≤ 100	PI965 Sec. II	≤ 8 g	**See specific product above for battery weight**

REGULATORY INFORMATION

If hazardous materials are present in the workplace, Safety Data Sheets (SDS) are required by various national and international occupational worker safety regulations. However, SDSs are not required for articles. An article is defined as a manufactured item other than a fluid or particle; (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g. minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.

GENERAL RECOMMENDATIONS

CAUTION: Under extreme conditions, a risk of fire, explosion and burns exists. Do not short-circuit, crush, puncture, heat, incinerate or disassemble battery.

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