

Safety Data Sheet

Issued/Revised Date: 1. 1, 2022

1. Product and Company Identification

Important Note: As a solid, manufactured article, exposure to hazardous ingredients is not expected with normal use. This battery is an article pursuant to 29 CFR 1910.1200 and, as such, is not subject to the OSHA Hazard Communication Standard requirement. The information contained in this Material Safety Data Sheet contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Commercial product name

See Further Information below for Model Names

Use of the substance/preparation

Lithium-Ion battery

Manufacturer

BYD LITHIUM BATTERY CO., LTD.

Address

NO.1,Bao Ping Road, Baolong Industrial Town, Longgang Shenzhen, 518116, P.R. China

Company/undertaking identification

Emergency Contact (Wu Di Tel: +86-755-8988 8888 ext 55163)

DELL Australia Emergency Contact information

Dell Australia Pty Limited
Building 3 14 Acquatic Drive
French's Forest Sydney,
NSW 2086
+(61) 2 8223 9403

Emergency Phone number

CHEMTREC Australia (Sydney) +(61) 2 90372994

Further Information

EE spec	Dell PN	Nominal Voltage	Rated Capacity
YX0XH	WYCVV	7.6V	4250mAh
YX0XH	T16KJ	7.6V	4250mAh
FTD6M	6HHW5	7.6V	2750mAh
WDX0R	FW8KR	11.4V	3500mAh
6MT4T	K3JK9	7.6V	7750mAh

J60J5	GG4FM	7.6V	6880mAh
PWKWM	63K70	15.2V	3500mAh
93FTF	DJWGP	11.4V	4254mAh
GJKNX	KCM82	7.6V	8500mAh
F62G0	RPJC3	11.4V	3166mAh
51KD7	FY8XM	11.4V	3510mAh
8N0T7	TMFYT	11.4V	6254mAh
3DDDG	RRJDX	11.4V	3500mAh
DJ1J0	9W9MX	11.4V	3500mAh
F3YGT	KG7VF	7.6V	7500mAh
5TF10	GHXKY	7.6V	8420mAh
NYFJH	GW0K9	11.4V	8500mAh
NYFJH	DP9KT	11.4V	8500mAh
H5H20	CP6DF	11.4V	4649mAh
33YDH	7FHHV	15.2V	3500 mAh
GJKNX	C7J70	7.6V	8500mAh
YRDD6	1VX1H	11.4V	3500mAh
1F22N	HYWXJ	15.2V	3750mAh
XRGXX	6YV0V	11.4V	7500mAh
52TWH	XX3T7	7.6V	6375mAh
0G74G	8JYHH	11.4V	3500mAh
MXV9V	N2K62	7.6V	7500mAh
MXV9V	WXW80	7.6V	7500mAh
1V1XF	27W58	11.4V	3500mAh
R8D7N	TNT6H	11.4V	4254mAh
4GVMP	9JRYT	7.6V	8500mAh
4GVMP	WJDPW	7.6V	8500mAh
1FKCC	D9J00	7.6V	4750mAh
1FKCC	T5H6P	7.6V	4750mAh
NF2MW	G8F6M	7.6V	6500mAh
7146W	2K0CK	11.4V	6500mAh
NF2MW	DJ5GG	7.6V	6500mAh
DT9XG	7PWKV	11.4V	7500mAh
Y9M6F	YM9KC	11.4V	6333mAh
3HWPP	3PCVM	15.2V	4250mAh
3HWPP	YPVX3	15.2V	4250mAh
JPFMR	16DPH	11.4V	3500mAh
266J9	M4GWP	11.4V	4255mAh
HK6N5	DGV24	7.6V	5618mAh
NXX33	MJMVV	7.6V	3500mAh

7MT0R	DN33X	10.95V	2831mAh
722KK	FP86V	7.6V	6500mAh
8FCTC	DVG8M	11.4V	4650mAh
69KF2	M59JH	11.4V	7167mAh
N7HT0	HYMNG	7.6V	6500mAh
N7HT0	YMX3G	7.6V	6500mAh
26N5V	Y3WGR	7.6V	6500mAh
TVKGH	89GNG	11.4V	7334mAh
5XJ6R	3324J	11.4V	4667mAh
XG4K6	F8CPG	11.4V	8071mAh
35J09	YJ9RP	11.4V	3255mAh
JHT2H	HRGYV	7.6V	6500mAh
JHT2H	XMT81	7.6V	6500mAh
Y7HR3	XMV7T	11.4V	5666mAh
C903V	447VR	11.4V	5667mAh
PKWVM	CR72X	11.4V	7922mAh
PWKVM	J0VNR	11.4V	7922mAh
JK6Y6	CF5RH	11.25V	3378mAh
H5CKD	TXD03	15V	3360mAh
MV07R	W5W19	15.2V	4255mAh
V0GMT	NCC3D	11.4V	4649mAh
4K1VM	XYCW0	11.4V	8071mAh
NF2MW	GJD1V	7.6V	6500mAh
7146W	WD8P8	11.4V	6500mAh
X1W0D	DD9VF	7.6V	6375mAh
T40JJ	HD8WG	3.7V	500mAh
Y2RV2	HWGYR/7XF2T	3.7V	500mAh
WY9DX	M3KCN	11.4V	3500mAh
RJ40G	M033W	15.2V	3941mAh
9JM71	HDGJ8	11.4V	3500mAh
7FMXV	4M1JN	15.2V	3941mAh
V5K68	F68NR	7.6V	6053mAh
G91J0	PG8YJ	11.25V	3467mAh
V6W33	WV3K8	15.0V	3420mAh
TN70C	JGCCT	15.2V	4000mAh
3VV58	6VJ1F	7.7V	4896mAh
GHJC5	VTH85	11.55V	4900mAh
9F4FN	2VKW9	7.6V	5000mAh
DWVRR	NR6MH	11.2V	7250mAh
GRT01	R05P0	15.2V	4000mAh
9JRV0	53XP7	11.4V	8071mAh
NR6MH	DWVRR	11.4V	7250mAh
XVJNP	6JRCP	11.4V	4457mAh
MN79H	NXRKW	11.55V	4524mAh
YKG3C	X0Y5M	11.4V	3500mAh
293F1	51R71	11.25V	3467mAh
M69D0	8WRCR	11.25V	3467mAh
YM15G	G9FHC	11.55V	4191mAh

VG661	V4N84	11.4V	6709mAh
RCVVT	X26RT	11.55V	6827mAh
X9FTM	965V4	11.55V	7650mAh
MN79H	NXRKW	11.55V	4524mAh
P83V9	CDTT2	15.4V	4442mAh
G8W13	7HFP9	11.4V	4123mAh
6WVHD	JM6CX	7.6V	4457mAh

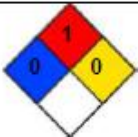

Anode (negative electrode): based on carbon

Cathode (positive electrode): based on lithium cobalt oxide

Remark:

The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. BYD LITHIUM BATTERY CO., LTD. makes no warranty, expressed or implied, with respect to this information and disclaims all liabilities from reliance on it.

2. Hazards Identification

Protective Clothing	NFPA Rating (USA)	EC Classification	WHMIS (Canada)	SafeWork (Australia)
Not required with normal use.		Not classified as hazardous	Not applicable with normal use.	Not classified as hazardous
GHS Hazard Symbol	IATA	JIS (Japan)	Taiwan	China
Not applicable with normal use.		Not classified as hazardous	Not classified as hazardous	Not classified as hazardous

2.1. Classification of the substance or mixture.

2.1.1. Preparation Hazards and Classification: The product is a Lithium ion cell or battery and is therefore classified as an article and is not hazardous when used according to the recommendations of the manufacturer. The hazard is associated with the contents of the cell or battery. Under recommended use conditions, the electrode materials and liquid electrolyte are non-reactive provided that the cell or battery integrity remains and the seals remain intact. The potential for exposure should not exist unless the cell or battery leaks, is exposed to high temperatures or is mechanically, electrically or physically abused/damaged. If the cell or battery is compromised and starts to leak, based upon the battery ingredients, the contents are classified as Hazardous.

2.1.2. Classification according to Directive 67/548/EEC or 1999/45/EC as amended: 67/548/EEC

2.1.3. Classification according to Regulation (EC) No. 1272/2008 as amended: NA

2.1.4. Hazard Summary

Physical hazards: Not classified for physical hazards.

Health hazards: Not classified for health hazards.

Environmental hazards: Not classified for hazards to the environment.

Specific hazards: Exposure to contents of an open or damaged cell or battery: contact with this material will cause burns to the skin, eyes and mucous membranes.

May cause sensitization by skin contact.

Main Symptoms: Symptoms include itching, burning, redness and tearing.

2.2. Other Hazards.

2.2.1. Appearance, Color and Odor: Solid object with no odor.

2.2.2. Primary Routes(s) of Exposure: These chemicals are contained in a sealed enclosure. Risk of exposure occurs only if the cell or pack is mechanically, thermally, electrically or physically abused to the point of compromising the enclosure.

If this occurs, exposure to the electrolyte solution contained within can occur by inhalation, ingestion, eye contact and skin contact.

2.2.3. Potential Health Effect(s):

2.2.3.1. Acute (short term): see Section 8 for exposure controls.

In the event that this cell or pack has been ruptured, the electrolyte solution contained within the cell would be corrosive and can cause burns to skin and eyes.

Inhalation: Inhalation of materials from a sealed cell is not an expected route of exposure. Vapors or mists from a ruptured cell may cause respiratory irritation.

Ingestion: Swallowing of materials from a sealed cell is not an expected route of exposure. Swallowing the contents of an open cell can cause serious chemical burns to mouth, esophagus, and gastrointestinal tract.

Skin: Contact between the cell and skin will not cause any harm. Skin contact with the contents of an open cell can cause severe irritation or burns to the skin.

Eye: Contact between the cell and the eye will not cause any harm. Eye contact with the contents of an open cell can cause severe irritation or burns to the eye.

2.2.3.2. CHRONIC (long term): see Section 11 for additional toxicological data.

2.2.4. Medical Conditions Aggravated by Exposure: Not Available.

2.2.5. Interactions with other chemicals: Immersion in high conductivity liquids may cause corrosion and breaching of the cell or battery enclosure. The electrolyte solution inside of the cells may react with alkaline (basic) materials and present a flammability hazard.

2.2.6. Potential Environmental Effects: Not Available.

Precautionary Statement(s) Prevention	P102: Keep out of reach of children. P103: Read label prior to use. P202: Do not handle until all safety precautions have been read and understood. P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking. P234: Keep only in original container. P254: Wash hands thoroughly after handling.
Response (If cell/battery leaks)	P260: Do not breathe vapor or spray. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301/330/331: IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. P303/361/353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304/340: If INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305/351/338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER or doctor/physician. P363: Wash contaminated clothing before reuse. P370: In case of fire: Use carbon dioxide, dry chemical or water extinguisher.

Storage (Store as indicated in Section 7)	P402: Store in a dry place. P405: Store locked up. P410: Protect from sunlight.
Disposal	P406: Store any spilled/leaking electrolyte material in a corrosive resistant container with a resistant inner liner. P501: Dispose of batteries in accordance with applicable hazardous waste regulations.

3. Composition/information on ingredients

Hazardous components

	Chemical Name	CAS No.	*Mass range in cell (g/g %)
Electrolyte	Contains Electrolyte salt and solvents.		10-20
Electrolyte salt	Lithium hexafluorophosphate	21324-40-3	0.5-5
Electrolyte solvent	Includes one or more of the following; Ethylene Carbonate Propylene Carbonate Diethyl Carbonate Carbonic acid diethyl ester 1,3-Dioxolan-2-one 4-Methyl-1,3-dioxolan-2-one	96-49-1 96-49-4 108-32-7 105-58-8 105-58-8 96-49-1 108-32-7	8-18
PVDF	Polyvinylidenefluoride	24937-79-9	0.5-2.0
Copper	Cu	7440-50-8	5-25
Aluminium	Al	7429-90-5	10-30
Cathode	Lithium cobalt oxide	12190-79-3	25-45
Anode	Carbon	7782-42-5	5-25
Steel, Nickel, and inert components		Various	Balance

Because of the cell structure the dangerous ingredients will not be available if used properly.
During charge process a lithium graphite intercalation phase is formed.

4. First Aid MeasuresSDI

4.1. Description of first aid measures

The hazardous components of this cell or battery are contained within a sealed unit. The following measures are only applicable if exposure has occurred to components when a cell or battery leaks, is exposed to high temperatures or is mechanically, electrically or physically abused/damaged. The hazardous contents are caustic alkaline electrolytes contained in cells with lithium metal oxide cathodes, graphite and carbon anodes and Polyvinylidenefluoride binders.

Ingestion: Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Quickly transport victim to an emergency care facility.

EYE: If eye contact with contents of an open cell occurs, immediately flush the contaminated eye(s) with water. Quickly transport victim to an emergency care facility.

Skin Contact: Immediately flush with water. If irritation or pain persists, seek medical attention.

Inhalation: Remove the patient from exposure into fresh air, seek medical attention.

PROTECTION FOR FIRST

AIDERS: Do not enter corrosive vapor contaminated areas without a respirator or Self Contained Breathing Apparatus. Wear adequate personal protective equipment as indicated in Section 8.

FIRST AID FACILITIES: Eye wash bottle, fountain, safety showers or at least a source of running water are required in the area where the product is used.

4.2 Most important symptoms & effects, acute & delayed, caused by exposure:

ACUTE: The contents of the battery are rated as corrosive. Ingestion of the electrolyte could lead to severe gastrointestinal tract irritation with nausea, vomiting and potentially burns. Inhalation of vapors may lead to severe irritation of the mouth and upper respiratory tract with a burning sensation, pain, burns and inflammation in the nose and throat; there may also be coughing or difficulty breathing. Eye contact may lead to severe eye irritation or in worst case scenario irreversible damage and possible eye burns. Skin contact may lead to irritation and possible skin burns.

CHRONIC: Skin contact may aggravate/exacerbate existing skin conditions, such as dermatitis. Chronic inhalation may lead to the same symptoms as listed for acute inhalation above.

4.3 Indication of any immediate medical attention and special treatment needed

ADVICE TO DOCTOR: Treat symptomatically if the person comes into contact with the corrosive electrolyte liquid contents of a damaged battery.

5. Fire Fighting Measures

Suitable extinguishing media

Cold water and dry powder in large amount are applicable.

Use metal fire extinction powder or dry sand if only few cells are involved.

Special hazards arising from the chemical

May form hydrofluoric acid if electrolyte comes into contact with water.

In case of fire, the formation of the following flue gases cannot be excluded:

Hydrogen fluoride (HF), Carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus and protective suit.

Additional information

If possible, remove cell(s) from fire fighting area. If heated above 125°C, cell(s) can explode/vent. Cell is not flammable but internal organic material will burn if the cell is incinerated.

6. Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures:

6.1.1. As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed areas before entering. Wear adequate personal protective equipment as indicated in Section 8.

6.2. Environmental precautions

6.2.1. Absorb spilled material with non-reactive absorbent such as vermiculite, clay or earth. Prevent from migration into soil, sewers and natural waterways – inform local authorities if this occurs.

6.3. Methods and material for containment and cleaning up

6.3.1. Evacuate spill area immediately and remove sources of ignition. Do NOT touch spilled material. Cleanup

personnel must be trained in the safe handling of this product. Spills may be absorbed on non-reactive absorbents such as vermiculite. Place cells or batteries into individual plastic bags and then place into appropriate containers and close tightly for disposal. Ensure that cleanup procedures do not expose spilled material to any moisture. Immediately transport closed containers outside. Lined steel drums are suitable for storage of damaged cells or batteries until proper disposal can be arranged.

7. Handling and Storage

Precaution for Handling

Advice on safe handling

Avoid short circuiting the cell. Avoid mechanical damage of the cell. Do not open or disassemble.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition.

Condition for storage

Requirements for storage rooms and vessels

Storage at room temperature (approx. 20°C) at approx. 20~60% of the nominal capacity (OCV approx. 3.6 - 3.9 V/cell).

Keep in closed original container.

8. Exposure controls/personal protection Exposure limit values Exposure limits

8.1. Exposure Control Measures

8.1.1. Exposure Limit Values: Airborne exposures to hazardous substances are not expected when the cells or batteries are used for their intended purposes. Exposure standards are not applicable to the sealed articles.

8.1.2. Biological Monitoring: Not applicable.

8.1.3. Control Banding: Not applicable.

8.1.4. Recommended monitoring procedures: Follow standard monitoring procedures.

8.1.5. Derived no-effect level (DNEL): Not applicable.

8.1.6. Derived minimal effect level (DMEL): Not applicable.

8.1.7. Predicted no-effect concentrations (PNECs): Not applicable.

8.2. Engineering Controls

8.2.1. Engineering Controls: Special ventilation is not required when using these products in normal use scenarios. Ventilation is required if there is leakage from the cell or battery.

8.2.2. Individual Protection Measures

8.2.2.1. Eye and Face protection: Eye protection is not required when handling cells or batteries during normal use. Wear safety glasses/goggles if handling a leaking or ruptured cell or battery.

8.2.2.2. Skin (Hand) protection: Hand protection is not required when handling the cell or battery during normal use. PVC gloves are recommended when dealing with a leaking or ruptured cell or battery.

8.2.2.3. Skin (clothing) protection: Skin protection is not required when handling the cell or battery during normal use. Wear long sleeved clothing to avoid skin contact if handling a leaking or ruptured cell or battery. Soiled clothing should be washed with detergent prior to re-use.





8.2.2.4. Respiratory protection: During routine operation, a respirator is not required. However, if dealing with an electrolyte leakage and irritating vapors are generated, an approved half face inorganic vapor and gas/acid/particulate respirator is required.

8.2.2.5. Thermal Protection: Not applicable.

8.2.2.6. Other Protective Equipment: Have a safety shower or eye wash station readily available

8.2.3. Hygiene Measures: Do not eat, drink or smoke in work areas. Avoid storing food, drink or tobacco near the product. Practice and maintain good housekeeping.

8.2.4. Environmental exposure controls: Avoid release to the environment.

Respiratory Protection	Hand Protection	Eye Protection	Other
			
In all fire situations, use self-contained breathing apparatus.	In the event of leaking or ruptured cells or batteries, wear gloves.	Safety glasses are recommended in case of leaking or ruptured cells or batteries.	In the event of leaking or ruptured cells or batteries, wear protective clothing.

9. Physical and Chemical Properties

Appearance

Form: Solid
Color: Various
Odor: Odorless

Important health, safety and environmental information

Test method

pHValue:	n.a.
Flash point:	n.a.
Lower explosion limits:	n.a.
Vapour pressure:	n.a.
Density:	n.a.
Water solubility:	Insoluble
Ignition temperature:	n.a.

10. Stability and Reactivity USA, EU

Stability

Stable

Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition. Do not puncture, crush or incinerate.

Materials to avoid

No materials to be especially mentioned.

Hazardous decomposition products

In case of open cells, there is the possibility of hydrofluoric acid and carbon monoxide release.

Possibility of Hazardous Reactions

Will not occur

Additional information

No decomposition if stored and applied as directed.

11. Toxicological Information

11.1. Information on toxicological effects:

The hazardous components of the cell or battery are contained within a sealed unit. Under recommended use conditions, the electrode materials and liquid electrolyte are non-reactive provided that the cell or battery integrity remains and the seals remain intact. The potential for exposure should not exist unless the battery leaks, is exposed to high temperature or is mechanically, electrically or physically abused/damaged. **The following toxicology data is in respect to if a person comes into contact with the electrolyte.**

11.2. Acute Toxicity:

11.2.1. Swallowed: The electrolyte contained within the cell or battery is a corrosive liquid. Ingestion of this electrolyte would be harmful. Swallowing may result in nausea, vomiting, diarrhea, abdominal pain and chemical burns to the gastrointestinal tract. During normal usage ingestion should not be a means of exposure.

11.2.2. Eye: The electrolyte contained within the cell or battery is a corrosive liquid and it is expected that it would cause irreversible damage to the eyes. Contact may cause corneal burns. Effects may be slow to heal after eye contact. Correct handling procedures incorporating appropriate eye protection should minimize the risk of eye irritation.

11.2.3. Skin: The electrolyte contained within the cell or battery is a corrosive liquid and it is expected that it would cause skin burns or severe irritation to the skin if not washed off immediately. Correct handling procedures should minimize the risk of skin irritation. People with pre-existing skin conditions, such as dermatitis, should take extreme care so as not to exacerbate the condition.

11.2.4. Inhaled: Inhalation of vapors from a leaking cell or battery is expected to cause severe irritation of the mouth and upper respiratory tract with a burning sensation, pain, burns and inflammation in the nose and throat; there may also be coughing or difficulty breathing.

11.3. Skin Corrosion/Irritation: The electrolyte contained within the cell or battery is classified as a corrosive liquid and is expected to exhibit Dermal Corrosivity/Irritation.

11.4. Serious Eye Damage/Irritation: The electrolyte contained within the cell or battery is classified as a corrosive liquid and is expected to exhibit serious Damage/Corrosivity.

11.5. Respiratory or Skin Sensitization: The electrolyte contained within the cell or battery is not expected to be a skin sensitizer according to OECD test 406, based on the available data and the known hazards of the components. The electrolyte contained within the battery is not expected to be a respiratory tract sensitizer, based on the available data and the known hazards of the components.

11.6. Germ Cell Mutagenicity: The electrolyte contained within the cell or battery is not expected to be mutagenic according to test such as OECD tests 471, 475, 476, 478 and 479, based on the available data and the known hazards of the components.

11.7. Carcinogenicity: The electrolyte contained within the cell or battery is not expected to be a carcinogen. The cathode contains Cobalt and Nickel components. These components are classified as IARC 2B – possibly carcinogenic to humans, however they do not pose a threat when contained in the cell or battery sealed unit.

11.8. Reproductive Toxicity: The electrolyte contained within the cell or battery is not expected to be a reproductive hazard according to test such as OECD tests 414 and 421, based on the available data and the known hazards of the components.

11.9. Specific Target Organ Toxicity (STOT) – Single Exposure: The electrolyte contained within the cell or battery is corrosive and is expected to cause respiratory irritation by inhalation. Inhalation of vapors may lead to severe irritation of the mouth and upper respiratory tract with a burning sensation, pain, burns and inflammation in the nose and throat; there may also be coughing or difficulty breathing.

11.10. Specific Target Organ Toxicity (STOT) – Repeated Exposure: The cells or batteries are not expected to cause organ damage from prolonged or repeated exposure according to tests such as OECD tests 410 and 412, based on the available data and the known hazards of the components.

11.11. Aspiration Hazard: The cells or batteries are not classified as an aspiration hazard, based on the available data and the known hazards of the components. However, due to the corrosive nature of the product if swallowed, do NOT induce vomiting. If vomiting has occurred after ingestion the person should be observed to ensure that aspiration into the lungs has not occurred and assessed for chemical burns to the gastrointestinal and respiratory tracts.

12. Ecological Information

Further information

Ecological injuries are not known or expected under normal use. Do not flush into surface water or sanitary sewer system.

13. Disposal Considerations

Advice on disposal

For recycling consult manufacturer.

Contaminated packaging

Disposal in accordance with local regulations.

14. Transport Information

With regard to transport, the following regulations are cited and considered:

- UN No. 3480
- UN proper shipping name: Lithium Ion Batteries.
- Transport hazard class : 9
- The International Civil Aviation Organization (ICAO) Technical Instructions, Packing Instruction 965, Section I B or II
- The International Air Transport Association (IATA) Dangerous Goods Regulations, Packing Instruction 965, Section I B or II
- The International Maritime Dangerous Goods (IMDG) Code [Special provision 188, 230]
- US Hazardous Materials Regulations 49 CFR (Code of Federal Regulations) Sections 173.185 Lithium batteries and cells,
- The UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria 38.3 Lithium batteries, Revision 3, Amendment 1 or any subsequent revision and amendment applicable at the date of the type
- Chemical substances information: Japan Advanced Information center of Safety and Health International Chemical Safety Cards (ICSCs):
- International Occupational Safety and Health Information Centre (CIS)
- 1999 TLVs and BEIs: American Conference of Governmental Industrial Hygienists (ACGIH)
- Dangerous Goods Regulations: 63rd Edition of IATA DGR Effective 01 January 2022: International Air Transport Association (IATA)
- IMDG CODE 2018 edition: International Maritime Organization (IMO)
- GB12268 Effective 1 December 2012: Standardization Administration of the People's Republic of China
- SDS of raw materials by prepared by the manufactures

If those lithium-ion batteries are packed with or contained in an equipment, then it is the responsibility of the shipper to ensure that the consignment are packed in compliance to the latest edition of the IATA Dangerous Goods Regulations section II of either Packing Instruction 966 or 967 in order for that consignment to be declared as NOT RESTRICTED (non-hazardous/non-Dangerous). If those lithium-ion batteries are packed with or contained in an equipment, UN No. is UN3481

Our products are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to all the applicable international and national governmental regulations, not limited to the above mentioned. We further certify that the enclosed products have been tested and fulfilled the requirements and conditions in accordance with UN Recommendations (T1 – T8) on the Transport of Dangerous Goods Model Regulations and the Manual of Testes and Criteria.

Test results of the UN Recommendation on the Transport of Dangerous Goods

Manual of Test and Criteria (38.3 Lithium battery)		Test Results	Remark
No	Test item		
T1	Altitude Simulation	Pass	
T2	Thermal Test	Pass	
T3	Vibration	Pass	
T4	Shock	Pass	
T5	External Short Circuit	Pass	
T6	Impact/Crush	Pass	
T7	Overcharge	Pass	For pack and single cell battery only
T8	Forced Discharge	Pass	

15. Regulatory Information

Canadian Federal Regulations:

These products have been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

WHMIS Classification: Not Controlled, manufactured article.

New Substance Notification Regulations: Lithium hexafluorophosphate is listed on the Non-Domestic Substance List (NDSL). All other ingredients in the product are listed, as required, on Canada's Domestic Substances List (DSL).

National Pollutant Release Inventory (NPRI) Substances: These products do not contain any NPRI chemicals.

United States Federal and State Regulations:

TSCA Status: All ingredients in these products are listed on the TSCA inventory.

OSHA: These products do not meet criteria as per Part 1910.1200, manufactured article.

SARA EPA Title III: None.

Sec. 302/304: None.

Sec. 311/312: None.

Sec. 313: None.

CERCLA RQ: None.

Australia and New Zealand

SUSMP: Not applicable

AICS: All ingredients are on the AICS list.

HSNO Approval number: Not applicable

HSNO Group Title: Not applicable

NOHSC:10008 Risk Phrases: R34 - Causes Burns.

NOHSC:1008 Safety Phrases:

S1 – Keep locked up.

S2 – Keep out of reach of children.

S23 – Do not breathe vapor.

S24/25 – Avoid contact with skin and eyes.

S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S27/28 – After contact with skin, take off immediately all contaminated clothing and wash immediately with plenty of water.

S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.

S56 – Dispose of this material and its container at hazardous waste or special waste collection point.

S62 – If swallowed, DO NOT induce vomiting: seek medical advice immediately and show this container or label.

S64 – If swallowed, rinse mouth with water (Only if the person is conscious).

EC Classification for the Substance/Preparation:

These products are not classified as hazardous according to Regulation (EC) No. 1272/2008.
Keep out of the reach of children.

EU Restrictions on use:

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended: Aluminium (CAS 7429-90-5)

Other EU Regulations

This Safety Data Sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Japanese Regulations

Japanese Industrial Standards (JIS) JIS Z 7253:2012
Waste disposal and public cleaning law
Law for Promotion of Effective Utilization of Resources

Taiwanese Regulations

Regulation of Labelling and Hazard Communication of Dangerous and Harmful Materials: Labeling requirements and other relevant provision of chemicals, this product is not classified as dangerous goods.
Toxic Chemicals Substance Control Law: Not Listed.
CNS 1030016 Safety of primary and secondary lithium cells and batteries during transport.

Chinese Regulations

General Rule for Classification and Hazard Communication of Chemicals (GB 13690-2009): Specifies the classification, labeling and hazard communication of chemicals in compliance with the GHS standard for chemical production sites and labeling of consumer goods.
General Rule for Preparation of Precautionary Labels for Chemicals (GB 15258-2009): Specifies the relevant application methods of precautionary labels for chemicals.
Safety Data Sheet for Chemical Products Content and Order of Sections (GB/T 16483-2008)

16. Other Information

Hazardous Materials Information Label (HMIS)

Health: 0
Flammability: 0
Physical Hazard: 0

NFPA Hazard Ratings

Health: 0
Flammability: 0
Reactivity: 0
Unique Hazard:

Further Information

Data of sections 4 to 8, as well as 10 to 12, do not necessarily refer to the use and the regular handling of the product (in this sense consult package leaflet and expert information), but to release of major amounts in case of accidents and irregularities. The information describes exclusively the safety requirements for the product (s) and is based on the present level of our knowledge. This data does not constitute a warranty for the characteristics of the product(s) as defined by the legal warranty regulations. "(n.a. = not applicable; n.d. = not determined)"

The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.



Safety Data Sheet – Appendix A

Subject: Amendment to original SDS prepared by the manufacturer

Section 1. Identification

In addition to the information in **1. Identification** section of the original manufacturer prepared SDS, the following information also applies for Dell products:

Supplier's Details

Supplier's Details	Dell Inc. One Dell Way Round Rock, TX 78682	For Australia only Supplier's Details	Dell Australia Pty Limited Building 3 14 Acquatic Drive French's Forest Sydney, NSW Postcode 2086 +(61) 2 8223 9403
Emergency telephone number	CHEMTREC North America 800-424-9300 International 1-703-527-3887	Australia Emergency Telephone number	CHEMTREC Australia (Sydney) +(61) 2 90372994
Prepared by	Global Product Compliance, Dell Inc.		