

**Explanatory sheet about safety of product for transportation
(Safety Data Sheet for transportation)**

1. Basic item

Product name	Anna Vacuum with lithium ion battery ("Lithium ion battery" includes lithium polymer battery in this document)
UN number	3481, Lithium ion batteries contained in equipment, Class 9
Battery Manufacturer	Energy Company, SANYO Electric Co., Ltd. Technical Administration Group Lithium-Ion Battery Business Unit
Address	222-1 Kaminaizen, Sumoto, Hyogo, Japan
Phone number	+81-799-23-3931
E-mail	joho_gijutsu@gg.jp.panasonic.com

2. Product information

Basic composition of the product

This product contains a battery which consists of such main component as core battery pack assembled with some Lithium ion cells. And it consists of any combination of plastic casing, tube casing, protection circuit boards, safety devices and interface terminals.

3. Safety Information

- SANYO certifies the battery has passed and satisfied the UN Manual of Tests and Criteria Part III, sub-section 38.3 testing in SANYO shipping.

- SANYO manufactured the battery under the quality management programme required in UN Model regulations 2.9.4(e).

3-1) Component cell

The Watt-hour rating of the component Lithium ion cells is not more than 20Wh.

3-2) Battery pack

1. Since the Watt-hour rating of the battery is more than 100Wh, it is a Dangerous Goods of Class 9 that fits UN ID3481.
2. Package of the battery satisfies the regulations of IATA DGR 54th edition Packing Instruction 967 Section I.
3. The battery is not damaged, not defective for safety reasons. The transportation purpose is not for recycling, not for disposal.
4. The battery is a Dangerous Goods of Class 9, UN3481 in sea and road transportation.
5. The battery is a Dangerous Goods of Class 9, UN3481 in air transportation.

1. Product and Company Identification

Name:	Anna Vacuum		
Product Number:	1422		
Chemical Formula:	Lithium ion rechargeable battery pack		
Manufacturer:	24-Hour Emergency Phone Numbers:		
BISSELL Homecare, Inc.	Prosar (Medical)	1 866-303-6951	
PO Box 1888	Chemtrec (US)	1 800-424-9300 acct 2808	
Grand Rapids, MI 49501	Chemtrec (Int'l)	1 703-527-3887	
(616) 453- 4451			

2. Composition Information on Ingredients

<u>Portion</u>	<u>Material name</u>	<u>Concentration range (wt %)</u>
Positive electrode	Lithium transition metal oxidate (Li[M]m[O]n *)	20~60
Positive electrode's base	Aluminum	1~10
Negative electrode	Carbon	10~30
Negative electrode's base	Copper	1~15
Electrolyte	Organic electrolyte principally involves ester carbonate	5~25
Outer case	Laminated plastic	1~30

* The letter M means transition metal and candidates of M are Co, Mn, Ni and Al. One compound includes one or more of these metals and one product include one or more of the compounds. The letter m and n means the number of atoms.

3. Hazard Identification

Emergency Overview: KEEP OUT OF REACH OF CHILDREN

For the battery cell, chemical materials are stored in a hermetically sealed plastic case, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, there is no physical danger of ignition or explosion and chemical danger of hazardous materials' leakage.

However, if exposed to a fire, added mechanical shocks, decomposed, added electric stress by miss-use, the gas release vent will be operated. The battery cell case will be breached at the extreme, and then hazardous materials may be released.

Moreover, if heated strongly by the surrounding fire, acrid gas may be emitted.

Potential Health Effects:

Eye:	Ruptured battery content and vapor is a corrosive irritant to eyes, may cause sensitization.
Skin:	Ruptured battery content and vapor is a corrosive irritant to skin, may cause sensitization.
Inhalation:	Ruptured battery content is an irritant to respiratory tract, and may cause sensitization.
Ingestion:	Ruptured battery content and vapor is a harmful, corrosive irritant.

3. Hazard Identification, continued

Specific hazards: If the electrolyte contacts with water, it will generate detrimental hydrogen fluoride. Since the leaked electrolyte is inflammable liquid, do not bring close to fire.

4. First Aid Measures

Eye: Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin: Remove contaminated clothing. Wash skin with soap and plenty of water.

Ingestion: If swallowed, do NOT induce vomiting. Give a glass of water. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Inhalation: Remove affected person to fresh air. Make the victim blow his/her nose, gargle. Get medical attention if person has difficulty breathing or irritation develops or persists.

5. Fire Fighting Measures

Flash Point: Not tested.

Flammability: Since the leaked electrolyte is a flammable liquid, do not bring close to fire.

Extinguishing Media: Plenty of water, carbon dioxide gas, nitrogen gas, chemical powder fire extinguishing medium and fire foam.

Fire and Explosion Hazards: Corrosive gas may be emitted during fire. If the electrolyte ruptures and contacts with water, it will generate detrimental hydrogen fluoride.

Fire Fighting Equipment: Fire fighters should wear self-contained breathing apparatus and protective clothing.

6. Accidental Release Measures

Spilled internal cell materials, such as electrolyte leaked from a battery cell, are carefully dealt with according to the following.

- Precautions for human body: Remove spilled materials with protective equipment (protective glasses and protective gloves). Do not inhale the gas as much as possible. Moreover, avoid touching with as much as possible.
- Environmental precautions: Do not throw out into the environment.
- Method of cleaning up: The spilled solids are put into a container. The spill area is wiped off with dry cloth.

7. Accidental Release Measures, continued

- Prevention of secondary hazards: Avoid re-scattering. Do not bring the collected materials close to fire.
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7. Handling and Storage

Handling: Use only as directed. Keep the battery away from heat and fire. Do not disassemble or reconstruct the battery; or solder the battery directly. Do not give a mechanical shock or deform. Do not use unauthorized charger or other charging method. Terminate charging when the charging process doesn't end within specified time.

Storage: Store Out Of Reach Of Children. Avoid direct sunlight, high temperature, and high humidity.

8. Personal Protection

Respiratory Protection: Not required under conditions of use.
Protective Gloves: Not required under conditions of use.
Eye Protection: Not required under conditions of use.
Ventilation: Not required under conditions of use.

9. Physical and Chemical Properties

Appearance:	Solid sealed article	Number of Cells:	18
Odor:	No odor	Nominal Voltage:	32.4 V
Form:	Sealed vacuum body	Nominal Capacity:	3550 mAh
Battery weight:	770 grams	Electric Energy:	115 Wh

10. Stability and Reactivity

Chemical Stability: Stable under normal use.

Conditions to Avoid: Avoid exposure to heat, open flame, direct sunlight and high humidity. Do not puncture, crush or incinerate. When a battery cell is exposed to an external short-circuit, crushes, deformation, high temperature above 100 degree C, it will be the cause of heat generation and ignition.

Incompatibility: Conductive materials, water, seawater, strong oxidizers and strong acids.

Hazardous Decomposition: None during normal operating conditions. Acrid or harmful gas is emitted during fire.

Hazardous Polymerization: Will not occur

11. Toxicological Information

Organic Electrolyte

Ingestion: The oral LD50 is greater than 2 g/ kg in rats.

Skin: Dermal irritant.

Eye: Ocular irritant.

12. Ecological Information

Since a battery cell and the internal materials remain in the environment, do not bury or throw out into the environment.

Some jurisdictions require recycling of this spent product. Battery recycling is encouraged. Lithium ion batteries are safe for disposal in the normal municipal waste stream since they are not defined by the federal government as hazardous waste. However, Lithium ion batteries are recyclable.

13. Disposal Consideration

Disposal of Product: Do not incinerate. Spent lithium ion battery packs should be disposed of or recycled in accordance with any applicable national, state/provincial, and local requirements.

Disposal of Packaging: Disposal methods must comply with all Federal, State or Provincial, and local laws and regulations.

14. Transportation Information

HMIS Hazard Rating: Health: 0 Fire: 0 Reactivity: 0

Hazard Rating Scale: 0=Insignificant; 1=Slight; 2=Moderate; 3=High; 4=Extreme

Proper Shipping Description

49 CFR (GRD): UN3481, Lithium ion batteries contained in equipment, Class 9, packaging group II

IATA (AIR): UN3481, Lithium ion batteries contained in equipment, Class 9, packaging group II

IMDG (OCN): UN3481, Lithium ion batteries contained in equipment, Class 9, packaging group II

TDGR (Canadian GND): UN3481, Lithium ion batteries contained in equipment, Class 9, packaging group II

ADR / RID (GRD/ Rail): UN3481, Lithium ion batteries contained in equipment, Class 9, packaging group II

15. Regulatory Information

California Prop 65:	This product does not contain regulated levels of any toxic chemical subject to the reporting requirements.
State Criteria Lists:	This product does not contain regulated levels of any toxic chemical subject to the reporting requirements.
WHIMS Classification:	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations
DSL / NDSL:	All of the components are listed.
Priority Substances List:	None of the components are listed.

16. Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date shown below. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its activities comply with federal, state or Provincial, and local laws.

Effective Date:	January 13, 2014
Supersedes:	Not applicable, New issue
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