

Declaration of Lithium content in products

The following Nedap products contain a Poly-carbon monofluoride Lithium coin cell* with 0.29 gr. of Lithium per cell.

Table 1 lists products that are equipped with two (2) batteries.

Table 2 lists products that are equipped with a single (1) battery.

Here, “x” also stands for multiplication, indicating the number of products per box (10).

Table 1.

Part no.	Description	No. of Lithium Metal cells*	Part no.	Description	No. of Lithium Metal cells*
9968121	NECK TAG IFERP4 NEDAP SET OF 10	2x10	9968148	NECK TAG FERP4 NEDAP SET OF 10	2x10
9981713	NECK TAG IFERP4 CRV SET OF 10	2x10	9981721	NECK TAG FERP4 CRV SET OF 10	2x10
9981748	NECK TAG IFERP4 INTERPULS SET OF 10	2x10	9981756	NECK TAG FERP4 INTERPULS SET OF 10	2x10
9980148	NECK TAG IFERP4 LELY SET OF 10	2x10	9981519	NECK TAG FERP4 GEA SET OF 10	2x10
9981497	NECK TAG IFERP4 GEA SET OF 10	2x10	9980695	NECK TAG FERP4 SEMEX SET OF 10	2x10
9980687	NECK TAG IFERP4 SEMEX SET OF 10	2x10	9984089	NECK TAG FERP4 SAC SET OF 10	2x10
9984119	NECK TAG IFERP4 SAC SET OF 10	2x10	9983805	NECK TAG FERP4 ALTA SET OF 10	2x10
9983783	NECK TAG IFERP4 ALTA SET OF 10	2x10	9984828	NECK TAG FERP4 NEDAP BLUE SET OF 10	2x10
9984801	NECK TAG IFERP4 NEDAP BLUE SET OF 10	2x10	9985107	NECK TAG FERP4 RED SET OF 10	2x10
9985093	NECK TAG IFERP4 RED SET OF 10	2x10	9987991	NECK TAG FERP4 GENEX SET OF 10	2x10
9987983	NECK TAG IFERP4 GENEX SET OF 10	2x10	9988114	NECK TAG FERP4 WAIKATO SET OF 10	2x10
9988122	NECK TAG IFERP4 WAIKATO SET OF 10	2x10	9988289	NECK TAG FERP4 COGENT SET OF 10	2x10
9988297	NECK TAG IFERP4 COGENT SET OF 10	2x10	9988661	NECK TAG FERP4 BOUMATIC SET OF 10	2x10
9988688	NECK TAG IFERP4 BOUMATIC SET OF 10	2x10	9988939	NECK TAG FERP4 VÄXA SET OF 10	
9988912	NECK TAG IFERP4 VÄXA SET OF 10	2x10			
9980768	NECK TAG CALIBRATION TOOL CP SYSTEM 434 MHZ	2x10			

* Notes: - Cell type: Panasonic, type BR2477A (*non-rechargeable, See attached Test Summary and Product Safety Data Sheet*).



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Table 2.

9985794	NECK TAG IFER4 NEDAP SET OF 10	1x10	9985964	NECK TAG FER4 NEDAP SET OF 10	1x10
9985864	NECK TAG IFER4 SUBSCRIPTION NEDAP SET OF 10	1x10	9988513	NECK TAG FER4 SUBSCRIPTION NEDAP SET OF 10	1x10
9985816	NECK TAG IFER4 CRV SET OF 10	1x10	9985891	NECK TAG FER4 CRV SET OF 10	1x10
9985824	NECK TAG IFER4 INTERPULS SET OF 10	1x10	9985905	NECK TAG FER4 INTERPULS SET OF 10	1x10
9985832	NECK TAG IFER4 LELY SET OF 10	1x10	9985492	NECK TAG FER4 GEA SET OF 10	1x10
9985476	NECK TAG IFER4 GEA SET OF 10	1x10	9988521	NECK TAG FER4 SUBSCRIPTION GEA SET OF 10	1x10
9988572	NECK TAG IFER4 SUBSCRIPTION GEA SET OF 10	1x10	9985948	NECK TAG FER4 SEMEX SET OF 10	1x10
9985867	NECK TAG IFER4 SEMEX SET OF 10	1x10	9985949	NECK TAG FER4 SAC SET OF 10	1x10
9985868	NECK TAG IFER4 SAC SET OF 10	1x10	9985950	NECK TAG FER4 ALTA SET OF 10	1x10
9985869	NECK TAG IFER4 ALTA SET OF 10	1x10	9988548	NECK TAG FER4 SUBS. ALTA SET OF 10	1x10
9988599	NECK TAG IFER4 SUBS. ALTA SET OF 10	1x10	9985952	NECK TAG FER4 NEDAP BLUE SET OF 10	1x10
9985871	NECK TAG IFER4 NEDAP BLUE SET OF 10	1x10	9985953	NECK TAG FER4 RED SET OF 10	1x10
9985972	NECK TAG IFER4 RED SET OF 10	1x10	9988017	NECK TAG FER4 GENEX SET OF 10	1x10
9988009	NECK TAG IFER4 GENEX SET OF 10	1x10	9988556	NECK TAG FER4 SUBS. GENEX SET OF 10	1x10
9988602	NECK TAG IFER4 SUBS. GENEX SET OF 10	1x10	9988149	NECK TAG FER4 WAIKATO SET OF 10	1x10
9988157	NECK TAG IFER4 WAIKATO SET OF 10	1x10	9988254	NECK TAG FER4 COGENT SET OF 10	1x10
9988262	NECK TAG IFER4 COGENT SET OF 10	1x10	9988629	NECK TAG FER4 BOUMATIC SET OF 10	1x10
9988696	NECK TAG IFER4 BOUMATIC SET OF 10	1x10	9988637	NECK TAG FER4 VÅXA SET OF 10	1x10
9988718	NECK TAG IFER4 VÅXA SET OF 10	1x10	9988955	NECK TAG FER4 SUBSCRIPTION COGENT SET OF 10	1x10
9988947	NECK TAG IFER4 SUBSCRIPTION COGENT SET OF 10	1x10			
9968083	NECK TAG IFE4 NEDAP SET OF 10	1x10	9968091	NECK TAG FE4 NEDAP SET OF 10	1x10
9969101	NECK TAG IFE4 CRV SET OF 10	1x10	9969128	NECK TAG FE4 CRV SET OF 10	1x10
9969136	NECK TAG IFE4 INTERPULS SET OF 10	1x10	9969144	NECK TAG FE4 INTERPULS SET OF 10	1x10
9969152	NECK TAG IFE4 LELY SET OF 10	1x10	9969195	NECK TAG FE4 GEA SET OF 10	1x10
9969187	NECK TAG IFE4 GEA SET OF 10	1x10	9980652	NECK TAG FE4 SEMEX SET OF 10	1x10
9980644	NECK TAG IFE4 SEMEX SET OF 10	1x10	9983082	NECK TAG FE4 SAC SET OF 10	1x10
9983104	NECK TAG IFE4 SAC SET OF 10	1x10	9983732	NECK TAG FE4 ALTA SET OF 10	1x10
9983767	NECK TAG IFE4 ALTA SET OF 10	1x10	9984798	NECK TAG FE4 NEDAP BLUE SET OF 10	1x10
9984771	NECK TAG IFE4 NEDAP BLUE SET OF 10	1x10	9985085	NECK TAG FE4 RED SET OF 10	1x10
9985077	NECK TAG IFE4 RED SET OF 10	1x10	9987967	NECK TAG FE4 GENEX SET OF 10	1x10
9987975	NECK TAG IFE4 GENEX SET OF 10	1x10	9988238	NECK TAG FE4 COGENT SET OF 10	1x10
9988246	NECK TAG IFE4 COGENT SET OF 10	1x10	9988726	NECK TAG FE4 BOUMATIC SET OF 10	1x10
9988742	NECK TAG IFE4 BOUMATIC SET OF 10	1x10	9988734	NECK TAG FE4 VÅXA SET OF 10	1x10
9988769	NECK TAG IFE4 VÅXA SET OF 10	1x10	9968091	NECK TAG FE4 NEDAP SET OF 10	1x10
9987282	NECK TAG IFER9 NEDAP SET OF 10	1x10	9987371	NECK TAG FER9 NEDAP SET OF 10	1x10
9987339	NECK TAG IFER9 LELY SET OF 10	1x10	9987428	NECK TAG FER9 NEDAP BLUE SET OF 10	1x10
9987347	NECK TAG IFER9 GEA SET OF 10	1x10	9987436	NECK TAG FER9 GEA SET OF 10	1x10
9987355	NECK TAG IFER9 SEMEX SET OF 10	1x10	9987444	NECK TAG FER9 SEMEX SET OF 10	1x10
9987592	NECK TAG IFER9 NEDAP BLUE SET OF 10	1x10	9987452	NECK TAG FER9 ALTA SET OF 10	1x10
9988025	NECK TAG IFER9 GENEX SET OF 10	1x10	9988033	NECK TAG FER9 GENEX SET OF 10	1x10

* Nots: - Cell type: Panasonic, type BR2477A (*non-rechargeable, See attached Test Summary and Product Safety Data Sheet*).

Cells are coin-cells and are installed in the products. As per IATA document “2020 Lithium Battery Guidance Document”, no Lithium warning labels are required on the boxes.

However, as with all shipments containing Lithium:

- This package must be handled with care. A flammability hazard exists if the package is damaged.
- If this package is damaged in transportation, it must not be loaded until the condition of the contents can be verified.
- The batteries contained in this package must be inspected for damage and may only be repacked if they are intact and protected against short circuits.



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Panasonic

No. 2019-000000573

Lithium Battery Test Summary / UN38.3 試験結果要約

Product manufacturer	Panasonic Corporation
Address/住所	1-1 Matsushita-cho, Moriguchi City, Osaka 570-8511, Japan
Telephone/電話番号	+81-6-6994-4560
e-mail	un38.3_microbattery@ml.jp.panasonic.com
URL	https://www.panasonic.com/global/home.html
Test laboratory	Panasonic Corporation
Address/住所	1-1 Matsushita-cho, Moriguchi City, Osaka 570-8511, Japan
Telephone/電話番号	+81-6-6994-4560
e-mail	un38.3_microbattery@ml.jp.panasonic.com
URL	https://www.panasonic.com/global/home.html

Description of Product / 製品情報

Model Number/品番	BR2477A
Type/タイプ	Lithium metal cell
Physical description/物理特性	Non-rechargeable, Coin
Mass/質量	8 g
Lithium content/リチウム含有量	0.29 g
Watt-hour rating/ワット時定格値	Not applicable
Nominal Voltage/公称電圧	3.0 V
Nominal Capacity/公称容量	1000 mAh

Test Results / 結果

Identification number/番号	CP0025-5
Date of test report/レポート発行日	2009/07/01
Reference edition/参照	UN Manual of Tests and Criteria 4th Amendment 1 and 2 edition

UN Manual of Tests and Criteria 国連勧告テスト判定基準	Results 結果	Remarks 備考
T1: Altitude simulation / 高度シミュレーション	Pass / 合格	
T2: Thermal Test / 温度試験	Pass / 合格	
T3: Vibration / 振動	Pass / 合格	
T4: Shock / 衝撃	Pass / 合格	
T5: External short circuit / 外部短絡	Pass / 合格	
T6: Impact / 衝突, Crush / 圧壊	Pass / 合格	Impact / 衝突
T7: Overcharge / 過充電	-	for rechargeable batteries only / 充電式電池のみ
T8: Forced discharge / 強制放電	Pass / 合格	

Hereby we certify that this model of Lithium battery meets the requirements of each test in the UN Manual of Tests and Criteria Part III, sub-section 38.3.

上記テストは国連勧告テスト(Manual of Tests and Criteria, Part III, sub-section 38.3.)に従い確認された結果であることを証明致します。

Signature: 

Name and Title: Kazuyuki Amano / Manager
Energy Device Business Division



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This product is a consumer product which is used in a hermetically sealed state. So, it is not an object of the SDS system. This document is provided to customers as reference information for the safe handling of the product. The information and recommendations set forth are made in good faith and are believed to be accurate at the date of preparation. Panasonic Corporation makes no warranty expressed or implied.

PRODUCT SAFETY DATA SHEET

1 Chemical product and company identification

Name of Product : Poly-carbonmonofluoride lithium battery
Name of Company : Panasonic Corporation Automotive & Industrial Systems Company
Address : 1-1 Matsushita-cho, Moriguchi-city, Osaka, 570-8511, Japan
Emergency Contact : Outside the United States +1-703-527-3887
(call CHMTREC) in the United States 1-800-424-9300

2 Hazards identification

GHS Classification : Not applicable
Toxicity : Vapor generated from burning batteries, may irritate eyes, skin and throat.
Hazard : Electrolyte and lithium metal are inflammable.
Risk of explosion by fire if batteries are disposed in fire or heated above 125 degrees C.
Stacking or jumbling batteries may cause external short circuits, heat generation, fire or explosion.

3 Composition/information of ingredients

Component	Material	CAS No.	Content (%)
Positive electrode	Poly-carbonmonofluoride	51311-17-2	8 - 24
Negative electrode	Lithium metal	7439-93-2	0.9 - 5
Electrolyte	Organic electrolyte	-	9 - 25
Others	Steel	7439-89-6, 7440-47-3	45 - 80
(Steel or Plastic parts)	Polypropylene	9003-07-0	1 - 15

Lithium content per cell

Model Number	Lithium content(g)	Model Number	Lithium content(g)	Model Number	Lithium content(g)	Model Number	Lithium content(g)
BR1225A	0.01	BR2330A	0.08	BR2450A	0.16	BR2777A	0.28
BR1632A	0.04			BR2477A	0.29		

4 First aid measures (in case of electrolyte leakage from the battery)

Eye contact : Flush the eyes with plenty of clean water for at least 15 minutes immediately, without rubbing. Get immediate medical treatment. If appropriate procedures are not taken, this may cause eye injury.
Skin contact : Wash the contact areas off immediately with plenty of water and soap. If appropriate procedures are not taken, this may cause sores on the skin.
Inhalation : Remove to fresh air immediately. Get medical treatment immediately.



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- 5 **Firefighting measures**
- Fire extinguishing agent : Alcohol-resistant foam and dry sand are effective.
- Extinguishing method : Since vapor, generated from burning batteries may make eyes, nose and throat irritates, be sure to extinguish the fire on the windward side. Wear the respiratory protection equipment in some cases.
- 6 **Accidental release measures (in case of electrolyte leakage from the battery)**
- Take up with absorbent cloth, treat cloth as inflammable.
- Move the battery away from the fire.
- 7 **Handling and storage**
- Handling** :
- When packing the batteries, do not allow battery terminals to contact each other, or contact with other metals. Be sure to pack batteries by providing partitions in the packaging box, or in a separate plastic bag so that the single batteries are not mixed together.
 - Use strong material for packaging boxes so that they will not be damaged by vibration, impact, dropping and stacking during their transportation.
 - Do not short-circuit, recharge, deform, throw into fire or disassemble.
 - Do not mix different type of batteries.
 - Do not solder directly onto batteries.
 - Insert the battery correctly in electrical equipment.
- Storage** :
- Do not let water penetrate into packaging boxes during their storage and transportation.
 - Do not store the battery in places of the high temperature or under direct sunlight.
 - Please also avoid the places of high humidity. Be sure not to expose the battery to condensation, rain or frozen condition.
8. **Exposure controls and personal protection**
- Acceptable concentration : Not specified about Lithium Battery.
- Facilities : Nothing in particular.
- Protective Equipment (in case of electrolyte leakage from the battery)
- Respiratory Protection : Self-Contained Breathing Apparatus for organic gases
- Hand Protection : Safety gloves.
- Eye Protection : Safety goggle
9. **Physical and chemical properties**
- Appearance : Coin shape
- Nominal Voltage : 3 V



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10. Stability and reactivity

Since batteries utilize a chemical reaction they are actually considered a chemical product. As such, battery performance will deteriorate over time even if stored for a long period of time without being used. In addition, the various usage conditions such as discharge, ambient temperature, etc. are not maintained within the specified ranges the life expectancy of the battery may be shortened or the device in which the battery is used may be damaged by electrolyte leakage.

11. Toxicological information (in case of electrolyte leakage from the battery)

Acute toxicity : Oral(rat) LD50 > 2000mg/kg (estimated)
Irritation : Irritating to eye and skin.
Mutagenicity : Not specified
Chronic toxicity : Not specified

12. Ecological information

In case of the worn out battery was disposed in land, the battery case may be corroded, and leak electrolyte. However, there is no environmental impact information.
Mercury (Hg), Cadmium (Cd) and Lead (Pb) are not used in cell.

13. Disposal considerations

When the battery is worn out, dispose of it under the ordinance of each local government.

14. Transport information

During the transportation of a large amount of batteries by ship, trailer or railway, do not leave them in the places of high temperatures and do not allow them to be exposed to condensation.

During the transportation do not allow packages to be dropped or damaged.

Proper shipping name : Lithium metal batteries

UN Number, UN Class : UN3090, Class9 (for the Air transport by PI968 Section IA or IB)
: Exemption (for the Marine transport and the Air transport by Section II of PI 968, 969 or 970)
Even though the cells are classified as lithium metal batteries (UN3090 or UN3091), they are not subject to some requirements of Dangerous Goods Regulations because they meet the following:
1. for cells, the lithium content is not more than 0.3g ;
2. each cell is of the type proven to meet the requirements of each test in the UN Manual of Tests and Criteria, Part III, sub-section 38.3.
3. each cell is manufactured in ISO9001 certified factory.

Please refer to the following reference information about concrete ways of transportation. Actual content of packaging label and shipping documents varies by shipping companies. Make sure to confirm in advance with your shipping company.



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Information of reference

	Reference	Packing Instruction(PI)/ Special provision(SP)	Note
Air transport	IATA DGR	PI 968 Section I A	Cells, Cargo Aircraft only; Net quantity per package Max. 35kg
		PI 968 Section I B	Cells, Cargo Aircraft only; net quantity per package Max. 2.5kg
		PI 968 Section II	Cells, Cargo Aircraft only, not more than one package in any single consignment; net quantity per package Max. 2.5kg
		PI 969 Section II	Cells packed with equipment
		PI 970 Section II	Cells contained in equipment, button cell batteries
Marine transport	IMDG Code	SP 188	

15. Regulatory information

- IATA Dangerous Goods Regulations 60th Edition (IATA DGR)
- IMO International Maritime Dangerous Goods Code 2016 and 2018 Edition (IMDG Code)
- UN Recommendations on the Transportation of Dangerous Goods, Model Regulations
- UN Recommendations on the Transportation of Dangerous Goods, Manual of Tests and Criteria
- EU Battery Directive (2006/66/EC, 2013/56/EU)
- Regulation (EC) No. 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
- State of California Regulations - Best management practices for Perchlorate Materials
- Act on Preventing Environmental Pollution of Mercury (Japan)

16. Other information

This PSDS is provided to customers as reference information in order to handle batteries safely. It is necessary for the customer to take appropriate measures depending on the actual situation such as the individual handling, based on this information.

Prepared by : Engineering Department
 Energy Device Business Division
 Panasonic Corporation

