

# PAPR Battery - High Capacity



Protecting you for life's best moments.

HC BATTERY MSDS

GVS-RPB.COM

## Material Safety Data Sheet - MSDS

### Product and Company Identification

Lithium-Ion Rechargeable Battery Pack  
P/N: 03-856 14.4V 4200mAh (60.48Whr)  
Manufacturer: GVS-RPB - RPB Safety LLC  
2807 Samoset Rd, Royal Oak, MI 48073  
Issued or revised date: January. 01, 2021  
Manufacturer date: January. 01, 2021

### 1. Chemical Product and Company Identification

62st Edition of the IATA DGR in Handling and Storage party of MSDS

**Product Identification:** P/N: 03-856 Lithium-ion Battery Pack  
**Manufacturer:** GVS-RPB - RPB Safety LLC  
2807 Samoset Rd, Royal Oak, MI 48073  
**Phone:** 866-494-4599  
**E-mail:** sales@rpbsafety.com

### 2. Composition Information

#### Battery Cell

Hazardous Ingredients	%	CAS #
Aluminum Foil	2-10	7429-90-5
Metal Oxide (proprietary)	20-50	
Polyvinylidene Fluoride (PVDF)	<5	24937-79-9
Copper Foil	2-10	7440-50-8
Carbon (proprietary)	10-30	7440-44-0
Electrolyte (proprietary)	10-20	
Stainless steel, Nickel and inert materials	Remainder	N/A

Battery: 60.48Whr BP20-002960

#### Circuit Module

##### Common Chemical Name

Lead	1-2	7439-92-1
Mercury	0	7439-97-6
Chromium	0	7440-47-3
Cadmium	0	7440-43-9
Plastic case and Si2O	60	N/A

#### Plastic Parts, Paints, Wiring and Socket

##### Common Chemical Name

Lead	<0.1	7439-92-1
Nickel	<0.01	7439-92-1
CFCs	0	75-69-4
Polychlorinated Biphenyls	0	1336-36-3
Plastics and other compound	Remainder	N/A

### 3. Common Chemical Name

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#### Primary Routes Of Entry

Skin contact, Skin absorption, Eye contact, Inhalation, and Ingestion : No

#### Symptoms of Exposure

Skin contact: No effect under routine handling and use.  
Skin absorption: No effect under routine handling and use.  
Eye contact: No effect under routine handling and use.  
Inhalation: No effect under routine handling and use.

#### Reported as Carcinogen

Not applicable

### 4. First Aid Measures

**Inhalation, eye contact, and skin contact:** Not a health hazard.  
**Ingestion:** If swallowed, obtain medical attention immediately. If exposure to internal materials within cell(pack) due to damaged outer casing, the following actions are recommended.  
**Inhalation:** Leave area immediately and seek medical attention.  
**Eye Contact:** Rinse eyes with water for 15 minutes and seek medical attention.  
**Skin Contact:** Wash area thoroughly with soap and water and seek medical attention.  
**Ingestion:** Drink milk/water and induce vomiting; seek medical attention.

### 5. Fire Fighting Measures

**General Hazard:** Cell is not flammable but internal organic material will burn if the cell is incinerated. Combustion products include, but are not limited to hydrogen fluoride, carbon monoxide and carbon dioxide.

**Extinguishing Media:** Use extinguishing media suitable for the materials that are burning.

**Special Firefighting Instructions:** If possible, remove cell(s) from fire fighting area. If heated above 125°C, cell(s) can explode/vent.

**Firefighting Equipment:** Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

### 6. Accidental Release Measures

**On Land:** Place material into suitable containers and call local fire/police department.

**In Water:** If possible, remove from water and call local fire/police department.

### 7. Handling and Storage

**Handling:** No special protective clothing required for handling individual cells. Package meet the IATA DG Regulation packing instruction 965 to 967 Section II request.

**Storage:** Store in a cool, dry place.

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## 8. Exposure Controls/Personal Protection

**Engineering Controls:** Keep away from heat and open flame. Store in a cool dry place.

### Personal Protection:

Respirator: Not required during normal operations. SCBA required in the event of a fire.

Eye/face protection: Not required beyond safety practices of employer. Gloves: Not required for handling of cells.

Foot protection: Steel toed shoes recommended for large container handling.

## 9. Physical and chemical properties

State	Solid
Odor	N/A
PH	N/A
Vapor pressure	N/A
Vapor density	N/A
Boiling point	N/A
Solubility in water	Insoluble
Specific gravity	N/A
Density	N/A

## 10. Stability and Reactivity

**Reactivity:** None

**Incompatibilities:** None during normal operation. Avoid exposure to heat, open flame, and corrosives.

**Hazardous Decomposition Products:** None during normal operating conditions. If cells are opened, hydrogen fluoride and carbon monoxide may be released.

**Conditions to Avoid:** Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

## 11. Toxicological Information

This product does not elicit toxicological properties during routine handling and use.

Sensitization	Teratogenicity	Reproductive toxicity	Acute toxicity
No	No	No	No

This product does not contain any kinds of the following substances and halogen-type flame retardants including Chlorine and Bromide type harmful flame retardants which are listed in Appendix of TCO documents and relevant international ECO requirements:

- Polybromated Biphenyls (PBB)
- Polybromated Biphenyl Ethers (PBBE)
- Polybromated Biphenyl Oxides (PBBO)
- Polybromated Diphenylethers (PBDE)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Diphenylethers (PCDE)
- Tetrabromophenol A (TBBPA)

Asbestos, Antimonytrioxide, Dioxine

None of the following substances will be exposed, leaked, or emitted during transportation, storage or any operation and any temperature condition:

Chlorinated Fluorohydrocarbon (FCKW)

Acrylonitrile

Styrol

Phenol

Benzol

Mercury of greater than 0.0001 wt% for alkaline battery

Mercury of greater than 0.0005 wt% for other battery

Lithium content of greater than 0.5g/battery cell

Cadmium, lead, and other harmful heavy metal

And will comply with the regulation of 49 CFR (DOT regulation), International Air Transport Association (IATA), and Deuche Forschungsgemeinschaft (DFG) regarding concentrations of emitted substances.

This product does not contain mercury, cadmium and lithium-metal.

Mercury content: N/A

Lithium-metal content: < 1.5g

Cadmium content: N/A

If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers.

## 12. Ecological Information

Some materials within the cell are bioaccumulative. Under normal conditions, these materials are contained and pose no risk to persons or the surrounding environment.

## 13. Disposal Considerations

**California regulated debris**

RCRA Waste Code: Nonregulated

Dispose of according to all federal, state, and local regulations.

## 14. Transport Information

GVS-RPB Lithium Ion battery Packs are considered to be "Rechargeable batteries" and meet the requirements of transportation by the U.S. Department of Transportation(DOT), International Civil Aviation Administration(ICA), International Air Transport Association(IATA) Dangerous Goods Regulations Section II of PACKING INSTRUCTION 965-967 and SPECIAL PROVISION A88, A99, A154, A164 and belongs to non-dangerous goods.

For the lithium ion battery, the Watt-hour is not more than 100Wh. Comply with all of the requirements set out in section II of packing instructions 965, 966 ,967 and UN3480 for lithium ion batteries in the 62st edition of the IATA DGR.

According to the special provision 188 of IMDG (39-18) . The goods are not subject to other provision of this code.

## 15. Regulatory Information

OSHA hazard communication standard (29 CFR 1910.1200)

Non-hazardous

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## UN Test Result

### Product and Company Identification

#### Product Identification:

Lithium-Ion Rechargeable Battery Pack. 4S1P

**Manufacturer:** GVS-RPB - RPB Safety LLC

2807 Samoset Rd, Royal Oak, MI 48073

Issued or revised date: January. 01, 2021

#### Substance Identification Substance:

Lithium Ion Battery CAS number: 12190-79-3.

UN Class: Even classified as lithium batteries, they are exempted from Dangerous Goods UN-Recommendations on the Transport of Dangerous Goods Model Regulations. (ST/SG/AC. 10/1 Rev. 11)

\*\*Lithium ion rechargeable cells are not subject to the UN Regulations if they meet the following provisions.

The equivalent Lithium content calculated by 0.3 times of the rated capacity in Ampere-hour (Ah) is not more than 1.5g.

\*\*Lithium ion rechargeable batteries are not subject to the UN Regulations if they meet the following provisions.

The equivalent Lithium content is not more than 8g.

#### Composition:

2-1. Cases: PC and ABS: No dangerous

2-2. Printed Circuit Board Assembly: No dangerous

2-3. Lithium Ion Cell: INR-21700-P42A \*4

Lithium cobalt oxide (Xn) 10-50%

Mixture of fluorinated inorganic (T,C) < 5%

Mixture of organic carbonate 10-30%

Model: 03-856

Description: (1). Rated Voltage:14.4V

(2). Nominal Capacity: 4200mAh (60.48Whr)

(3). Lithium equivalent content: 1.26g Date:  
2021.01.01

We declare that the above-mentioned test is the result of being checked according to UN test.

(Manual of Tests and Criteria Rev 5, Part III, sub-section 38.3)

Date: January. 01, 2021

Model: 03-856

Description: Rechargeable lithium-ion battery rated voltage 14.4V  
nominal capacity : 4200mAh

### Package Drop

Test Model: 03-856

No.	Test Description	Remark	Test Results
1	Package Drop Test	The package shall be dropped from 1.2M high onto a concrete surface (Flat and Horizontal) with five orientations:  1st for Flat of the bottom side 2nd for Flat of the top side 3rd for Flat of the right side 4th for Flat of the left side 5th for the corner	Pass

We declare that the above-mentioned test is the result of being checked according to UN test. (Manual of Tests and Criteria Rev 5, Part III, sub-section 38.3)

No.	Manual of Tests and Criteria (38.3 Lithium batteries) Test description	Test Results	Remark
T1	Altitude Simulation Test	Pass	N/A
T2	Thermal Shock Test	Pass	N/A
T3	Vibration Test	Pass	N/A
T4	Shock Test	Pass	N/A
T5	External Short Circuit Test	Pass	N/A
T6	Impact Test	-	No need for pack
T7	Overcharge Test	Pass	N/A
T8	Forced Discharge Test	-	No need for pack