



Effect date: October 17, 2022

PRODUCT SAFETY DATA SHEET

Newell Brands Inc. Commercial BU has prepared this Product Safety Data Sheet to provide information for this battery. Batteries are articles as defined under the GHS and exempt from GHS classification criteria (Section 1.3.2.1.1 of the GHS). The information and recommendations set forth herein are made in good faith, for information only, and are believed to be accurate as of the date of preparation. However, **Newell Brands Inc. Commercial BU MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.**

Section 1: Identification

1.1 Product identifier

Name of the substance: 54V 4Ah 216Wh 60V MAX lithium battery

1.2 Recommended use of the product:

Read Operation Guide for proper use and care.

1.3 Details of the supplier of the safety data sheet

Producer/Supplier: Newell Brands Inc. Commercial BU

Address: 8900 Northpointe Executive Park Drive
Huntersville, NC 28078

20 Hereford Street
Brampton, ON L6Y 0M1 - Canada
T 1.800.998.7004

1.4: Emergency Number: 1-800-347-9800

Section 2: Hazard identification

2.1 Classification of the chemical: This product is out of scope of GHS system.

2.2 Hazard summary: Under normal conditions of use, the battery is hermetically sealed.

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| Physical hazards: | <p>Inhalation: The steam of the electrolyte has an anesthesia action and can damage a respiratory tract.</p> <p>Skin contact: Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water.</p> <p>Eye contact: Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.</p> <p>If any of these occur and the irritation continues seek medical attention immediately.</p> |
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| Environment impact: | Dispose in accordance with applicable federal, state, and local regulations. DO NOT dispose of battery in regular waste streams. |
| Physical and chemical harms: | Do not open or destroy the battery. Electrolytes contained within the battery are corrosive and may cause damage to eyes or skin if released. |
| Special harm: | If the electrolyte contacts with water, it will generate detrimental hydrogen fluoride. Do not dispose of the battery in a fire. The cells could catch fire or explode. |

2.3 Label

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| Signal word: | None |
| Hazard Symbols: | None |
| Hazard statements: | None |
| Precautionary statements: | Prevention |

Section 3: Composition/ information on ingredients

3.1 Substances

| Chemical Name | Percent of Content | CAS No. | OSHA (PEL) | ACGIH (TLV) |
|---|--------------------|-------------|------------|-------------|
| Lithium nickel manganese cobalt (LiNixCoyMn1-x-yO2) | 32% | 346417-97-8 | N/A | N/A |
| Graphite (C) | 19% | 7782-42-5 | N/A | N/A |
| Poly Vnylidene Fluoride (PVDF) | 2% | 24937-79-9 | N/A | N/A |
| Ethylene carbonate | 4% | 96-49-1 | N/A | N/A |
| Dimethyl carbonate | 4% | 616-38-6 | N/A | N/A |
| Lithium hexafluorophosphate (LiPF6) | 3% | 21324-40-3 | N/A | N/A |
| Copper | 12% | 7440-50-8 | N/A | N/A |
| Aluminum | 10% | 7429-90-5 | N/A | N/A |
| Can | 14% | 7439-89-6 | N/A | N/A |

Section 4: First-aid measures

4.1 Description of first aid measures

Inhalation: Make the victim blow his/her nose, gargle. Seek medical attention if necessary.

Skin contact: Remove contaminated clothes and shoes immediately. Wash extraneous matter or contact region with soap and plenty of water immediately. If irritation continues seek medical attention immediately.

Eye contact: Do not rub one's eyes. Immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention immediately.

Section 5: Fire-fighting measures

In case of fire where lithium-ion batteries are present, flood area with water. Water may not extinguish burning batteries but will cool the adjacent batteries and control the spread of fire. Burning batteries will burn themselves out. Virtually all fires involving lithium-ion batteries can be controlled by flooding with water. Smothering agents, such as an ABC or BC extinguisher are recommended. A smothering agent will extinguish burning lithium batteries.

Emergency Responders should wear self-contained breathing apparatus.

Section 6: Accidental release measures

To cleanup leaking batteries:

Ventilation Requirements: Room ventilation may be required in areas where there are open or leaking batteries.

Respiratory Protection: Avoid exposure to electrolyte fumes from open or leaking batteries.

Eye Protection: Wear safety glasses with side shields if handling an open or leaking battery.

Gloves: Use gloves appropriate for handling the leaking battery.

Battery materials should be disposed of in a leak-proof container.

Section 7: Handling and Storage

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| Handling | Do not exposure battery to water, excessive moisture, or expose to strong oxidizer. Do not damage or remove the external case. Keep the battery away from heat and fire including direct sunlight for extended periods of time Do not disassemble or reconstruct the battery; or solder the battery directly. Do not deform or allow mechanical shock. Do not use unauthorized charger or other charging method. |
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7.2 Conditions for safe storage, including any incompatibilities:

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| Storage | <p>Do not exposure battery to water, excessive moisture, or expose to strong oxidizer.</p> <p>Do not expose a battery pack or appliance to fire or excessive temperature. Exposure to fire or temperature above 266°F (130°C) may cause explosion.</p> <p>When the battery pack is not in use, keep the battery away from other metal objects, like paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.</p> |
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Section 8: Exposure Control / Personal Protection

8.1 Appropriate engineering controls:

For a leak from a damaged or opened battery: Provide adequate ventilation if fumes or vapors are generated

8.2 Individual protection measures, such as personal protective equipment

Hand protection: Not necessary under normal condition

Eye protection: Not necessary under normal condition

Body protection: Not necessary under normal condition

Other: Personal protective equipment should be used when the battery is damaged.

SECTION 9: Physical and chemical properties

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| Physical state | Solid |
| Form | Solid |
| Color | Various |
| Odor | No odor |
| Odor threshold | No odor |
| pH | Not applicable |
| Melting point/freezing point | Not applicable |
| Initial boiling point and boiling range | Not applicable |
| Flash point | Not applicable |
| Evaporation rate | Not applicable |
| Flammability (solid, gas) | Not applicable |
| Upper/lower flammability or explosive limits | Not applicable |
| Flammability limit - lower (%) | Not applicable |
| Flammability limit - upper (%) | Not applicable |
| Vapor pressure | Not applicable |
| Vapor density | Not applicable |
| Relative density | Not applicable |
| Solubility | Insoluble. |
| Partition coefficient(n-octanol/water) | Not applicable |
| Auto-ignition temperature | Not applicable |

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| Decomposition temperature | Not applicable |
| Viscosity | Not applicable |

Section 10: Stability and reactivity

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| 10.1. Reactivity | Stable under normal use, storage, and transport |
| 10.2. Chemical stability | Stable under normal use, storage, and transport |
| 10.3. Possibility of hazardous reactions | Not hazardous under normal use. |
| 10.4. Conditions to avoid | Prevent static during processing, high humidity, fire high heat |
| 10.5. Incompatible materials | Conductive materials, water, strong oxidizers, and strong acids |
| 10.6. Hazardous decomposition products | Acrid or harmful gas is emitted during fire. |

Section 11 Toxicological information

Batteries are non-toxic under normal conditions.

If batteries become damaged:

Symptoms related to the physical, chemical, and toxicological characteristics: Skin or eye burns.

Delayed or chronic effects from short- and long-term exposure: Not applicable

Numerical measures of toxicity: LD50, oral - Rat 2,000mg/kg or more Irritating nature: Irritative to skin and eye.

Section 12 Ecological information

Issues such as ecotoxicity, persistence and bioaccumulation are not applicable for articles.

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| Ecotoxicity | No impact under normal use |
| Persistence and degradability | No data available |
| Bioaccumulative potential | No data available |
| Mobility in soil | No data available |

Section 13: Disposal considerations

Disposal: Dispose in accordance with applicable federal, state, and local regulations.

Disposal methods/information: Do not dispose in fire. Dispose waste and residues in accordance with applicable federal, state, and local regulations.

DO NOT dispose in regular waste streams or trash.

Section 14: Transport information

UN number: UN3480

UN proper shipping name: LITHIUM-ION BATTERIES

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Transport rules:

International Maritime Dangerous Goods Code- Dangerous Goods Class 9

US Hazardous Materials Regulations 49 CFR (Code of Federal Regulations) (173.185(c)(1)(IV))-Non
Dangerous Goods Class 9 by highway or rail

Packing group: PI 965

Environmental hazards: No

Special precautions: No

Section 15: Regulatory information

Safety: UL 2595

Section 16: Other information

Version contained: Commercial BU Version: 1.0

Training information: Read equipment Operation Guide for full details on proper handling and safety precautions.