

# MATERIAL SAFETY DATA SHEET (MSDS)

**Applicant Name** : Hangzhou Wintools Technology & Development Co., Ltd  
**Applicant Address** : 18th Floor,Building 6, Vanward International, No.188 Haoyue Road,Ningwei Street, XiaoShan, Hangzhou,China  
**Product Name** : Li-ion battery pack WT02F1098-1 20V 2.0Ah 37Wh  
**Report No.** : RT2023033000009  
**Received Date** : 2023-3-29  
**Redact Period** : 2023-3-29 to 2023-3-30  
**Regulatory Requirements** : As requested by the applicant, the Material Safety Data Sheet is prepared according to Globally Harmonized System of Classification and Labelling of Chemicals (GHS)Rev\_9.

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Nancheng District, Dongguan City, China

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## SECTION 1. Identification of the substance/preparation and company

- 1.1 Product Name** : Li-ion battery pack WT02F1098-1 20V 2.0Ah 37Wh
- 1.2 Model No.** : /
- 1.3 Recommended Use** : /
- 1.4 Applicant Name** : Hangzhou Wintools Technology & Development Co., Ltd
- 1.5 Applicant Address** : 18th Floor,Building 6,Vanward International, No.188 Haoyue Road,Ningwei Street, XiaoShan, Hangzhou,China
- 1.6 Manufacturer Name** : Hangzhou Wintools Technology & Development Co., Ltd
- 1.7 Manufacturer Address** : 18th Floor,Building 6,Vanward International, No.188 Haoyue Road,Ningwei Street, XiaoShan, Hangzhou,China
- 1.8 Tel / Fax** : 86-13666659508
- 1.9 Email** : wm@wintools.com.cn
- 1.10 Emergency Phone** : /

## SECTION 2. Hazards identifications

### 2.1 Hazard Classification of substance or mixture(GHS):

Class 9: Other dangerous goods- The battery

### 2.2 Pictograms:



### 2.3 Signal word:

Warning

### 2.4 Hazard description:

These chemicals are contained in a sealed can. Risk of exposure occurs only if the battery is mechanically or electrically abused.

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## 2.5 Precautionary description:

Wear protective gloves/protective clothing/eye protection/face protection

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Do not open, squeeze, or disassemble the battery. Do not expose it to flames or open flames. Contact of electrolyte and extruded lithium with skin and eyes should be avoided.

## SECTION 3. Composition / information on ingredients

The difference between the single product and mixture: Mixture

| Substance name                  | Conc. (%) | CAS.        |
|---------------------------------|-----------|-------------|
| Nickel-cobalt-manganese lithium | 32.40     | 346417-97-8 |
| Iron                            | 19.00     | 7439-89-6   |
| Graphite                        | 18.10     | 7782-42-5   |
| Dimethyl carbonate              | 8.50      | 616-38-6    |
| Copper                          | 8.20      | 7440-50-8   |
| Aluminum                        | 3.80      | 7429-90-5   |
| Lithium hexafluorophosphate     | 2.40      | 21324-40-3  |
| Ethylene carbonate              | 2.30      | 96-49-1     |
| Ethylmethyl carbonate           | 1.40      | 623-53-0    |
| Acetylene balck                 | 1.10      | 1333-86-4   |
| PVDF                            | 0.90      | 4937-79-9   |
| PP                              | 0.80      | 9003-07-0   |
| Nickel                          | 0.70      | 7440-02-0   |
| CMC                             | 0.20      | 9000-11-7   |
| Styrene-butadiene rubber        | 0.20      | 9003-55-8   |



Product Image

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## SECTION 4.First aid measures

General advice: Immediate medical attention is required. Show this safety data sheet (MSDS) to the doctor in attendance.

### 4.1 Following eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention immediately.

### 4.2 Following skin contact:

Immediately remove contaminated clothing and rinse skin with plenty of soap and water. Immediately consult a physician if feeling uncomfortable.

### 4.3 Following inhalation:

Move victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give cardiopulmonary resuscitation and consult a physician immediately.

### 4.4 Following ingestion:

If it is ingested, rinse the mouth with water. Seek medical attention immediately.

## SECTION 5.Firefighting measures

### 5.1 Special hazards arising from the substance or mixture:

If the battery is in high temperature or short circuit may occur when the fire or explosion.

### 5.2 Extinguishing Media:

Dry powder, Chemical foam, Carbon dioxide, water mist. Carbon tetrachloride.

### 5.3 Advice for firefighters:

As in any fire, wear self-contained breathing apparatus(MSHA/NIOSH approved or equivalent)and full protective gear.

Extinguish fire in a safe distance with enough protection

Prevent fire extinguishing water from contaminating surface water or the ground water system.

### 5.4 Hazardous combustion products:

Carbon monoxide、 Carbon dioxide.

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## SECTION 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures:

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the batteries to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Wear appropriate protective measures (SEE SECTION 8).

### 6.2 Cleaning method and Environmental precautions:

It is recommended to discharge the battery to the end, handing in the abandoned batteries to related department unified, dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental protection agency and/or federal EPA.

## SECTION 7. Safe handling and storage

### 7.1 Handling Notes:

Keep away from fire and heat sources. The batteries should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container. Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids.

### 7.2 Storage Notes:

Keep away from fire and heat sources. Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods. Do not store with food containers or incompatible materials (see section 10.2)

## SECTION 8. Exposure controls / personal protection

### 8.1 Occupational Exposure Limit:

No information found

### 8.2 Engineering Control:

Keep substances sealed during production and keep indoor ventilation. Where reasonably practicable,

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this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.Ensure that eyewash stations and safety showers are proximal to the work-station location.

### 8.3 Respiratory Protection:

Wear filter mask.

If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.

### 8.4 Eyes Protection:

Wear protective goggle in working time.( Comply with the European Union EN 166 or The U.S. NIOSH standard.)If contacting with eyes, flush with plenty of water and Seek medical attention.

### 8.5 Hands Protection:

Wear protective gloves (such as butyl rubber), passing the tests according to EN 374(EU),US F739 or AS/NZS 2161.1 standard.Wash with plenty of water if gloves puncture or skin exposure.

### 8.6 Sanitary Measure:

Forbid smoking, eating and drinking in working places. Washing hands after handling products.

## SECTION 9. Physical and chemical properties

|                             |                    |
|-----------------------------|--------------------|
| <b>Appearance and Color</b> | Solid              |
| <b>Odour</b>                | Odorless           |
| <b>Solubility</b>           | Insoluble in water |

## SECTION 10.Stability and reactivity

### 10.1 Stability:

Stable under recommended storage and handling conditions (See section 7).

### 10.2 Material for avoiding:

Strong oxidizers, acids, strong alkalis,halogenated hydrocarbons.

### 10.3 Contact conditions for avoiding:

Fire、 High temperature.

### 10.4 Hazardous decomposition products

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Sulfuric acid mist, metal oxide, hydrogen, oxygen.

## SECTION 11. Toxicological information

Inhalation, skin contact and eye contact are possible when the battery is opened. Exposure to internal contents, the corrosive fumes will be very irritation to skin, eyes and mucous membranes.

Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritation.

## SECTION 12. Ecological information

### 12.1 Ecotoxicity:

According to the environmental protection laws, this product can't be poured into sewers or drainage ditches, can't be discarded in those places which would affect soil and underground water.

### 12.2 Persistence and degradability:

No data available.

### 12.3 Bioaccumulative potential:

No data available.

### 12.4 Mobility in soil:

No data available.

### 12.5 Other adverse effects:

No data available

## SECTION 13. Disposal considerations

### 13.1 Handling method for waste:

Handling waste according to the local regulations. Contact specific waste disposal company or companies recommended by local laws.

### 13.2 Handling method for uncleaned packaging:

In accordance with official regulations.

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## SECTION 14. Transport information

| Mode of transport      | Land transport<br>ADR/RID  | Marine transport<br>IMDG/GGVSee   | Air transport<br>ICAO/IATA  |
|------------------------|--|---|---|
| <b>UN NO.</b>          | 3481   | 3481  | 3481  |
| <b>Class</b>           | 9  | 9   | 9   |
| <b>Packaging group</b> | Not applicable   | Not applicable  | Not applicable  |
| <b>Technical name</b>  | LITHIUM ION<br>BATTERIES<br>CONTAINED IN<br>EQUIPMENT or<br>LITHIUM ION<br>BATTERIES PACKED<br>WITH<br>EQUIPMENT(including<br>lithium ion polymer<br>batteries)        | LITHIUM ION<br>BATTERIES<br>CONTAINED IN<br>EQUIPMENT or<br>LITHIUM ION<br>BATTERIES PACKED<br>WITH<br>EQUIPMENT(including<br>lithium ion polymer<br>batteries) | LITHIUM ION<br>BATTERIES<br>CONTAINED IN<br>EQUIPMENT or<br>LITHIUM ION<br>BATTERIES PACKED<br>WITH<br>EQUIPMENT(including<br>lithium ion polymer<br>batteries) |
| <b>Label</b>           |   |   |    |
| <b>Notes</b>           | Gentle with, prevent collision drag and dump.prohibition with antioxidant and food chemical mixed stowage,transit should prevent sun、 fire、 rain and high temperature. |   |   |

## SECTION 15. Regulatory information

Hazardous chemicals catalog  
 International maritime dangerous goods code  
 Dangerous Goods Number Of United Nations  
 Technical Instructions for the Safe Transport of Dangerous Goods by Air  
 Classification and code of dangerous goods

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Occupational Safety and Health Act (OSHA)

The principle of classification of transport packaging groups of dangerous goods

Globally Harmonized System of Classification and Labelling of Chemicals

In accordance with all local laws.

## SECTION 16. Other information

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