

MATERIAL SAFETY DATA SHEETS

For

Battery Pack

Prepared for	: NINGBO SAYEAH TOOLS CO.,LTD
Address	: NO.50 DONGBEI ROAD DONGQIAO INDUSTRY ZONE HAISHU DISTRICT
	NINGBO
Prepared by	: EMTEK (DONGGUAN) CO., LTD
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Date of Conduct	: Oct. 21, 2022
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Prepared by:

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Approved by:

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Reviewed by:

DATA SHEETS to the World MATERIAL SAFETY

EMTEK

1- Identification

- 1.1 Product identifier
- Trade name: Battery Pack
- · Registration number: No available data.
- UFI number: No available data
- Other means of identification: ZDBP18012001 18V 2.0Ah 36Wh

ZDBP20012001 20V 2.0Ah 40Wh

- · 1.2 Relevant identified uses of the substance or mixture and uses advised against on
- Application of the substance/ mixture: Power supply.
- · Uses advised against: No data available.
- · Reason why uses advised against: No data available.

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier: Ningbo Sayeah Tools Co., Ltd.

No.50 Dongbei Road, Donggiao Industry Zone, Haishu District, Ningbo, Zhejiang, China

Tel: 0574-88436671

Email: xgq@sayeahtools.com

National contact: 徐国强

- Only Representative/other EU contact point: No information available.
- Further information obtainable from: Ningbo Sayeah Tools Co., Ltd.
- 1.4 Emergency telephone number

Tel: 0574-88436671

(Only available during the following office hours 8:00-18:00, Beijing time, for Chinese service only)

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2 - Hazards Identification

- 2.1 Classification of the substance or mixture

• 2.1.1 Classification according to regulation (EC) 1272/2008:

Regulation (EC) No 1272/2008 [CLP]	Classification procedure
Skin Irrit. 2, H315	Calculation method
Skin Sens. 1, H317	Calculation method
Eye Irrit.2, H319	Calculation method
Resp. Sens. 1B, H334	Calculation method
Carc. 1A, H350	Calculation method
STOT RE 1, H372	Calculation method

• 2.1.2 Additional information: For full text of Hazard- and EU Hazard-statements: see SECTION 16.

· 2.2 Label elements

- Labeling according to Regulation (EC) No 1272/2008:

The product is labelled according to CLP Regulation.

Hazard pictograms:



GHS08

- · Signal word: Danger
- Hazard-determining components of labelling:

Cobalt lithium manganese nickel oxide.

Hazard statements:

	inenta.
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H350	May cause cancer
H372	May causes damage organs through prolonged or repeated exposure by inhalation
Precautiona	ry statement:
P201	Obtain special instructions before use.
P260	Do not breathe dust.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or
	doctor/physician.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
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• Supplemental label elements: Restricted to industrial and professional uses.

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2.3 Other hazards

None of the ingredients ($\geq 0.1\%$) meets the criteria for PBT/vPvB in accordance with Annex XIII. None of the ingredients ($\geq 0.1\%$) is identified as having endocrine disrupting properties according to Regulation (EU) 2017/2100.

3- Composition / Information on Ingredients

· 3.1 Substance

Not applicable

· 3.2 Mixtures

· Description of the mixture: Battery Pack.

Ingredients:	Ingredients:						
Substance	CAS No.	Index No.	EC No.	w/w, %	CLP Classification	SCL/M- factor/ ATE	
Cobalt lithium manganese nickel oxide	346417-97-8	-	-	32.4	Skin Sens. 1, H317 Resp. Sens. 1B, H334 Carc. 1A, H350 STOT RE 1, H372	-	
Iron	7439-89-6	_	231-096-4	19.0	None	-	
Graphite	7782-42-5	-	231-955-3	18.1	None	-	
Dimethyl carbonate	616-38-6	607-013-00-6	210-478-4	8.5	Flam. Liq. 2, H225	-	
Copper	7440-50-8		231-159-6	8.2	None	-	
Aluminium	7429-90-5	-	231-072-3	3.8	None	-	
Lithium hexafluoropho sphate (1-)	21324-40-3	-	244-334-7	2.4	Acute Tox. 3, H301 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT RE 1, H372	ATE (oral)= 200 mg/kg	
Ethylene carbonate	96-49-1	-	202-510-0	2.3	Acute Tox. 4, H302 Eye Irrit.2, H319 STOT RE 2, H373	ATE (oral)= 500 mg/kg	
Ethyl methyl carbonate	623-53-0	-	433-480-9	1.4	Flam. Liq. 2, H225	-	
Carbon black	1333-86-4	-	215-609-9	1.1	None	-	

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Ingredients:						
Substance	CAS No.	Index No.	EC No.	w/w , %	CLP Classification	SCL/M- factor/ ATE
Polyvinylidene fluoride	24937-79-9	-	-	0.9	None	-
Polypropylene	9003-07-0	-	-	0.8	None	-
Nickel	7440-02-0	-	231-111-4	0.7	None	-
Carboxymethy I cellulose	9000-11-7	-	-	0.2	None	-
Butadiene-styr ene rubber	9003-55-8	-	-	0.2	None	-

Additional information: Full text of H-statements, see SECTION 16.



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4 - First Aid Measures

4.1 Description of first aid measures

General advice:

IF exposed or concerned: Get medical advice/attention.

After inhalation:

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor/if you feel unwell.

After skin contact:

Take off immediately all contaminated clothing.

Rinse skin with water/ shower.

Immediately call a POISON CENTER or doctor/physician.

After eye contact:

Rinse cautiously with water for several minutes.

Immediately call a POISON CENTER or doctor/physician.

After swallowing:

Rinse mouth.

Do NOT induce vomiting.

Immediately call a POISON CENTER/doctor.

• 4.2 Most important symptoms and effects, both acute and delayed:

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause cancer.

May causes damage organs through prolonged or repeated exposure by inhalation.

· 4.3 Indication of any immediate medical attention and special treatment needed:

Treatment according to symptoms, no known specific medicine.

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5 - Fire-Fighting Measures

- 5.1 Extinguishing media

Suitable extinguishing agents:

Use chemical powder, sand, soil, alcohol resistant foam to extinguish.

Unsuitable extinguishing media:

Water.

· 5.2 Special hazards arising from the substance or mixture:

May produce corrosive dust/ mist.

- 5.3 Advice for firefighters

Protective equipment:

Wear an approved positive pressure self-contained breathing apparatus (Comply with EN 133).

6 - Accidental Release Measures

· 6.1 Personal precautions, protective equipment and emergency procedures

· 6.1.1 For non-emergency personnel

Protective equipment:

Protective gloves/ protective clothing/ eye protection/ face protection and respiration protection.

Emergency procedures:

Evacuate quickly.

Ensure good ventilation.

Wear protective gloves/ protective clothing/ eye protection/ face protection and respiration protection.

Avoid contact with skin and eyes.

6.1.2 For emergency responders

Personal protective equipment:

Protective gloves/ protective clothing/ eye protection/ face protection and respiration protection

6.2 Environmental precautions:

Prevent further leakage or spillage if safe to do so.

Prevent spillage from entering drains, sewer, basement or confined areas.

If the spillage contaminates rivers, lakes or drains inform respective authorities.

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6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Do not use water flush.

Ensure good ventilation.

Dispose contaminated material as waste according to section 13.

6.4 Reference to other sections:

See section 7 for information on safe handing.

See section 8 for information on personal protection equipment.

See section 13 for disposal in formation.

7 - Handling and Storage

· 7.1 Precautions for safe handling:

Ensure good ventilation/ exhaustion at the workplace.

Absorb spillage to prevent material damage.

Do not breathing dust.

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

Use respiratory protective device against the effects of dust.

Prevent to contact with eyes and skin.

Avoid release to the environment.

Information about fire and explosion protection:

Keep away from heat source.

· 7.2 Conditions for safe storage, including any non-compatibility

· Requirements to be met by storerooms and receptacles:

Store in a well-ventilated place. Keep cool.

Information about storage in one common storage facility:

Store in the original container.

Further information about storage conditions:

Store locked up.

Storage class:

Not applicable.

· 7.3 Specific end use(s):

See section 1.2.

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8 - Exposure Controls / Personal Protection

8.1 Control parameters

• Ingredients with limit values that require monitoring at the workplace:

Country	Limit value - Eight hours	Limit value - Short term	
7782-42-5 Grap	hite		
Belgium	2 mg/m ³	-	
Denmark	2.5 mg/m ³ Respirable aerosol	5 mg/m ³ Respirable aerosol	
Finland	2 mg/m ³	-	
France	2 mg/m ³ Respirable aerosol	-	
Germany (DFG)	4 mg/m ³ Inhalable aerosol; 1.5 mg/m ³ Respirable	-	
	aerosol		
Ireland	10 mg/m ³ Inhalable fraction; 4 mg/m ³ Respirable	-	
	fraction		
Latvia	2 mg/m ³	-	
Spain	2 mg/m ³ Inhalable aerosol;		
Sweden	5 mg/m ³ Respirable aerosol	1-	
United Kingdom	10 mg/m ³ Inhalable fraction; 4 mg/m ³ Respirable	-	
	fraction		
1333-86-4 Carb	on black		
Belgium	3.5 mg/m ³	-	
Denmark	3.5 mg/m ³	7.0 mg/m ³	
Finland	3.5 mg/m ³	7 mg/m ³ 15 minutes reference	
		period	
France	3.5 mg/m ³	-	
Ireland	3.5 mg/m ³	7 mg/m ³ 15 minutes reference	
		period	
Spain	3.5 mg/m ³	-	
Sweden	3 mg/m ³	-	
United Kingdom	3.5 mg/m ³	7.0 mg/m ³	

· DNELs:

DNEL type		DNEL worker	DNEL consumer	
		value	value	
1333-86-4 Carbon black				
Systemic Effects Long-term, inhalation exposure		1 mg/m³	0.06 mg/m ³	
Local Effects	Long-term, inhalation exposure	2 mg/m³	1.75 mg/m³	

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· PNECs:

PNEC type	Value
1333-86-4 Carbon black	
Freshwater	5-50 mg/L
Marine water	5 mg/L

Additional information:

The lists valid during the marking were used as basis.

8.2 Exposure controls

• Based on the composition shown in section 3, the following measures are suggested for occupational safety measure.

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice.

See section 7 for information about design of technical facilities.

- Personal protective equipment
- Eye and face protection:



Safety glasses

Protective goggles with side-shields.

- Skin protection
- Hand protection:



Protective gloves

Gloves made from butyl rubber Neoprene[™] rubber, nitrile rubber (thickness> 0.3mm; breakthrough times up to 480 minutes).

Other skin protection:

Anti-acid gauntlets, boots, bodysuit are necessary.

Respiration protection:

Use positive pressure breathing mask if concentrations in air could exceed occupational exposure standard.

Thermal hazards:

All the personal protective equipment must be heat-resistant.

Environmental exposure controls:

Control measures must be made in accordance with Community environmental protection legislation.

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9 - Physical and Chemical Properties

• 9.1 Information on basic physical and che	mical properties	
Physical state	Solid	
Color	Not determined	
Odor & Odor threshold	Odorless	
Melting point/freezing point (or softening	Not determined	
point/range)		
· Boiling point or initial boiling point and	Not determined	
boiling range		
Flammability	Not flammable solid	
Lower and upper explosion limit	Not applicable	
Flash point	Not applicable	
Auto-ignition temperature	Not applicable	
Decomposition temperature	Not determined	
•рН	Not determined, this product is insoluble in water.	
Kinematic viscosity (mm ² /s)	Not determined	
· Solubility	Not determined	
Partition coefficient n-octanol/water (log	Not determined	
value)		
· Vapor pressure	Not determined	
Density and/or relative density	Not determined	
Relative vapor density	Not determined	
Particle characteristics	Not determined	
• 9.2 Other information		
• 9.2.1 Information with regard to physical h	azard classes:	
· Explosives	Not applicable	
Flammable gases	Not applicable	
· Aerosols	Not applicable	
 Oxidising gases 	Not applicable	
Gases under pressure	Not applicable	
Flammable liquids	Not applicable	
Flammable solids	Not applicable	
Self-reactive substances and mixtures	Not applicable	
Pyrophoric liquids	Not applicable	
Pyrophoric solids	Not applicable	
Self-heating substances and mixtures	Not applicable	
Substances and mixtures, which emit	Not applicable	
flammable gases in contact with water		

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 Oxidizing liquids 	Not applicable
Oxidizing solids	Not applicable
Organic peroxides	Not applicable
Corrosive to metals	Not applicable
Desensitised explosives	Not applicable
• 9.2.2 Other safety characteristics	
Mechanical sensitivity	Not applicable
Self-accelerating polymerisation	Not applicable
temperature	
Formation of explosible dust/air	Not applicable
mixtures	
Acid/alkaline reserve	Not applicable
Evaporation rate	Not applicable
• Miscibility	Not applicable
Conductivity	Not applicable
Corrosiveness	Not applicable
· Gas group	Not applicable
Redox potential	Not applicable
Radical formation potential	Not applicable
Photocatalytic properties	Not applicable
Other physical and chemical parameters	Not determined

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10 - Stability and Reactivity

10.1 Reactivity:

The product is non-reactive under normal conditions of use, storage and transport.

· 10.2 Chemical stability:

Under storage at normal ambient temperatures, the product is stable.

10.3 Possibility of hazardous reactions:

No known hazardous reaction.

- 10.4 Conditions to avoid:

High temperature and flame.

10.5 Incompatible materials:

Acid.

10.6 Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 - Toxicological Information

11.1 Information on toxicological effects

- · Acute toxicity: Based on available data, the classification criteria are not met.
- · Skin corrosion/irritation: Causes skin irritation.
- · Serious eyes damage/ irritation: Causes serious eye irritation.

Respiratory or skin sensitization:

May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

- Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- · Carcinogenicity: May cause cancer.
- Reproductive toxicity: Based on available data, the classification criteria are not met.
- · Summary of evaluation of the CMR properties:

Based on available data, the classification criteria are not met.

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- STOT-single exposure: Based on available data, the classification criteria are not met.
- STOT-repeated exposure: Causes damage to organ through prolonged or repeated exposure.
- Aspiration hazard: Based on available data, the classification criteria are not met.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties:

None of the ingredients ($\geq 0.1\%$) is considered to have endocrine-disrupting properties with respect to humans, as none of them meet the criteria set out in section A of Regulation (EU) No 2017/2100.

11.2.2 Other information: No known other relevant information on adverse health effects.

12 - Ecological Information

• 12.1 Toxicity: No available data.

- · 12.2 Persistence and degradability: No available data.
- 12.3 Bio-accumulative potential: No available data.
- 12.4 Mobility in soil: No available data.

· 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties:

None of the ingredients ($\geq 0.1\%$) is considered to have endocrine-disrupting properties with respect to non-target organisms, as none of them meet the criteria set out in section B of Regulation (EU) No 2017/2100.

- 12.7 Other adverse effects:

No known other adverse effects.

· 12.8 Additional ecological information

· General notes:

WGK3 (German Regulation) (self-assessment): Severe hazard to waters.

Do not allow the product to reach ground water, water course or sewage system, even little quantities.

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13 - Disposal Considerations

• 13.1 Waste treatment methods

· Recommendation:

Must not be disposed together with household garbage.

· 13.2 Un-cleaned packaging

Recommendation:

Dispose of contents/container in according to the local/regional/national/ international regulation.

14 - Transport Information

• IMO/IMDG (40-20)	This product is not subject to IMO/IMDG code according to special provision 188.
ADR/RID (2021 Edition)	This product is not subject to ADR/RID according to special provision 188.

15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
MAK (German Maximum Workplace Concentration):

7782-42-5	Graphite	4
1333-86-4	Carbon black	3

Directive 2012/18/EU

- Named dangerous substances-ANNEX I: None of the ingredients is listed.
- · Seveso category: Not applicable
- Qualifying quantity (tonnes) for the application of lower-tier requirements: Not applicable
- · Qualifying quantity (tonnes) for the application of upper-tier requirements: Not applicable
- · National regulations.
- Water hazard class: WGK3 (German Regulation) (self-assessment): Severe hazard to waters.
- Other regulations, limitations and prohibitive regulations
- · SVHC Candidate list of REACH Regulation Annex XIV Authorization: None of the ingredients is listed.
- REACH Regulation Annex XVII Restriction:

346417-97-8Cobalt lithium manganese nickel oxide27
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REACH Regulation Annex XIV Authorization List: None of the ingredients is listed.

• 15.2 Chemical safety assessment: A Chemical Safe Assessment has not been carried out.

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16 - Other Information

16.1 Indication of changes:

None.

16.2 Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road). IMDG: International Maritime Code for Dangerous Goods. IATA: International Air Transport Association. CAS: Chemical Abstracts Service (division of the American Chemical Society) DNEL: Derived No-Effect Level (REACH) PNEC: Predicted No-Effect Concentration (REACH) PBT: Persistent, Bio accumulative and Toxic vPvB: very persistent and very bio accumulative SVHC: Substance of Very High Concern Flam. Liq. 2: Flammable liquid, hazard category 2 Acute Tox. 3: Acute toxicity, hazard category 3 Acute Tox. 4: Acute toxicity, hazard category 4 Skin Corr. 1A: Skin corrosion/irritation, hazard category 1A Skin Irrit. 2: Skin corrosion/irritation, hazard category 2 Skin Sens. 1: Skin sensitization, hazard category 1 Eye Dam. 1: Eye damage/irritation, hazard category 1 Eye Irrit. 2: Eye damage/irritation, hazard category 2 Resp. Sens. 1: Respiratory sensitization, hazard category 1 Carc. 1A: Carcinogenicity, hazard category 1A STOT RE 1: Specific target organ toxicity after repeated exposure, hazard category 1 STOT RE 2: Specific target organ toxicity after repeated exposure, hazard category 2

· 16.3 Key literature references and sources for data:

https://echa.europa.eu/ https://chem.nlm.nih.gov/ https://www.osha.gov/ http://www.unece.org/ http://www.imo.org/ https://www.dguv.de/ https://epa.govt.nz/ http://www.ilo.org/ https://www.phmsa.dot.gov/

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• 16.4 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]:

See SECTION 2.1 (classification).

· 16.5 Relevant H- and EUH-phrases (number and full text):

H225 Highly flammable liquid and vapour

- H301 Toxic if swallowed
- H302 Harmful if swallowed

H314 Causes severe skin burns and eye damage

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H318 Causes serious eye damage

H319 Causes serious eye irritation

- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H350 May cause cancer

H372 Causes damage to organs through prolonged or repeated exposure

H373 May cause damage to organs through prolonged or repeated exposure

16.6 Training advice:

Workers must be trained in general and specific aspects of safe work procedures for this chemical. Workers need easy to understand guidelines and instructions for safe working with this chemical. Instructions, guidelines and legally required documents need to be available for workers in easy to understand language.

16.7 Further information:

The contents and format of this SDS are in accordance with Regulation (EC) No 1907/2006, its amendment Regulation (EU) No 2020/878 and (EC) No 1272/2008.

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*** End of Report ***

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签发测试报告条款 Conditions of Issuance of Test Reports

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