MATERIAL SAFETY DATA SHEETS

For

Klein Tools

Prepared for	:	SHENZHEN TOPBAND CO., LTD.
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Signed for and on behalf of
EMTEK (Dongguan) Co., Ltd.

Prepared by:	Reviewed by:	Approved by:
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Report Engineer	Supervisor	Manager

MATERIAL SAFETY DATA SHEETS

1- Identification of the substance /preparation and of the company/undertaking

Identification of The Preparation	:	Klein Tools
Model	:	56403
Company Identification	:	Shenzhen Topband Co., Ltd.
Company Address	:	Topband Industrial Park, Liyuan Industrial Zone, Shiy Town, Bao'An District, Shenzhen, China
Off-Hour Emergency Phone Number	:	18320482105
Fax	:	/
E-mail	:	hexd@topband.com.cn

2 - Hazards Identification

Routes of Exposure	:	Contact, inhalation, ingestion.
Skin contact	:	No special hazards under normal use, battery damage caused skin irritation or chemical burns.
Eye contact	:	Not necessary under normal use, battery damage caused serious stimulation or chemical burns.
Inhalation	:	Inhalation of the smoke that arising of battery may cause serious respiratory irritation, coughing, Burns, respiratory difficulties and may be in a coma.
Ingestion	:	May cause digestive tract severe and permanent damage. Can lead to circulatory system failure. Battery damage may cause oral, esophageal and gastro-intestinal serious chemical burn.

3- Composition / Information on Ingredients

Component/Substance	% by wt	CAS Number
Foil	2-10	/
Metallic	20-50	/
PVDF	5	/
SBR	5	/
Carbon	10-30	/
Electrolyte	10-20	/

4 - First Aid Measures

Eye Protection	:	Flush with plenty of water (eyelids held open) for at least 15 minutes.
Skin Protection	:	Remove all contaminated clothing and flush affected areas with plenty of water and soap for at least 15 minutes.
Ingestion	:	Seek medical advice immediately.
Inhalation	:	Remove to fresh air and ventilate the contaminated area. Give oxygen of artificial respiration if needed.

5 - Fire-Fighting Measures

General Information	:	This substance is Flammable.
Suitable Fire Extinguishing Media	:	Dry chemical, foam, dry sand, CO_2.
Special Remarks On Fire Hazards	:	Wear self-priming of meet pressure respiratory machine, equipped with a full range of protection devices.
Special Fire-Fighting Procedures	:	Not applicable.

6 - Accidental Release Measures

Personal precautions	:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	:	Select the appropriate personal protective equipment. Maintain good ventilation, clean spilled materials immediately. Damaged batteries do not heat or burning should be placed in sealed plastic bags or containers, prevention of pollution from substances into the soil and sewage.

7 - Handling and Storage

Handling Precautions	:	Avoid short circuit, short circuit in a long time can cause the battery to lose energy, produce a lot of hot burning skin, or even cause a fire or explosion. When transporting or storing the battery due to effective measures against short circuit, do not remove the decomposition of batteries, lithium-ion polymer batteries should be maintained in the 10-50% State of charge transport, and are not allowed in contact with water.
Storing Notes	:	When stored for a long time, and polymer lithium-ion battery should be maintained in the State of charge of 40-60%, stored in a cool, dry, ventilated place, performance loss at high temperature can cause battery leakage

8 - Exposure Controls / Personal Protection

Engineering Controls:	:	Choosing the right ventilation equipment, use and storage of the substance site should have eye wash and shower facilities.
Respiratory Protection	:	Not necessary under normal use. Use gas mask if handing a leaking of rupture battery.
Eye Protection	:	Not necessary under normal use. Wear safety goggles or glasses with side shields if handing a leaking of rupture battery.
Skin Protection	:	Not necessary under normal use. Use rubber apron and protective working in case of handing of a rupture battery.

9 - Physical and Chemical Properties

Appearance	:	Solid	Odor	:	No smell
pH value	:	No data available	Melting Point	:	No data available
Boiling Point	:	No data available	Vapor Pressure	:	No data available
Density	:	No data available	Solubility in water	:	Insoluble in water
Heat Of Vaporization	:	No data available	Heat Of Combustion	:	No data available
Vapor Density	:	No data available	Partition Coefficient	:	No data available
Rated capacity	:	3250mAh	Rate Energy	:	11.70Wh
Nominal Voltage(cell/battery/power bank)	:	3.6V			

10 - Stability and Reactivity

Stability	:	Stable under normal temperatures and pressures.
Conditions To Avoid	:	Avoid to be exposed to direct sunlight, high temperature or humidity, short-circuit.
Materials To Avoid	:	Conductive materials, water, strong oxidizers and strong acids.
Decomposition	:	Acrid or harmful gas is emitted during fire.

11 - Toxicological Information

Acute Toxicity	:	No data available	Chronic Toxicity	:	No data available
Irritation	:	Contacts inside the battery leaking substances can have on the skin stimulation or chemical burns.	Allergenicity	:	No data available
Mutagenicity	:	No data available	Teratogenicity	:	No data available
Carcinogenicity	:	No data available	Reproductive Toxicity	:	No data available

12 - Ecological Information

Ecotoxicity	:	No data available	Environmental Degradation	:	No data available
Non-biodegradable	:	No data available	Biological concentration	:	No data available

13 - Disposal Considerations

Recommended methods for safe and environmentally preferred disposal:

Product (waste from residues)

Do not throw out a used battery cell. Recycle it through the recycling company.

Contaminated packing

Neither a container nor packing is contaminated during normal use. When internal materials leaked from a battery cell contaminates, dispose as industrial wastes subject to special control.

14 - Transport Information

In the case of transportation, avoid exposure to high temperature and prevent the formation of any condensation. Take in a cargo of them without falling, dropping and breakage. Prevent collapse of cargo piles and wet by rain. The container must be handled carefully. Do not give shocks that result in a mark of hitting on a cell. Please refer to section 7-HANDING AND STORAGE also.

UN38.3 test result:

Name of test items	Standard requirement or the clause number of standard	Test conclusion
Altitude simulation	38.3 test T.1	Passed
Thermal test	38.3 test T.2	Passed
Vibration	38.3 test T.3	Passed
Shock	38.3 test T.4	Passed
External short circuit	38.3 test T.5	Passed
Impact	38.3 test T.6	Passed
Overcharge	38.3 test T.7	---
Forced discharge	38.3 test T.8	Passed

The batteries is of the type proven to meet the requirements or each test in the UNITED NATIONS "Recommendation on the TRANSPORT OF DANGEROUS GOODS", manual of tests and criteria, UN (ST/SGIAC.10/11) Rev.5-2009 section 38.3 lithium batteries, could be transport by sea as ordinary goods. Otherwise the battery contained in equipment (UN3481) should be transported according to class 9, the goods are packed according to packing instruction P903 IMDG Code, 2018 Edition (inc. Amdt 39-18).
The Li-ion Battery had been tested according to the requirements of the UN manual of tests and Criteria, Part Ill, subsection 38.3:
The lithium ion batteries according to Section II/Section IB of PACKING INSTRUCTION 955, or of PACKING INSTRUCTION 966~967 of the 2018 Dangerous Goods regulations 60th Edition may be transported.
The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking. The materials and pack design shall be chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.
According to the Packing Instruction of IATA DGR 60th Edition for transportation.
Meets requirements of international Maritime Dangerous Goods(IMDG)-2018 Special Provision 188 to be transported as non-dangerous goods.

Dangerous Goods Code: assigned to the miscellaneous class 9

Packaging Type: IATA-DGR: PI967 Section II

UN Number: UN3481

Packaging Mark: lithium batteries.

Packaging Method: No data available

15 - Regulatory Information

OSHA Hazard communication standard (29 CFR 1910.1200)

Hazardous Non-hazardous √

16 - Other Information

Date: December 25, 2018

Data Audit Units: EMTEK(Dongguan) CO., LTD.

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