SAFETY DATA SHEET

[In accordance with the criteria of Regulation No 1907/2006 (REACH) as amended]

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: **FUTURE BX 750, FUTURE BX 1000, FUTURE AIR-TRAVEL 600, FUTURE AIR-TRAVEL 800, GHOST BX 1500, GHOST BX 2000, TAC1000, TAC2000, TAC800 (MODULAR BATTERY), ONE 97WH SEGMENT OF MODULAR AIR-TRAVEL FRIENDLY BATTERY, MODULAR AIR-TRAVEL FRIENDLY BATTERY - 780 WH (8 MODULES), MODULAR AIR-TRAVEL FRIENDLY BATTERY - 582 WH (6 MODULES), BATTERY DEDICATED TO SCOOTER FUTURE STANDARD 750 WH, BATTERY DEDICATED TO SCOOTER FUTURE LONG 1000 WH, BATTERY DEDICATED TO SCOOTER GHOST STANDARD 1500 WH, BATTERY DEDICATED TO SCOOTER GHOST LONG 2000 WH, BATTERY DEDICATED TO SCOOTER TAC1000 LONG 1000 WH, BATTERY DEDICATED TO SCOOTER TAC2000 LONG 2000 WH**

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Lithium-Ion Battery Pack— Rechargeable

Uses advised against: not determined.

1.3. Details of the supplier of the safety data sheet

Producer: **Marine Tech Spółka Akcyjna**

Address: ul. Franciszka Żwirki i Stanisława Wigury 17
38-400 Krosno

Telephone/Fax number: +48 502 741 715

E-mail address for a competent person responsible for sds: iga.piatek@seacraft.eu

1.4. Emergency telephone number

112 (Europe's emergency telephone number). Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department. Please check any national emergency information services in your country.

Section 2: Hazards identification

2.1. Classification of the substance or mixture

In accordance with the REACH regulation, a product is considered as an article, therefore it is not subject to the classification and labelling requirements.

2.2. Label elements*

Hazard pictograms and signal words

None.

The names of substances on the label

None.

Hazard statements

None

Precautionary statements

None.

2.3. Other hazards

The product does not contain ingredients which meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation. The product does not contain substances included in the list established in accordance with Article 59(1) for having endocrine disrupting properties, or substances identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation 2017/2100/EU or Commission Regulation 2018/605/EU at a concentration equal to or greater than 0.1 % by weight.

For the battery cell, chemical materials are stored in a hermetically sealed metal or metal laminated plastic case, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, there are no physical hazards such as ignition, explosion and chemical hazards due to leakage of battery contents. However, if exposed to a fire, added mechanical shocks, decomposed, added electric stress by miss-use, the gas release vent will be operated. The battery cell case will be breached at the extreme, hazardous materials may be released. Also, if it is heated strongly by surrounding fires or the like, there is a possibility that irritating or harmful gasmay be generated.

Section 3: Composition/information on ingredients

3.1 Substance

Not applicable.

3.2. Mixtures

The product is a lithium ion rechargeable battery cell. See the table below for information about the chemical nature of product. Not every product includes all of these materials.

Portion	Material name	CAS No.	Concentration range (wt. %)
positive electrode	lithium transition metal oxidate	12190-79-3 12031-65-1 12057-17-9 182442-95-1 207803-51-8	20~60
positive electrode's base	aluminium	7429-90-5	1~10
negative electrode	carbon	7782-42-5 7440-44-0	10~30
negative electrode's base	cooper	7440-50-8	1~15
outer case	aluminium, iron, aluminium laminated plastic	7429-90-5 7439-89-6	1~30
electrolyte	ethyl methyl carbonate diethyl carbonate ethylene carbonate lithium hexafluorophosphate	623-53-0 105-58-8 96-49-1 21324-40-3	5~25

Section 4: First aid measures

4.1. Description of first aid measures

The undamaged product does not pose a hazard to human health. The information on first aid described below applies to a situation in which the exposure occurred as a result of damage to the product or improper handling.
Skin contact: remove contaminated clothes and shoes immediately. Apply a sterile dressing. Immediately call a doctor. If the skin is contaminated with metallic lithium, do not rinse the skin with water before removing it.

Eye contact: do not rub one's eyes. Protect non-irritated eye, remove contact lenses. Wash out with plenty of water with the eyelid hold wide open for at least 15 min. Avoid powerful water stream – risk of cornea damage. Put on sterile dressing. Consult ophthalmologist.

Ingestion: exposure by this route does not usually occur. However, if swallowed rinse mouth with water. Never give anything to drink to an unconscious person, unless instructed by medical personnel. Do not induce vomiting. Consult a doctor, if disturbing symptoms appear, show the container or label.

Inhalation of vapours: make the victim blow his nose, gargle. Consult a doctor, if disturbing symptoms appear. Remove the victim to fresh air, keep warm and calm.

4.2. Most important symptoms and effects, both acute and delayed

There is no report data on adverse exposure health effects or risks in case of correct use of the product. In case of battery damage and leakage of content:

Skin contact: the product may cause redness, burning sensation, irritation, burns.

Eye contact: the product may cause burning sensation, irritation, tearing, pain, risk of serious damage to eyes.

Ingestion: exposure by this route does not occur.

Inhalation: high concentration of vapours and mists may cause respiratory irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Physician makes a decision regarding further medical treatment after thoroughly examination of the injured. Symptomatic treatment.

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: plenty of water, carbon dioxide gas, nitrogen gas, chemical powder fire extinguishing medium and fire foam. Adapt the extinguishing media to surrounding materials.

Unsuitable extinguishing media: water jet – risk of the propagation of the flame.

5.2. Special hazards arising from the substance or mixture

During the fire may produce harmful gases containing eg. carbon oxides, other hazardous unidentified products of thermal decomposition, corrosive gases. Do not inhale combustion products, they can be dangerous for human health.

5.3. Advice for firefighters

When extinguishing a lithium battery fire with water, special care should be taken due to the possibility of metallic lithium splashes and the fact that contact of hot lithium with water can lead to hydrogen release. If the batteries are connected to a power source - turn off the power. When the battery burns with other combustibles simultaneously, take fire- extinguishing method which correspond to the combustibles. Extinguish a fire from the windward as much as possible. Personal protection typical in case of fire. Do not stay in the fire zone without self-contained breathing apparatus and protective clothing resistant to chemicals. Cool down the containers that are endangered by fire with a water spray from a safe distance. Collect used extinguishing media.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Limit the access for the outsiders into the breakdown area, until the suitable cleaning operations are completed. Ensure that only the trained personnel removes the effects of the accident. In case of large spills, isolate the exposed area. Eliminate all sources of ignition - do not use an open flame, do not smoke, do not use sparking tools, etc. Use personal protective equipment.

6.2. Environmental precautions

Do not allow the product to get into the sewage system, surface waters and soil. In case of release of large amounts of the product, it is necessary to take appropriate steps to prevent it from spreading into the environment. Notify relevant emergency services.

6.3. Methods and material for containment and cleaning up

In the event of an electrolyte leak: if possible, eliminate or limit the leak. Absorb with non-flammable liquid absorbing materials (e.g. earth, sand). The leaked place is wiped off with dry cloth. The collected material should be treated as waste and placed in an appropriately labelled container. Do not inhale the gas as much as possible. Remaining elements of the product: collect mechanically, place them in a properly labelled container and transfer to utilization. Prevention of secondary hazards: Avoid re-scattering. Do not bring the collected materials close to fire. Do not use water to clean surfaces contaminated with the electrolyte released from the product - risk of liberating flammable gases that may ignite spontaneously.

6.4. Reference to other sections

Appropriate conduct with waste product – section 13. Appropriate personal protective equipment – section 8.

Section 7: Handling and storage

7.1. Precautions for safe handling

Provide general and / or local ventilation in the workplace. Prevent the casing from unsealing. Handle in accordance with good occupational hygiene and safety practices. Use personal protective equipment. Before break and after work wash hands carefully. Keep the unused containers tightly closed. Do not eat, drink and smoke during the work. Avoid eyes and skin contamination. Do not connect the positive terminal to the negative terminal with electrical wire or chain. Avoid polarity reverse connection when installing the battery to an instrument. Do not wet the battery with water, seawater, drink or acid; or expose to strong oxidizer. Do not damage or remove the external tube. Keep the battery away from heat and fire. Do not disassemble or reconstruct the battery; or solder the battery directly. Do not give a mechanical shock or deform. Do not use unauthorized charger or other charging method. Terminate charging when the charging process doesn't end within specified time.

7.2. Conditions for safe storage, including any incompatibilities

Store in properly labelled, sealed packages in a dry, cool and well-ventilated place. Keep away from incompatible materials (see subsection 10.5). Keep away from foodstuffs and animal feed. Protect against excessive heating, high temperatures, may cause tearing of the casing or and the electrolyte leakage. Do not store the battery with metalware, water, seawater, strong acid or strong oxidizer. Make the charge amount less than or equal to 50% then store at -20~40 °C in a dry (humidity: 45~85 %) place. Since deterioration will be faster in the high temperature range than in the low temperature range, so do not keep it in the high temperature range beyond the period that is specified by the seller or owner. Excessive heating can shorten the battery life. Use insulative and adequately strong packaging material to prevent short circuit between positive and negative terminal when the packaging breaks during normal handling. Do not use conductive or easy to break packaging material.

7.3. Specific end use(s)

No information about applications other than those specified in section 1.2.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Due to the form of the product, monitoring of the permissible concentration of substances in the workplace is not required.

8.2. Exposure controls

Industrial hygiene

Use the product in accordance with good occupational hygiene and safety practices. Do not eat, drink and smoke during the work. Before break and after work wash hands carefully. Ensure adequate general and/or local ventilation at the workplace.

Individual protection measures, such as personal protective equipment

The necessity to use and the selection of appropriate personal protective equipment should take into account the type of risk posed by the product, working conditions and the way of handling the product. The personal protective equipment used must meet the requirements of Regulation (EU) 2016/425 and the relevant standards. The employer is obliged to provide protection measures appropriate to the activities performed and meeting all quality requirements, including their maintenance and cleaning. Any contaminated or damaged PPE must be replaced immediately.

Hand protection

Use protective gloves resistant to chemicals according to EN 374. Select the material for the gloves individually at the workplace.

The material that the gloves are made of must be impenetrable and resistant to the product's effects. The selection of material must be performed with consideration of breakthrough time, penetration speed and degradation. Moreover, the selection of proper gloves depends not only on the material, but also on other quality features and changes depending on the manufacturer. The producer should provide detailed information regarding the exact breakthrough time. This information should be followed. It is recommended to change protective gloves regulary and replace them immidiately if any signs of their wear, damage or changes in appearance (colour, flexibility, shape) occur.

Body protection

Use skin protection measures adequate to the existing thermal, chemical or mechanical hazards. Working clothes with long sleeve and long trousers.

Eye protection

If there is a risk of eye contamination, use safety glasses in accordance with the EN 166 standard.

Respiratory protection

Not required with adequate ventilation.

Thermal hazards

Not applicable.

Environmental exposure controls

Prevent direct release to drains/ surface waters. Do not contaminate surface waters and drainage ditches with chemicals or used containers. Released product or uncontrolled spills to surface waters should be reported to appropriate authorities in accordance with local and national legislations. Dispose as chemical waste, in accordance with local and national legislation.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	solid
Colour	metallic colour or black
Odour	characteristic
Melting point/freezing point	not applicable
Boiling point or initial boiling point and boiling range	not applicable
Flammability	not applicable
Lower and upper explosion limit	not applicable
Flash point	not applicable
Auto-ignition temperature	not applicable
Decomposition temperature	not applicable
pH	not applicable
Kinematic viscosity	not applicable
Solubility	not applicable
Partition coefficient n-octanol/water (log value)	not applicable
Vapour pressure	not applicable
Density and/or relative density	not applicable
Relative vapour density	not applicable
Particle characteristics	not applicable

9.2. Other information

No additional tests.

Section 10: Stability and reactivity

10.1. Reactivity

Efficient and sealed battery is not reactive. Battery content is reactive. See also subsection 10.3-10.5.

10.2. Chemical stability

Normally stable unless a strong shock is applied or heated strongly.

10.3. Possibility of hazardous reactions

In normal conditions of use, they do not occur. Contact of the damaged product with water may lead to exothermic reactions and the release of flammable gas. Damage to the container may cause leakage of contents. Contents may leak or ignite due to temperature rise.

10.4. Conditions to avoid

Crushing or deformation, use and storage at 80 °C or higher or at high humidity. Usage at a voltage or a current outside the rating and external short circuit. Avoid direct exposure to sunlight.

10.5. Incompatible materials

Strong oxidizing agents. Conductive material such as water or metal pieces.

10.6. Hazardous decomposition products

Irritating or harmful gases are released if a leakage or fire occurs.

Section 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Under normal conditions of use product is not dangerous for life and health.

Acute toxicity

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

Skin corrosion/irritation

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

Serious eye damage/irritation

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

Respiratory or skin sensitisation

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

Germ cell mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Information on likely routes of exposure

Routes of exposure: eye contact, skin contact, inhalation. See subsection 4.2 for more information on the effects from each possible route of exposure.

Symptoms related to the physical, chemical and toxicological characteristics

Undamaged battery poses no hazard to human health.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Undamaged battery poses no hazard to human health.

11.2. Information on other hazards

Endocrine disrupting properties

The product does not contain substances included in the list established in accordance with Article 59(1) for having endocrine disrupting properties, or substances identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1 % by weight.

Other information

No data.

Section 12: Ecological information

12.1. Toxicity

Undamaged battery poses no hazard for the environment.

12.2. Persistence and degradability

Product is not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation is not expected.

12.4. Mobility in soil

Mobility of components of the mixture in soil depends on the hydrophilic and hydrophobic properties and biotic and abiotic conditions of soil, including its structure, climatic conditions, seasons and soil organisms.

12.5. Results of PBT and vPvB assessment

Product does not contain ingredients which meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation.

12.6. Other adverse effects

The product does not contain substances included in the list established in accordance with Article 59(1) for having endocrine disrupting properties, or substances identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1 % by weight.

12.7. Other adverse effects

Product has no influence on global warming and destruction of the ozone layer. Consider other harmful effects of individual components of the mixture on the environment (eg. global warming potential).

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods for the product:

The waste product should be recovered or disposed of in authorized incineration plants or waste disposal / neutralization plants, in accordance with applicable regulations. Do not empty into drains. The waste code should be given in the place of its formation. Specified collection or disposal of lithium ion battery is required by the law like as "battery control law" in several nations. Collection or recycle of the battery is mainly imposed on battery's manufacturer or importer in the nations recycle is required.

Disposal methods for used 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.

Legal basis: Directive 2008/98/EC as amended, 94/62/EC as amended.

Section 14: Transport information

14.1. UN number or ID number

UN 3480*

UN 3481*

14.2. UN proper shipping name

UN 3480

ADR / IMDG / IATA / ICAO

LITHIUM ION BATTERIES (including lithium ion polymer batteries)

UN 3481

ADR / IMDG / IATA / ICAO

LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT

14.3. Transport hazard class(es)

9

14.4. Packing group

Not applicable.**

14.5. Environmental hazards

Not applicable.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

Other information

UN 3480

ADR	limited quantities	0
	classification code	M4
	special provisions	188, 230, 310, 348, 376, 377, 387, 636
	transport category	2
	tunnel restriction code	(E)
IMDG	limited quantities	0
	EmS code	F-A, S-I
	marine pollutant	no
	special provisions	188, 230, 310, 348, 376, 377, 384, 387
ICAO/IATA	special provisions	A88, A99, A154, A164, A183, A201, A206, A213, A331, A334, A802
	Ltd Qty Packing Instruction	Forbidden
	Ltd Qty Passenger and Cargo Aircraft max net	Forbidden
	Passenger and Cargo Aircraft Pkg Inst	Forbidden
	Passenger and Cargo Aircraft max net qty	Forbidden
	Cargo Aircraft Only Pkg Inst	965
	Cargo Aircraft Only max net qty	35 kg/ 10 kg

UN 3481

ADR	limited quantities	0
	classification code	M4
	special provisions	188, 230, 310, 348, 360, 376, 377, 387, 390, 670
	transport category	2
	tunnel restriction code	(E)
IMDG	limited quantities	0
	EmS code	F-A, S-I
	marine pollutant	no
	special provisions	188, 230, 310, 348, 360, 376, 377, 384, 387, 390
ICAO/IATA	special provisions	A48, A88, A99, A154, A164, A181, A185, A206, A213, A220
	Ltd Qty Packing Instruction	Forbidden
	Ltd Qty Passenger and Cargo Aircraft max net	Forbidden
	Passenger and Cargo Aircraft Pkg Inst	967
	Passenger and Cargo Aircraft max net qty	5 kg
	Cargo Aircraft Only Pkg Inst	967
	Cargo Aircraft Only max net qty	35 kg

* UN Number is 3481 in case of the battery is contained in equipment, and Proper Shipping Name is "lithium ion batteries contained in equipment".
**Lithium ion rechargeable battery cell is not assigned to packing groups, and the packaging performance level is set out in the applicable packing instruction. Packing group II is often set out.

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation No 1907/2006/EC of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC as amended.
Regulation No 1272/2008/EC of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 as amended.
Commission Regulation No 2020/878/EU of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives as amended.
European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste as amended.
Regulation 2016/425/EU of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC.
Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.
Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC.
Commission Directive 2009/161/EU of 17 December 2009 establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC.
Commission Directive 2017/164/EU of 31 January 2017 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU.
Commission Directive 2019/1831/EU of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC.
European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).
IMDG Code International Maritime Dangerous Goods Code.
IATA Dangerous Goods Regulations.

15.2. Chemical safety assessment

A Chemical Safety Assessment is not required for mixtures in accordance with REACH Regulation.

Section 16: Other information

Full text of indicated H phrases mentioned in section 3

Not applicable.

Clarification of aberrations and acronyms

PBT	Persistent, Bioaccumulative and Toxic substance
vPvB	very Persistent, very Bioaccumulative substance
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods Code
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road

Trainings

Before commencing working with the product, the user should learn the Health & Safety regulations, regarding handling chemicals, and in particular, undergo a proper workplace training. Personnel related with the transport of hazardous substances in accordance with the ADR agreement should be trained and should obtain proper certification in a range of their obligations (general training, workplace training, safety training).

Key literature references and data sources

This SDS was prepared on the basis of the safety data sheet provided by the manufacturer, literature data, online databases (e.g. ECHA, TOXNET, COSING), our knowledge and experience, taking into account the current legislation.

Classification and procedure used to classify the mixture in accordance with Regulation (EC) 1272/2008 (as amended)

In accordance with the REACH regulation, a product is considered as an article, therefore it is not subject to the classification and labelling requirements.

Other data

Date of issue:	19.09.2022
Version:	1.0/EN
Safety Data Sheet made by:	**THETA Consulting Sp. z o.o.** (on the basis of producer's data).

The information above is based on a current available data concerning the product, but also on the experience and knowledge in this field of the producer. They are neither a quality description of the product nor a guarantee of particular features. They are to be treated as aid to safety in transport, storage and usage of the product. That does not free the user from the responsibility of improper usage of the information above and also of improper compliance with the law norms in the field.