

Material safety data sheet

Material Safety Data Sheet

Name of product: Home energy storage system

SampleName: Residential Energy Storage System

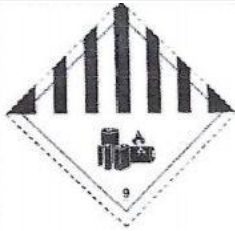
Manufacturer: Daqin New Energy Technology (Taizhou) Co., LTD

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Material safety data sheet

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1. Chemicals and corporate logos Chemical Product And Company Identification	
Sample Name Name	Home energy storage system Residential Energy Storage System
mode 1 Mode 1	TNK- 10000-LV-A1
production unit Manufacture	Daqin New Energy Technology (Taizhou) Co., LTD DAQIN NEW ENERGY TECH (TAIZHOU)., LTD.
Address of production unit Manufacture Address	No.199, Science and Technology Road, Sanshui Street, Jiangyan District, Taizhou City 199 Keji Road, Sanshui Street, Jiangyan District, Taizhou City
emergency telephone Emergency telephone call	+86-523-88510062
2. Overview of hazards Hazards Identification	
Hazard label for dangerous goods	 <p style="text-align: center;">Nine types of lithium batteries Class 9-Lithium batteries</p>
Explosive danger Explosive risk	This item is not an explosive hazard. This article does not belong to the explosion dangerous goods.
Flammable hazard Flammable risk	This item is not a flammable dangerous goods. This article does not belong to the flammable material.
Hazard of oxidation Oxidation risk	This item is not a hazardous oxidant. This article does not belong to the oxidation of dangerous goods.
Toxic risk	The article is not a toxic dangerous goods. This article does not belong to the toxic dangerous goods.
Radiation hazard Radioactive risk	This item is not a radioactive dangerous goods. This article does not belong to the radiation of dangerous goods.
Corrosion risk Mordant risk	This item is not a corrosive dangerous goods. This article does not belong to the corrosion of dangerous goods.
Other risks	The battery watt-hour rate 10.24kWh belongs to the lithium ion battery. Watt hour rate 10.24kWh, which belong to the Lithium-ion battery.

3. Component/composition information			
Composition Information			
ingredient Hazardous components	Percent age/%Cont ent/%	CAS NO.	Rema rks
lithium iron phosphate LiFePO4	26	15365-14-7	-
carbon Carbon	12	7440-44-0	-
Electrolyte- hexafluorophosphorus lithium	24	21324-40-3	--
Electrolyte-solvent		/	-
Polypropylene (PE)	3	9003-07-0	-
copper Copper	15	7440-50-8	-
aluminium Aluminum	20	7429-90-5	-
4. First aid measures			
First aid measures			
<p>eye :</p> <p>In case of contact, immediately rinse with plenty of water for at least 15 minutes, lift the upper and lower eyelids until the chemical residue disappears, and seek medical attention immediately. Eye</p> <p>Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.</p> <p>skin :</p> <p>In case of contact, rinse with plenty of water for at least 15 minutes, remove contaminated clothing and shoes, and seek medical attention immediately.</p> <p>Skin</p> <p>Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.</p> <p>inhalation :</p> <p>Move immediately from the exposure to a fresh air place, give oxygen if breathing is difficult, and seek medical attention immediately.</p> <p>Inhalation</p> <p>Remove from exposure and move to fresh air immediately. Use oxygen if available.</p> <p>ingestion :</p> <p>Quote two glasses of milk or water. If the person is still conscious, induce vomiting and seek medical attention immediately.</p> <p>Ingestion</p> <p>Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician</p>			

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5 . fire protection
Fire-fighting measu res

Ignition point: not applicable
 FlashPoint:N/A.
 Autoignition temperature: not applicable
 Auto-Ignition Temperature:N/A.
 Fire extinguishing medium: a large amount of water (cooling), carbon dioxide
 ExtinguishingMedia:Water, CO2.
 Special fire extinguishing procedure: self-contained breathing apparatus
 SpecialFire-FightingProcedures:Self-contained breathing apparatus.
 Abnormal fire or explosion: When the cell is exposed to an overheated environment, the safety valve may open.
 Unusual Fire and ExplosionHazards:Cell may vent when subjected to excessiveheat-exposing battery contents.
 Hazardous substances produced by combustion: carbon monoxide, carbon dioxide, lithium oxide flue gas
 Hazardous CombustionProducts:Carbon monoxide, carbon dioxide, lithium oxide fumes.

6 . Leakage emergency handling
Accidental release measures

Measures taken to prevent leakage or release of battery materials
 If the internal materials of the battery leak, immediately evacuate the test area until the smoke dissipates. Open the ventilation system to disperse the hazardous gases. Clean the test area with a cloth, remove any spilled liquids, place the leaking battery in a plastic bag, and then into a steel container. Avoid contact with skin or eyes, and avoid inhaling harmful gases.
 Steps to be Taken in case Material is Rel eased or Spilled
 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 t he battery to cool and vapors to dissipate.Provide maximum ventilation.Avoid skin and eye contact or inhalation of vapors.Remove spil led liquid with absorbent and incinerate.
 Waste disposal methods
 It is recommended to completely discharge the battery, consume the lithium metal inside the battery, and bury it deep in the soil.
 Waste Disposal Method

It is rocommended to discharge the battery to the end, to usc up the mctal lithium insid c the battery,and to bury the discharged battery in s oil.

7 . Operation, handling and storage
Handling and storage

Do not open, destroy or burn batteries, as they may explode, burst or leak during these processes. Do not overcharge, force discharge or throw batteries into fire. Do not squeeze or puncture batteries or immerse them in a solution.

The battery should not be opened, destroyed or incinerated, 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 overcharge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids.

Precautions for operation, handling and storage

Do not abuse the battery or electricity, do not store the battery at high temperature, it is best to store the battery in a cool, dry, ventilated environment with little temperature change. Do not touch the battery with heating equipment or expose the battery directly to sunlight.

Precautions to be taken in handling and storage

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.

Other precautions to pay attention to

The battery may explode and burn if it is disassembled, squeezed, or directly placed in fire or high temperature conditions. Do not short circuit or incorrectly install the positive and negative terminals of the battery in the device.

Other Precautions

The battery may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

8 . Contact control/personal protection
Exposure controls/personal protection

respiratory protection :

When the battery vent valve is opened, the ventilation equipment should be turned on as much as possible to avoid limiting the cell with the open vent valve to a narrow space. Under normal operating conditions, breathing protection is not necessary.

Respiratory Protection

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores.

Respiratory Protection is not necessary under conditions of normal use.

atmospheric conditions

Not required under normal conditions of use.

Ventilation

Not necessary under conditions of normal use.

protective glove

Not required under normal conditions of use.

Protective Gloves

Not necessary under conditions of normal use.

Other protective clothing or equipment

Not required under normal conditions of use.

Other Protective Clothing or Equipment

Not necessary under conditions of normal use.

Personal protection should be taken during battery opening valve test

Respiratory protection, protective gloves, protective clothing and safety glass shields with guards are all required.

Personal Protection is recommended for venting battery

Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.

9 . Physical and chemical properties
Physical and chemical prop erties

Shape: Square
 Appearance:Quadrate shape
 Odor: when leaked, there is the smell of ether.
 Odors:If leaking, smells of medical ether.
 pH: not applicable
 pH:Not applicable as supplied.
 Ignition point: except for the exposure test of a single cell, it is not applicable.
 FlashPoint:Not applicable unless individual compo nents exposed.
 Flammability: it is not applicable except for the exposure test of a single cell.
 Flammability:Not applicable unless individua l components exposed.
 Relative density: it is not applicable except for the exposure test of a single cell.
 Relativedensity:Not applicable unles s individual components exposed.
 Solubility (water solubility): it is not applicable except for the single cell exposure test.
 Solubility(water):Not applicable unless indiv idual components exposed.
 Solubility (other): Other than the single cell exposure test, it is not applicable.
 Solubility(other):Not applicable unless indiv idual components exposed.

10. Stability and reactivity
Stability and reactivity

Stability: The product is stable under the conditions described in section 7.
 Stability:Product is stable under conditions described in Section 7.
 Conditions to be avoided: heating above 70°C or incineration. Deformation. Destruction. Crushing. Disassembly. Overcharging. Short circuit. Long exposure
 In humid conditions.
 Conditions toAvoid:Heat above70°C or incinerate. Deform. Mutilate. Crush. Disassemble. Overcharge. Short circuit.
 Expose over a long period to h umid conditions.
 Avoid materials: oxidant, alkali, water.
 Materials toavoid:Oxidising agents, alkalis, water.
 Dangerous decomposition products: toxic smoke and possible formation of peroxides.
 Hazardous Decomposition Products:Toxic Fumes, and may form peroxides.
 Aggregate hazard: not applicable
 Hazardous Polymerization:N/A.
 In case of leakage, avoid contact with strong oxidants, inorganic acids, strong bases and halogenated hydrocarbons.
 If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalies, ha logenated Hydrocarbons

<p>11 . Toxicological data Toxicological information</p>
<p>Signs and symptoms: None, unless the battery is broken. Signs&symptoms:None,unless battery ruptures. In the case of internal exposure, steam smoke may irritate eyes and skin. In the event of exposure to internal contents,vapour fumes may be very irritating to the eyes and skin. Inhalation: Irritant to lungs. Inhalation:Lung iitant. Skin contact: skin irritation. Skincontact:Skin irritant. Eye contact: Irritant to eyes. Eyecontact:Eye irritant Ingestion: Swallowing poisoning. Ingestion:Poisoning if swallowed. The health condition will deteriorate in the following cases: In case of contact with the internal material of the battery, minor or severe irritation may cause a dry and burning sensation on the skin, and damage the nerves of the target organs (liver, kidney). Medi cal conditions generally aggravated byexposure:In the event of exposure to inte rnal contents,moderate to serve r irritation,burning and dryness of th e skin may occur,Target Organs nerves,liver and kidneys.</p>
<p>12 . Ecological data Ecological information</p>
<p>Effects on mammals: Unknown at present. Mammalianeffects:None kno wn at present. Ecological toxicity: currently unknown. Eco-toxicity:None known at present Accumulation in living organisms: slow biodegradation. Bioaccumulationpotential:Slowly Bio-degradable. Environmental hazard: There are no known environmental hazards. Environmental fate:None known environmental hazard s at present.</p>
<p>13 . Disposal of waste Disposal considerati on</p>
<p>Do not burn or allow the battery temperature to exceed 70°C, which can lead to leakage and/or battery explosion. Handle in accordance with local regulations. Do not incinerate,or subject cells to tempe rature in excessof70°C,Such abuse can result in loss of sealleakage,and/o r cell explosion.Dispose of in accordance wit h appropriate local regulations</p>

14. Transport information

Transport information

Transport label: Class 9 dangerous goods label,
Label for conveyance: Class 9 Hazard Label,
UN number: UN 3480
UN Number: UN 3480
Transportation specific name: lithium ion battery pack (including polymer lithium ion battery)
Proper Shipping name: Lithium ion batteries (including lithium ion polymer batteries)
Packaging level: II
Packaging Group: II
Special provisions of IMDG code: 188, 230, 310, 348, 376, 377, 384, 387
IMDG CODE Special provisions: 188, 230, 310, 348, 376, 377, 384, 387
EmS number: F-A, S-I
EmS No: F-A, S-I
Marine pollutants: None
Marine pollutant: No
Hazard classification: The goods shall comply with IMDG CODE (Amdt. 40-20) Packaging Guidelines P903, including the requirements of the UN38.3 test manual.
Hazard Classification: The goods shall be complied with the Packing Instructions P903 of IMDG CODE (Amdt. 40-20), including the passing of the UN38.3 test.

15. Regulatory information
Regulation information

legal informatics

Law information

Rules on Dangerous Goods

《DangerousGoods Regulations》

Recommendations relating to the transport of dangerous goods

《Recommendations on the Transport of Dangerous Goods ModelRegulations》

International Maritime Dangerous Goods Code

《International Maritime Dangerous Goods》

Technical Directive on Safe Transport of Dangerous Goods

《Technical Instructions for the Safe Transport of DangerousGoods》

Classification and Nomenclature of Dangerous Goods

《Classification and code of dangerous goods》

Occupational Safety and Health Act

《Occupational Safety and HealthAct》 (OSHA)

Toxic Substances Control Act

《Toxic Substance ControlAct》 (TSCA)

Consumer Product Safety Act

《Consumer Product Safety Act》 (CPSA)

Federal Pollution Control Act

《Federal Environmental Pollution Control Act》 (FEPCA)

Oil Pollution Act

《The Oil PollutionAct》 (OPA)

Superfund Amendment and Reauthorization Act III (302/311/312/313)

Superfund Amendment and Reauthorization Act Title I-III (302/311/312/313) (SARA)

Resource Conservation and Restoration Act

《Resource Conservation andRecovery Act》 (RCRA)

Safe Drinking Water Act

《Safety Drinking WaterAct》 (C WA)

Prop 65 in California

《California Proposition65》

United States Code of Federal Regulations

The Code of FederalRegulations (CFR)

is based on all federal, state and

local laws.

In accordance with all Federal State and local laws.

16. Other information
Other information

This document is valid only for batteries manufactured by Daqin New Energy Technology (Taizhou) Co., LTD. (model: TNK-10000-LV-A1). The manufacturer warrants the completeness and accuracy of the composition information of this battery. ■

Users should read this document carefully and use the battery in the correct manner. The Material Safety Data Sheet is used by each manufacturer as a reference for safe handling of chemicals, and each manufacturer requires that appropriate chemical handling measures be taken as their own responsibility; The supplier makes no warranty, representation or implication;

With respect to this product, the user assumes that all risks emanate from its use. This file is only valid for the battery (model: TNK-10000-LV-A1) provided by DAQIN NEW ENERGY TECH(TAIZHOU).,LTD.The manufacturer provides composition information of batteries,and promises its integrity and accuracy.Users should read this file carefully,and use the batteries in correct method.The material safety data sheet is furnished to every manufacturer as a reference to secure the safe handling of chemical.

Every manufacturer is requested to carry out appropriate actions for chemical handling as their own responsibility.The supplier makes no warranty,either express or implied.Concerning of this products,User assumes all risks resulting from its use.

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