



PESS ENERGY

Safety Data Sheet IRON-E

Index	B
Date	05/07/2024

A Safety Data Sheet is not required for this product under article 31 of the European REACH regulation (regulation no. 1907/2006). This was created on a voluntary basis

Table of contents

Section 1.	Identification of the substance/mixture and of the company/undertaken	4
Section 2.	Hazards identification	5
Section 3.	Composition/information on ingredients	5
Section 4.	First aid measures	6
Section 5.	Firefighting measures	6
Section 6.	Accidental release measures	7
Section 7.	Handling and storage	7
Section 8.	Exposure controls/personal protection	8
Section 9.	Physical and chemical properties	8
Section 10.	Stability and Reactivity	9
Section 11.	Toxicological information	9
Section 12.	Ecological information	10
Section 13.	Disposal considerations	10
Section 14.	Transport information	11
Section 15.	Regulatory Information	12
Section 16.	Other information	12

A Safety Data Sheet is not required for this product under article 31 of the European REACH regulation (regulation no. 1907/2006). This was created on a voluntary basis

Versions

INDEX	Changes	Description	Author	Verifier
A	16/05/2024	Creation	DA	RP
B	05/07/2024	Update of Section 3 content	DA	RP

A Safety Data Sheet is not required for this product under article 31 of the European REACH regulation (regulation no. 1907/2006). This was created on a voluntary basis

Section 1. Identification of the substance/mixture and of the company/undertaken

1.1. Product identifier

Lithium-ion batteries contained in equipment, hereinafter referred to as a product (Powerbank, model "IRON-E").

Substance	Formule moléculaire	% contenu	N° CE	N° CAS	N° index	N° d'enregistrement REACH
Lithium Iron Phosphate	LiFePO4	39	604-917-2	15365-14-7	-	-
Graphite	C	19,6	231-955-3	7782-42-5	-	-
Ethyl Methyl Carbonate	C4H8O3	13,2	613-014-2	623-53-0	-	-
Aluminum	Al	10,7	231-072-3	7429-90-5	-	-
Copper	Cu	6,9	231-159-6	7440-50-8	-	-
Ethylene Carbonate	C3H5O4	6	202-510-0	96-49-1	-	-
Lithium Hexafluorophosphate	LiPF6	2,6	244-334-7	21324-40-3	-	-
Polyethylene	[-CH2-CH2] _n	1,4	926-220-5	9002-88-4	-	-
Acetylene Black	C	0,6	215-609-9	1333-86-4	-	-

Other means of identification:

	IRON-E
Nominal Voltage in Volt	51,2 V
Nominal Capacity in Ampere-Hour	200 Ah
Nominal Watt-Hour Capacity	10 000 Wh
Quantity of dangerous goods in kg	60 kg

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

Relevant identified uses: storage and supply of electrical energy

Uses advised against: refer to the User manual

1.3. Details of the supplier of the safety data sheet:

Manufacturer/Supplier:	PESS (PILLOT ENERGY STORAGE SOLUTIONS) ENERGY
Street address/P.O. Box:	164, Boulevard Mireille LAUZE
Country ID/Postcode/Place:	13010 Marseille - FR
Telephone number:	+33 (0)4 91 58 86 74
Generic e-mail address:	contact@pessenergy.com

A Safety Data Sheet is not required for this product under article 31 of the European REACH regulation (regulation no. 1907/2006). This was created on a voluntary basis

1.4. Emergency telephone number:

- (FR) N° ORFILA : +33 (0)1 45 42 59 59
- (UK) National Poisons Information Service (NPIS) : NHS on 111
- Emergency Telephone +44 1235 239670 - Europe - Multilingual response

Section 2. Hazards identification

2.1. Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP): **Not classified**

2.2. Label elements

Refer to § "3. Composition/information on ingredients"

The lithium-ion batteries contained in the product (IRON-E) contain a mixture of chemical substances (cf. §1.1). In case of rupture, the hazards listed above exist.

The intended and proper use of the product should not result in exposure to these substances.

Safety information is given for exposure to the product as it is sold.

2.3. Other hazards

The product, as defined in §1.1 "Product identifier", belongs to the category of lithium-ion batteries.

Section 3. Composition/information on ingredients

Warning! In the event of a battery failure only. It is reminded that the intended and compliant use of the product must not result in exposure to the substances identified above.

Classification		Labelling	
Hazard class and category	Hazard statement	Hazard statement	Additional Hazard Statement
Flammable liquids, Hazard category 2	H225 - Highly flammable liquid and vapour	H225	-
Flammable solids, Hazard category 1, 2	H228 - Flammable solid	H228	-
Substances and mixtures which, in contact with water, emit flammable gases Hazard category 2, 3	H261 - In contact with water releases flammable gas	H261	-
Acute toxicity (oral), Hazard category 3	H301 - Toxic if swallowed	H301	-
Skin Corrosion/Irritation, Hazard Category 1, Sub-Categories 1A, 1B, 1C	H314 - Causes severe skin burns and eye damage	H314	-
Serious Eye Damage/Eye Irritation, Hazard Category 1	H318 - Causes serious eye damage	H318	-
Acute toxicity (inhalation), Hazard Category 1, 2	H330 - Fatal if inhaled	H330	-
Specific target organ toxicity, single exposure, Hazard Category 3; Narcotic effects	H336 - May cause drowsiness or dizziness	H336	-
Specific Target Organ Toxicity - Repeated Exposure, Hazard Category 1	H372 - Causes damages to organs through prolonged or repeated exposure	H372	-

A Safety Data Sheet is not required for this product under article 31 of the European REACH regulation (regulation no. 1907/2006). This was created on a voluntary basis

Hazardous to the aquatic environment - Acute Hazard, Hazard Category 1	H400 - Very toxic to aquatic life	H400	-
Hazardous to the aquatic environment, long-term hazard, Hazard Category 2	H411 - Toxic to aquatic life with long lasting effects	H411	-

Section 4. First aid measures

Warning! In the event of a battery failure only. It is reminded that the intended and compliant use of the product must not result in exposure to the substances identified above.

4.1. Description of first aid measures

EYES - If in contact with eyes, rinse thoroughly with water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses if present and if possible. Contact a doctor or medical assistance immediately.

SKIN - In case of direct (or indirect) skin (or hair) contact, remove contaminated clothing and shower, or rinse thoroughly with water, for at least 15 minutes. Contact a doctor or medical assistance immediately.

INHALATION - If inhaled, move away from the exposure area and move/move the victim away and immediately move the victim to a cool-ventilated area. Keep her at rest, in a comfortable position for breathing. Contact a doctor or medical assistance immediately.

INGESTION - If swallowed, rinse mouth thoroughly without swallowing. If the person is unconscious, place them in the lateral safety position. Do not induce vomiting. Contact a doctor or medical assistance immediately.

FIRST AID SELF-PROTECTION - Ensure medical staff are aware of the substances/mixture involved. Take the necessary steps to protect them and prevent any risk of contamination. Avoid contact (direct or indirect) with skin, eyes or clothing. Use a single-use mouth-to-mouth mask in case of a resuscitation. Wear appropriate personal protective equipment.

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

In case of direct or indirect contact, or ingestion, contact a doctor or medical assistance immediately and react according to the first aid measures described in §4.1.

4.3. Indication of any immediate medical care and special treatment required

Refer to the first aid measures described in §4.1.

Section 5. Firefighting measures

5.1. Extinguishing media

If possible, cover the product with a fire blanket to contain the fire and limit the risk of splashing that it could cause. Stay away from the device and contact firefighters immediately.

The use of a fire hose may be recommended to spray abundantly on the burning product but can only be carried out by a designated, competent, trained and fire-aware person of lithium-ion batteries. Appropriate personal protective and respiratory equipment should be worn prior to intervention.

If any of these conditions are not met, move out of the way and wait for the firefighters to intervene.

Water or CO2 fire extinguishers are not suitable means of extinguishing lithium-ion battery fires. They can, however, be used as a means of prevention to limit the spread of fire to the environment, which could be a consequence.

5.2. Special hazards arising from the substance or mixture

Risk of fire and/or explosion due to thermal runaway of one or more of the lithium-ion batteries contained in the product, which in particular may could result from improper use of the product.

A Safety Data Sheet is not required for this product under article 31 of the European REACH regulation (regulation no. 1907/2006). This was created on a voluntary basis

Hazardous combustion products: carbon monoxide (CO), carbon dioxide (CO₂), lithium oxide (Li₂O) fumes that can cause eyes, skin and mucous membranes burns. Thermal runaway can also lead to the release of irritating gases and vapours.

5.3. Advice for firefighters

First, tell firefighters that a fire on equipment that contains lithium-ion batteries is happening. Cover the device with a fire blanket and/or spray the product continuously with a large amount of water and/or immerse the product in a large volume of water; This is in order to mimic the spread of the fire to the environment. Wear appropriate personal protective and respiratory equipment.

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

In case of a leakage, avoid direct or indirect contact with skin, eyes and clothing. Make sure the room is sufficiently ventilated to allow the evacuation of irritating gases and/or vapours.

Evacuate personnel away from the disaster area to prevent any risk of accidental exposure to splashes or leaks.

If you need to intervene, wear sufficient personal protective and respiratory equipment.

Contact firefighters, doctor and/or medical assistance as soon as possible.

6.1.2. For emergency responders

Wear sufficient personal protective and respiratory equipment suitable for the substances identified in §1.1.

6.2. Environment precautions

The intended and proper use of the product must not result in the leakage or spillage of substances into the Environment. However, and if safety conditions permit, any leak or spill into the Environment must be avoided by preventing the penetration of substances into the soil, channel and subsoil.

6.3. Methods and material for containment and cleaning up

If safety conditions permit, remove the mixture with an absorbent, having equipped yourself with sufficient personal protective equipment beforehand. Isolate the generated waste in a leak-proof and identified container and dispose of it in compliance with legal Environmental regulations. In the event of accidental pollution, the competent local authorities (police and/or water services and/or firefighters and/or town council) should be notified, to ensure that the necessary measures can be made by both parties.

6.4. Reference to other sections

Not applicable.

Section 7. Handling and storage

7.1. Precautions for safe handling

Use of the product must be done in accordance with what is described in the User manual. It should not be opened, shocked, watered/submerged, or overloaded.

7.2. Conditions for safe storage, including any incompatibilities

The product must be stored in accordance with the terms and conditions described in the User manual.

In particular, the product must be stored in a dry, ventilated place, away from sunlight and dust, and in a temperature range between -20 °C and +50 °C.

A Safety Data Sheet is not required for this product under article 31 of the European REACH regulation (regulation no. 1907/2006). This was created on a voluntary basis

7.3. Specific end use(s)

Refer to the User manual.
Only qualified personnel may use the product.

Section 8. Exposure controls/personal protection

It is reminded that the intended and compliant use of the product must not result in exposure to the substances identified above.

8.1. Control Parameters

Not applicable.

8.2. Exposure controls

8.2.1. *Appropriate engineering controls*

Not applicable.

8.2.2. *Individual protective measures, such as personal protective equipment*

In case of battery rupture and/or exposure to substances, refer to §4.1.

8.2.3. *Environmental exposure controls*

Refer to §6.2. and §6.3.

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

ODOUR - In the event of an accidental leak or spill, the odour would be similar to that of medical ether (chemical solvent).

pH - Not applicable as supplied.

FLASH POINT - Not applicable unless individual components are exposed.

FLAMMABILITY - Not applicable unless individual components are exposed.

DENSITY AND/OR RELATIVE DENSITY - Not applicable unless individual components are exposed.

WATER SOLUBILITY - Not applicable unless individual components are exposed.

SOLUBILITY IN OTHER SOLVENTS - Not applicable unless individual components are exposed.

9.2. Other information

Not applicable.

A Safety Data Sheet is not required for this product under article 31 of the European REACH regulation (regulation no. 1907/2006). This was created on a voluntary basis

Section 10. Stability and Reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The product is stable when stored according to the recommendations described in §7.2.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

The product must not be exposed/stored at a temperature above +50 °C, incinerated, deformed, mutilated, crushed, disassembled, overloaded, short-circuited or exposed in humid conditions for a long period of time (cf. §7.2.).

10.5. Incompatible materials

Oxidizing agents, alkalis (alkali metals), water.

10.7. Hazardous decomposition products

Toxic fumes, and possible formation of peroxides.

In the event of a spill or leak, no contact with strong oxidants, mineral acids, strong alkalis and halogenated hydrocarbons.

Section 11. Toxicological information

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

It is reminded that the intended and compliant use of the product must not result in exposure to the substances identified above.

In the event of a spill or leak of the mixture contained in the product:

ACUTE TOXICITY – Toxic if swallowed.

SKIN CORROSION/SKIN IRRITATION – Causes severe skin burns and eye damage.

SEVERE EYE DAMAGE/IRRITATION – Causes serious eye damage.

RESPIRATORY OR SKIN SENSITISATION - Fatal if inhaled, causes damages to organs through prolonged or repeated exposure.

GERM CELL MUTAGENICITY - Not applicable.

CARCINOGENICITY - Not applicable.

REPRODUCTIVE TOXICITY - Not applicable.

SPECIFIC TARGET ORGAN TOXICITY (STOT) – SINGLE EXPOSURE - Target organs: liver, kidneys, nerves.

SPECIFIC TARGET ORGAN TOXICITY (STOT) – REPEATED EXPOSURE - Target organs: liver, kidneys, nerves, bones, teeth.

A Safety Data Sheet is not required for this product under article 31 of the European REACH regulation (regulation no. 1907/2006). This was created on a voluntary basis

ASPIRATION HAZARD - Causes damages to organs through prolonged or repeated exposure.

The condition of health is usually aggravated by exposure. If exposed to one or more of the substances in the mixture, moderate to severe irritation, burning, and dryness of the skin and eyes may occur.
The target organs are the liver, kidneys and nerves.

Section 12. Ecological information

12.1. Toxicity

Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Result of PBT and vPvB assessment

No information available.

12.6. Endocrine disrupting properties

No information available.

12.7. Other adverse effects

No information available.

Section 13. Disposal considerations

13.1. Waste treatment methods

Do not incinerate or subject the product to a temperature above +50 °C. Such abuse could impact the tightness of the product and/or lead to an explosion of the product.

Its disposal must be carried out in accordance with the applicable regulatory requirements for specific waste an environmental management.

A Safety Data Sheet is not required for this product under article 31 of the European REACH regulation (regulation no. 1907/2006). This was created on a voluntary basis

Section 14. Transport information

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
UN 3481	UN 3481	UN 3481	UN 3481
14.2. UN proper shipping name			
LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT	Lithium-ion batteries contained in equipment	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT
Dangerous good description on the transport document			
UN3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, 9, (E)	UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, 9	UN 3481 Lithium-ion batteries contained in equipment, 9	UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, 9
14.3. Transport hazard class(es)			
9	9	9	9
Danger labels			
9A	9A	9A	9A
			
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Not applicable	Not applicable	Not applicable	Not applicable

14.6. Special precautions for user

The product is to be considered as a dangerous substance within the meaning of **ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road)**, **IATA DGR (World Reference Standard for the Transport of Dangerous Goods by Air)**, **IMDG (International Maritime Dangerous Goods code)** and **RID (Agreements Concerning the International Carriage of Dangerous Goods by Rail)**.

Restrictions in terms of declaration, quantities transported, and packaging and labelling instructions for the container and/or vehicle apply.

Road transport

Special provisions (ADR)	376, 377
Limited quantities (ADR)	0
Excepted quantities (ADR)	E0
Packing instructions (ADR)	P903, P908, P909, P911, LP903, LP904, LP906
Transport Category (ADR)	2
Tunnel restriction code (ADR)	E

Maritime transport

Special provisions (IMDG)	376, 377
Limited quantities (IMDG)	0
Excepted quantities (IMDG)	E0
Packing instructions (IMDG)	P903, P908, P909, P911, LP903, LP904, LP906

A Safety Data Sheet is not required for this product under article 31 of the European REACH regulation (regulation no. 1907/2006). This was created on a voluntary basis

FS number (Fire)	F-A
FS number (Spill)	S-I
Loading category (IMDG)	A
Stowage and handling (Code IMDG)	SW19
Details and observations (IMDG)	Electrical batteries containing lithium ion encased in a rigid metallic body. Lithium ion batteries may also be shipped in, or packed with, equipment. Electrical lithium batteries may cause fire due to an explosive rupture of the body caused by improper construction or reaction with contaminants.

Air transport

Excepted quantities in passengers and cargo aircraft (IATA)	E0
Limited quantities in passengers and cargo aircraft (IATA)	Forbidden
Maximum net quantity for limited quantity in passengers and cargo aircraft (IATA)	Forbidden
Instructions d'emballage avion passagers et cargo (IATA)	967
Maximum net quantity for passengers and cargo aircraft (IATA)	5 kg
Packing instructions for cargo aircraft only (IATA)	967
Maximum net quantity for cargo aircraft only (IATA)	35 kg
Special provisions (IATA)	A48, A154, A164
ERG code (IATA)	12FZ

Rail transport

Special provisions (RID)	376, 377
Limited quantities (RID)	0
Excepted quantities (RID)	E0
Packing instructions (RID)	P903, P908, P909, P911, LP903, LP904, LP906

14.7. Maritime transport in bulk according with to IMO instruments

Not applicable.

Section 15. Regulatory Information

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

Regulation (EC) No 1272/2008 – Classification, packaging and labelling of substances and mixtures.

15.2. Chemical safety assessment

No information available.

Section 16. Other information

16.1. Indications of changes

Not applicable.

A Safety Data Sheet is not required for this product under article 31 of the European REACH regulation (regulation no. 1907/2006). This was created on a voluntary basis

16.2. Abbreviations and acronyms

ADR: Agreement concerning the International Carriage of Dangerous Goods by Road

DGR: Dangerous Goods Regulations

IATA: International Air Transport Association

IMDG: International Maritime Dangerous Goods code

RID: Agreements Concerning the International Carriage of Dangerous Goods by Rail

Disclaimer

The information provided by PESS ENERGY in this Safety Data Sheet is only intended to guide the safe handling, use, processing, storage, transport, disposal and disposal of the product, and should not be taken as a guarantee or proof of quality.

This information must be brought to the attention of each user and only concerns the product designated in §1.1. of this document.

Unless otherwise stated in this document, this information is valid only for said product.

PESS ENERGY declines all responsibility in the event of non-compliance with this information and/or misuse of the product.

End of the Safety Data Sheet