SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2015/830)

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : BATTERY LI-ION P40 / P800 / IF / ST400i

Product code : SPIT-019336.

The battery is considered to be an ARTICLE for the purposes of REACH.

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

Rechargeable lithium ion batteries.

1.3. Details of the supplier of the safety data sheet

Registered company name : SPIT PASLODE.

Address : 150, route de Lyon.26500.BOURG LES VALENCE.France.

Telephone : 0 810 102 102. Fax : 0 810 432 432.

Email : msds-reach@spit.com

http://www.spit.fr

1.4. Emergency telephone number : 112.

Association/Organisation : European emergency number.

Other emergency numbers

National Poisons Information Service of England: http://npis.org - NHS 111: dial 111 - National Poisons Information Centre of Ireland: 353 (1) 809 2166 - European Emergency Number Association (EENA) : 112

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

This mixture does not present a health hazard with the exception of possible occupational exposure thresholds (see paragraphs 3 and 8).

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

2.2. Label elements

In compliance with EC regulation No. 1272/2008 and its amendments.

No labelling requirements for this mixture.

2.3. Other hazards

The mixture does not contain substances classified as ‘Substances of Very High Concern' (SVHC) >= 0.1% published by the European CHemicals Agency (ECHA) under article 57 of REACH: http://echa.europa.eu/fr/candidate-list-table

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

THE BATTERY IS AN ARTICLE CONTAINING AN INTEGRATED MIXTURE (electrolyte - REACH definition).

THE ELECTROLYTE IS CONSUMED DURING THE ARTICLE'S USE PHASE AND IS NOT REJECTED (unless the article is damaged).

THE ABOVE LABEL IS THEREFORE FOR INFORMATION PURPOSES in case the ARTICLE IS DAMAGED and should not be fixed to the article.

The rechargeable lithium ion batteries described in this SDS are sealed products that are not hazardous when used in accordance with the manufacturer's instructions.

Do not short circuit, pierce, incinerate, crush, submerge, forcefully discharge or expose to temperatures in excess of the operating range stated on the products. Risk of fire and explosion.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Composition :

Identification	(EC) 1272/2008	Note	%
METAL OXIDE (PROPRIETARY)			20 - 50
CAS: 7440-44-0 EC: 231-153-3 CARBONE		[1]	10 - 30
ELECTROLYTE (PROPRIETARY)			10 - 20

INDEX: 013-002-00-1 CAS: 7429-90-5 EC: 231-072-3 REACH: 01-2119529243-45 ALUMINIUM POWDER (STABILISED)	GHS02 Dgr Water-react. 2, H261 Flam. Sol. 1, H228	T [1]	2 - 10
CAS: 7440-50-8 EC: 231-159-6 REACH: 17-2119429821-40 COPPER		[1]	2 - 10
CAS: 24937-79-9 POLY(VINYLIDENE FLUORIDE)	GHS07 Wng Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335		< 5
STAINLESS, NICKEL AND INERT MATERIALS			-

(Full text of H-phrases: see section 16)

Information on ingredients :

[1] Substance for which maximum workplace exposure limits are available.

Other data :

Each battery consists of a sealed metal container containing chemical substances and components, some of which may be hazardous in the event of a leak.

There is no risk from being exposed to these batteries unless the seal containing the electrochemical elements is broken by exposure to excess temperatures or the accidental application of abusive electrical or mechanical constraints.

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. Description of first aid measures

If a battery is ruptured or opened, evacuate people from the contaminated zone and ensure maximum ventilation to eliminate any corrosive gases, smoke or unpleasant odours.

If this event is the result of an accident, follow the advice below:

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

In the event of splashes or contact with skin :

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

In the event of swallowing :

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

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

No data available.

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

No data available.

SECTION 5 : FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist
- carbon dioxide (CO2)
- water
- foam

Unsuitable methods of extinction

In the event of a fire, do not use :

- water jet
- water

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO2)
- hydrogen fluoride (HF)

5.3. Advice for firefighters

Due to the toxicity of the gas emitted on thermal decomposition of the products, fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Retrieve the product by mechanical means (sweeping/vacuuming).

Hermetically seal leaking batteries and any contaminated absorbent material in a plastic bag and eliminate it as Special Waste in accordance with local regulations.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions for safe handling

Always wash hands after handling.

Do not crush or pierce the batteries or short circuit their positive/negative terminals with conducting materials (e.g.: metals) as this can result in excessive heating.

Do not apply direct heat or solder. Do not burn batteries.

Do not mix different brands or types of battery. Do not mix new batteries with old batteries.

Store batteries in non-conductive trays (e.g.: plastic).

Do not disassemble, damage or mechanically degrade the batteries.

Fire prevention :

Handle in well-ventilated areas.

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Packages which have been opened must be reclosed carefully and stored in an upright position.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep out of reach of children.

Keep the container tightly closed in a dry, well-ventilated place.

Leave a suitable gap between the batteries and walls.

Temperatures in excess of 70°C may cause batteries to leak and rupture.

Store batteries in their original packaging until they are to be used; do not mix them as a short circuit can cause a fire, a risk of leaks or rupture.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

Comply with the manufacturer's recommendations and the operating temperature range.

Applying pressure that can deform the battery may result in a disassembly followed by ocular, dermal or laryngeal irritation.

Do not immerse the batteries in water.

The batteries are not intended to be recharged by any external power sources other than Li-ion chargers approved by the manufacturer.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
7429-90-5	2 mg/m3	-	-	-	-
7440-50-8	0.2 mg/m3	-	-	-	-

- Australia (NOHSC: 3008, 1995) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
7429-90-5	2 mg/m3	-	-	-	-
7440-50-8	1 mg/m3	-	-	-	-

- Belgium (Arrêté du 09/03/2014, 2014) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
7440-44-0	2 f/cc	-	-	-	-
7429-90-5	10 mg/m3	-	-	-	-
7440-50-8	1 mg/m3	-	-	-	-

- France (INRS - ED984 / 2019-1487) :

CAS	VME-ppm :	VME-mg/m3 :	VLE-ppm :	VLE-mg/m3 :	Notes :	TMP No :
7429-90-5	-	10	-	-	-	-

- Switzerland (SUVAPRO 2017) :

CAS	VME	VLE	Valeur plafond	Notations
7429-90-5	3 a mg/m³			B
7440-50-8	0.1 i mg/m³	0.2 i mg/m³		SSC

- UK / WEL (Workplace exposure limits, EH40/2005, 2011) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
7440-44-0	- ppm 4 mg/m³	- ppm - mg/m³			
7429-90-5	2 mg/m3	-	-	-	-
7440-50-8	0.2 mg/m3	-	-	-	-

N/A

- Austria (BGBl. II, 254/2018, 382/2020) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
7440-44-0	5A mg/m³	10 A mg/m³			
7429-90-5	10 E mg/m³	20 E mg/m³			
7440-50-8	0.1 A mg/m³	0.4 A mg/m³			

8.2. Exposure controls

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Before handling powders or dust emission, wear mask goggles in accordance with standard EN166.

- Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Type of gloves recommended :

- Butyl Rubber (Isobutylene-isoprene copolymer)

Recommended properties :

- Impervious gloves in accordance with standard EN ISO 374-2

Use personal protective equipment in the event of an electrolyte leak.

- Body protection

Suitable type of protective clothing :

Wear protective clothing against solid chemicals and particles suspended in the air (type 5) in accordance with standard EN13982-1 to prevent skin contact.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

Use personal protective equipment in the event of an electrolyte leak.

- Respiratory protection

Avoid breathing dust.

Type of FFP mask :

Wear a disposable half-mask dust filter in accordance with standard EN149/A1.

Wear a disposable half-mask dust filter in accordance with standard EN149.

Category :

- FFP1

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387 :

- A1 (Brown)

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General information :

Physical state :	Solid.
-	Prismatic or cylindrical shaped batteries.
Odour:	Odour-free (except if the product is damaged and there is an electrolyte leak)

Important health, safety and environmental information

pH :	Not relevant.
Flash point interval :	Not relevant.
Vapour pressure (50°C) :	Not relevant.
Density :	> 1
Water solubility :	Insoluble.

9.2. Other information

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

10.4. Conditions to avoid

Avoid :

- formation of dusts
- humidity
- heat

Dusts can form an explosive mixture with air.

10.5. Incompatible materials

Keep away from :

- water
- strong acids
- alkalis
- oxidising agents

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO2)
- hydrogen fluoride (HF)

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Splashes in the eyes may cause irritation and reversible damage

11.1.1. Substances

No toxicological data available for the substances.

11.1.2. Mixture

No toxicological data available for the mixture.

SECTION 12 : ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

German regulations concerning the classification of hazards for water (WGK, AwSV vom 18/04/2017, KBws) :

Nicht wassergefährdend : Not hazardous for water.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

Do not incinerate or submit elements to temperatures in excess of 70°C. An excess temperature may damage the seal, cause a leak and/or cause elements to explode.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2019 - IMDG 2018 - ICAO/IATA 2020).

14.1. UN number

3480

~ See also UN 3481 ~

14.2. UN proper shipping name

UN3480=LITHIUM ION BATTERIES (including lithium ion polymer batteries)

~ See also UN 3481 - LITHIUM-ION CELLS AND BATTERIES INSTALLED IN OR PACKED WITH EQUIPMENT (including lithium ion batteries with polymer membrane) ~

14.3. Transport hazard class(es)

- Classification :

9A

14.4. Packing group

-

14.5. Environmental hazards

-

14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	9	M4	-	9A	-	0	188 230 310 348 376 377 387 636	E0	2	E

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregation
	9	-	-	0	F-A, S-I	188 230 310 348 376 377 384 387	E0	Category A SW19	-

IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	9	-	-	Forbidden	Forbidden	Voir 965	Voir 965	A88 A99 A154 A164 A183 A201 A206 A213 A331 A334 A802	E
	9	-	-	Forbidden	Forbidden	-	-	A88 A99 A154 A164 A183 A201 A206 A213 A331 A334 A802	E0

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available.

SECTION 15 : REGULATORY INFORMATION

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

- Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2020/217 (ATP 14)

- Container information:

No data available.

- Particular provisions :

No data available.

- German regulations concerning the classification of hazards for water (WGK, AwSV vom 18/04/2017, KBws) :

Nicht wassergefährdend : Not hazardous for water.

- Standardised American system for the identification of hazards presented by the product in view of emergency procedures (NFPA 704) :

NFPA 704, Labelling: Health=0 Inflammability=1 Instability/Reactivity=1 Specific Risk=none

15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Wording of the phrases mentioned in section 3 :

H228	Flammable solid.
H261	In contact with water releases flammable gases.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Abbreviations :

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefahrdungsklasse (Water Hazard Class).

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.