



# Li-Ion Battery 16S3P ANR26650 for FX 3-A tool

## Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

Issue date: 30/03/2023

Revision date: 30/03/2023

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Version: 1.00

### SECTION 1: Identification

#### 1.1. GHS Product identifier

Product form	Article
Name	Li-Ion Battery 16S3P ANR26650 for FX 3-A tool
UN-No. (ADR)	3481
Product code	BU Direct Fastening

#### 1.2. Other means of identification

No additional information available

#### 1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture	For professional use only Electrical batteries and accumulators
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#### 1.4. Supplier's details

##### Supplier

Hilti (Philippines) Inc.  
2256 Pasong Tamo Extension Edsa, Brgy. Magallanes  
PH- 1224 Makati City  
Philippinen  
T +632 784 7100 - F +63 2 784 7100  
[customerservice.ph@hilti.com](mailto:customerservice.ph@hilti.com)

##### Department issuing data specification sheet

Hilti Entwicklungsgesellschaft mbH  
Hiltistraße 6  
DE- 86916 Kaufering  
Deutschland  
T +49 8191 906876  
[anchor.hse@hilti.com](mailto:anchor.hse@hilti.com)

#### 1.5. Emergency phone number

Emergency number	Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +632 784 7100
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### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification according to the United Nations GHS

Not classified

Adverse physicochemical, human health and  
environmental effects

No additional information available

#### 2.2. GHS Label elements, including precautionary statements

##### Labelling according to the United Nations GHS

No labelling applicable

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### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification For the battery chemical materials are stored in a hermetically sealed metal case, designed to withstand Temperatures and pressures encountered during normal use. As a result, during normal use there is no physical danger of ignition or explosion and chemical danger of hazardous materials leakage.

It may cause heat generation or electrolyte leakage if battery terminals contact with other metals. Electrolyte is flammable. In case of electrolyte leakage move the battery from fire immediately.

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 case will be broken at the extreme, hazardous materials may be released.

Moreover, if heated strongly by a surrounding fire, acrid gas may be emitted.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Comments

Lithium Ion rechargeable battery pack:

Name/Type	Energy content (Wh)
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16S3P ANR26650	396
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This product contains a positive electrode (Lithium iron phosphate), a negative electrode (graphite), electrolyte and binder.

The physical form of the product, however, precludes exposure to workers under normal conditions of use.

This mixture does not contain any substances to be mentioned according to the applicable regulations

## SECTION 4: First-aid measures

### 4.1. Description of necessary first-aid measures

First-aid measures general

If the electrolyte is leaking out of the battery pack, the following measures have to be taken.

First-aid measures after inhalation

Allow affected person to breathe fresh air. Allow the victim to rest. If necessary seek medical advice.

First-aid measures after skin contact

Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact

Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion

Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects

Not expected to present a significant hazard under anticipated conditions of normal use.

### 4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable extinguishing media

Suitable extinguishing media

Cool batteries and accumulators with water jet. In case of fire in the surroundings: Use extinguishing agent suitable for surrounding fire.

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### 5.2. Specific hazards arising from the chemical

Fire hazard	Water may not extinguish burning batteries but will cool adjacent batteries and control the spread of fire. Burning batteries will burn themselves out. Virtually all fires involving lithium batteries can be controlled by flooding with water. However, the contents of the battery will react with water and form hydrogen gas. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended.
Hazardous decomposition products in case of fire	Formation of toxic gases is possible during heating or in case of fire. Water might react with released Lithium hexafluorophosphate to highly toxic gaseous hydrogen fluoride.

### 5.3. Special protective actions for fire-fighters

Firefighting instructions	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	Use a self-contained breathing apparatus and also a protective suit.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	No flames, no sparks. Eliminate all sources of ignition. Isolate from fire, if possible, without unnecessary risk.
<b>6.1.1. For non-emergency personnel</b>	
Emergency procedures	Evacuate unnecessary personnel.
<b>6.1.2. For emergency responders</b>	
Protective equipment	Equip cleanup crew with proper protection.
Emergency procedures	Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and materials for containment and cleaning up

Methods for cleaning up	Take up liquid spill into absorbent material.
Other information	Dispose of materials or solid residues at an authorized site.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	<p>Do not soak in water or seawater.</p> <p>Do not expose to strong oxidizers.</p> <p>Do not give a strong mechanical shock or fling.</p> <p>Never disassemble, modify or deform.</p> <p>Do not connect the positive terminal to the negative terminal with electrically conductive material.</p> <p>Use only the chargers / electric tools specified by Hilti to charge or discharge the battery.</p>
Hygiene measures	<p>Do not throw into fire or expose to high temperatures (&gt;85 °C).</p> <p>Do not connect the positive terminal to the negative terminal with electrically conductive material. Charge within limits of 0°C to 45°C temperature.</p> <p>Discharge within limits of -20°C to +60°C temperature.</p> <p>Always wash hands after handling the product.</p>
Additional hazards when processed	Normal use of this product shall imply use in accordance with the instructions on the packaging and in line with the expectations of a professional user.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	Protect from heat and direct sunlight. Protect from moisture.
Storage area	Store in a well-ventilated place.
Incompatible products	Strong bases. Strong acids.

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Incompatible materials	Sources of ignition. Direct sunlight.
Information on mixed storage	Store away from water. Do not store together with electrically conductive materials.
Storage temperature	The accu-pack should be stored at 30 to 50% of the charging capacity. Avoid storing in places where it is exposed to static electricity. -20 – 45 °C (humidity: 0% - 80%)

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Appropriate engineering controls

Appropriate engineering controls	Ensure adequate ventilation. If the electrolyte is leaking out of the battery pack, the following measures have to be taken.
Other information	Do not eat, drink or smoke when using this product. No additional information available.

#### 8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,12		EN ISO 374

Eye protection: Chemical goggles or safety glasses

Respiratory protection: No additional information available

Personal protective equipment symbol(s)



#### 8.4. Exposure limit values for the other components

No additional information available

### SECTION 9: Physical and chemical properties

#### 9.1. Basic physical and chemical properties

Physical state	Solid
Colour	Grey.
Odour	Not available
Odour threshold	Not available
Melting point	Not available
Freezing point	Not applicable
Boiling point	Not available
Flammability	Non flammable.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
pH	Not available
pH solution	Not available
Viscosity, kinematic (calculated value) (40 °C)	Not applicable
Partition coefficient n-octanol/water (Log Kow)	Not available
Vapour pressure	Not available

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Vapour pressure at 50°C	Not available
Density	Not available
Relative density	Not available
Relative vapour density at 20°C	Not applicable
Solubility	Not available
Particle size	Not available

### 9.2. Data relevant with regard to physical hazard classes (supplemental)

Explosive limits	Not applicable
Explosive properties	Risk of explosion by shock, friction, fire or other sources of ignition.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Heating may cause a fire or explosion.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Water, humidity.

### 10.5. Incompatible materials

Conductive materials, water, seawater, strong oxidizers and strong acids.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitisation	Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	Not classified (Based on available data, the classification criteria are not met)

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Viscosity, kinematic	Not applicable
Other information	When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

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### SECTION 12: Ecological information

#### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	Not classified (Based on available data, the classification criteria are not met)

#### 12.2. Persistence and degradability

Li-Ion Battery 16S3P ANR26650 for FX 3-A tool	
Persistence and degradability	No additional information available

#### 12.3. Bioaccumulative potential

Li-Ion Battery 16S3P ANR26650 for FX 3-A tool	
Bioaccumulative potential	No additional information available

#### 12.4. Mobility in soil

Li-Ion Battery 16S3P ANR26650 for FX 3-A tool	
Mobility in soil	No additional information available

#### 12.5. Other adverse effects

Ozone	Not classified
Other adverse effects	Do not allow battery packs to penetrate the soil. The battery cell may corrode and electrolyte may leak.
Other information	Do not allow battery packs to penetrate the soil. The battery cell may corrode and electrolyte may leak.

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Product/Packaging disposal recommendations	Dispose in a safe manner in accordance with local/national regulations. Refer to manufacturer/supplier for information on recovery/recycling.
Ecology - waste materials	Avoid release to the environment.

### SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	RID
<b>14.1. UN number or ID number</b>			
UN 3481	UN 3481	UN 3481	UN 3481
<b>14.2. UN proper shipping name</b>			
LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT	Lithium ion batteries contained in equipment	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT
<b>Transport document description</b>			
UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, 9A, (E)	UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, 9	UN 3481 Lithium ion batteries contained in equipment, 9A	UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, 9A
<b>14.3. Transport hazard class(es)</b>			
9A	9	9A	9A

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ADR	IMDG	IATA	RID
<b>14.4. Packing group</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>			
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available			

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	M4
Special provisions (ADR)	188, 230, 310, 348, 360, 376, 377, 387, 390, 670
Limited quantities (ADR)	0
Excepted quantities (ADR)	E0
Packing instructions (ADR)	P903, P908, P909, P910, P911, LP903, LP904, LP905, LP906
Transport category (ADR)	2
Tunnel restriction code (ADR)	E

#### Transport by sea

Special provisions (IMDG)	188, 230, 310, 348, 360, 376, 377, 384, 387
Limited quantities (IMDG)	0
Excepted quantities (IMDG)	E0
Packing instructions (IMDG)	P903, P908, P909, P910, P911, LP903, LP904, LP905, LP906
EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-I
Stowage category (IMDG)	A
Stowage and handling (IMDG)	SW19
Properties 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

PCA Excepted quantities (IATA)	E0
PCA Limited quantities (IATA)	Forbidden
PCA limited quantity max net quantity (IATA)	Forbidden
PCA packing instructions (IATA)	967
PCA max net quantity (IATA)	5kg
CAO packing instructions (IATA)	967
CAO max net quantity (IATA)	35kg
Special provisions (IATA)	A48, A88, A99, A154, A164, A181, A185, A213, A220
ERG code (IATA)	12FZ

#### Rail transport

Classification code (RID)	M4
Special provisions (RID)	188, 230, 310, 348, 360, 376, 377, 387, 390, 670
Limited quantities (RID)	0
Excepted quantities (RID)	E0
Packing instructions (RID)	P903, 908, 909, P910, P911, LP903, LP904, LP905, LP906



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Transport category (RID)	2
Colis express (express parcels) (RID)	CE2
Hazard identification number (RID)	90

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations specific for the product in question

Regulatory reference Not listed on the United States TSCA (Toxic Substances Control Act) inventory.

## SECTION 16: Other information

Issue date 30/03/2023  
Revision date 30/03/2023

Section	Changed item	Change	Comments
1	Trade name	Modified	
14	Transport information	Modified	

### Abbreviations and acronyms

CAS-No. - Chemical Abstract Service number  
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE - Acute Toxicity Estimate  
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008  
DNEL - Derived-No Effect Level  
EC50 - Median effective concentration  
ED - Endocrine disrupting properties  
EC-No. - European Community number  
EN - European Standard  
IATA - International Air Transport Association  
IMDG - International Maritime Dangerous Goods  
IOELV - Indicative Occupational Exposure Limit Value  
LC50 - Median lethal concentration  
LD50 - Median lethal dose  
NOEC - No-Observed Effect Concentration  
OECD - Organisation for Economic Co-operation and Development  
N.O.S. - Not Otherwise Specified  
OEL - Occupational Exposure Limit  
PBT - Persistent Bioaccumulative Toxic  
PNEC - Predicted No-Effect Concentration  
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006  
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail  
SDS - Safety Data Sheet  
STP - Sewage treatment plant  
TLM - Median Tolerance Limit  
TRGS - Technical Rules for Hazardous Substances  
VOC - Volatile Organic Compounds  
WGK - Water Hazard Class  
vPvB - Very Persistent and Very Bioaccumulative





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NOAEL - No-Observed Adverse Effect Level  
NOAEC - No-Observed Adverse Effect Concentration  
LOAEL - Lowest Observed Adverse Effect Level

SDS UN HILTI

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.