

FX 3-A tool containing lithium ion battery

Safety Data Sheet

according to the Hazardous Substance SDS Notice 2017 (EPA)

Issue date: 05/04/2023

Revision date: 05/04/2023

Supersedes:

Version: 2.1

SECTION 1: Identification

1.1 Product identifier

Name	FX 3-A tool containing lithium ion battery
Product form	Article
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

Recommended use	For professional use only Electrical batteries and accumulators
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1.4 Details of manufacturer or importer

Supplier

Hilti (New Zealand) Ltd.
Level 1, Building B 600 South Road Ellerslie
Auckland 1051
New Zealand
T +64 9 571 9995
, 800 444 584 toll free - F +64 9526 7780
servicenz@hilti.com

Department issuing data specification sheet

Hilti Entwicklungsgesellschaft mbH
Hiltistrasse 6
Kaufering 86916
Deutschland
T +49 8191 906310 - F +49 8191 90176310
df-hse@hilti.com

1.5. Emergency phone number

Emergency number	Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +64 9 571 9995 ; 800 444 584 toll free
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SECTION 2: Hazard identification

2.1. Classification of the hazardous chemical

Classification according to the Environmental Protection Authority notices (EPA Hazardous Substances and New Organisms Act 1996)

Not classified

2.2. GHS Label elements, including precautionary statements

GHS NZ labelling

No labelling applicable

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2.3. Other hazards which do not result in classification

Other hazards which do not result in 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 and 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. Symptoms caused by exposure

Symptoms/effects

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

4.3. Medical attention and special treatment

Other medical advice or treatment

Treat symptomatically.

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SECTION 5: Fire-fighting measures

5.1. 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.

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.

General measures No flames, no sparks. Eliminate all sources of ignition. Isolate from fire, if possible, without unnecessary risk.

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 equipment and precautions 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.

Hazchem Code 2Y

EAC code 2Y - 2Y

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.

6.1.1. For non-emergency personnel

Emergency procedures Evacuate unnecessary personnel.

6.1.2. For emergency responders

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.

Reference to other sections (13) For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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.

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Precautions for safe handling

Do not soak in water or seawater.
 Do not expose to strong oxidizers.
 Do not give a strong mechanical shock or fling.
 Never disassemble, modify or deform.
 Do not connect the positive terminal to the negative terminal with electrically conductive material.
 Use only the chargers / electric tools specified by Hilti to charge or discharge the battery.

Do not throw into fire or expose to high temperatures (>85 °C).
 Do not connect the positive terminal to the negative terminal with electrically conductive material. Charge within limits of 0°C to 45°C temperature.
 Discharge within limits of -20°C to +60°C temperature.
 Always wash hands after handling the product.

Hygiene measures

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

Protect from heat and direct sunlight. Protect from moisture.

Incompatible products

Strong bases. Strong acids.

Incompatible materials

Sources of ignition. Direct sunlight.

Storage temperature

-20 – 45 °C (humidity: 0% - 80%)

Information on mixed storage

Store away from water.

Do not store together with electrically conductive materials.

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.
 Store in a well-ventilated place.

Storage area

SECTION 8: Exposure controls and personal protection

8.1. Control parameters - exposure standards

FX 3-A tool containing lithium ion battery	
New Zealand - Occupational Exposure Limits	
Local name	Ethyl acetate
WES-TWA (OEL TWA) [1]	720 mg/m ³
WES-TWA (OEL TWA) [2]	200 ppm
Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 12th Edition

Exposure limit values for the other components

No additional information available

8.2. Monitoring methods

No additional information available

8.3. 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.

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

Personal protective equipment

Avoid all unnecessary exposure.

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

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Respiratory protection

No additional information available

Personal protective equipment symbol(s)



Other information

Do not eat, drink or smoke when using this product. No additional information available.

SECTION 9: Physical and chemical properties

Physical state	Solid
Appearance	No data available
Colour	Grey
Odour	Odourless.
Odour threshold	No additional information available
pH	No additional information available
Evaporation rate	No additional information available
Relative evaporation rate (butylacetate=1)	No data available
Melting point / Freezing point	No additional information available
Boiling point	No data available
Flash point	No data available
Auto-ignition temperature	No data available
Flammability	No additional information available
Vapour pressure	No additional information available
Relative density	No additional information available
Density	No additional information available
Solubility	No additional information available
Partition coefficient n-octanol/water (Log Pow)	No data available
Viscosity, dynamic	No data available
Explosive properties	Risk of explosion by shock, friction, fire or other sources of ignition.
Explosive limits	No additional information available
Minimum ignition energy	No data available

SECTION 10: Stability and reactivity

Reactivity	No additional information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Heating may cause a fire or explosion.
Conditions to avoid	Direct sunlight. Extremely high or low temperatures. Water, humidity.
Incompatible materials	Conductive materials, water, seawater, strong oxidizers and strong acids.
Hazardous decomposition products	fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Toxicity

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)

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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)
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.

SECTION 12: Ecological information

12.1. Ecotoxicity

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
Soil toxicity	Not classified
Terrestrial vertebrate toxicity	Not classified
Terrestrial invertebrate toxicity	Not classified
Other information	Do not allow battery packs to penetrate the soil. The battery cell may corrode and electrolyte may leak.

12.2. Persistence and degradability

FX 3-A tool containing lithium ion battery	
Persistence and degradability	No additional information available

12.3. Bioaccumulative potential

FX 3-A tool containing lithium ion battery	
Bioaccumulative potential	No additional information available

12.4. Mobility in soil

FX 3-A tool containing lithium ion battery	
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.

SECTION 13: Disposal considerations

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 / RID

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

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ADR	IMDG	IATA	RID
Transport document description			
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
14.3. Transport hazard class(es)			
9A	9A	9A	9A
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
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)	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
EAC code	2Y

Transport by sea

Special provisions (IMDG)	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.
MFAG-No	138

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

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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) 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
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

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Issue date 5/04/2023
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Indication of changes			
Section	Changed item	Change	Comments
1	Trade name	Modified	
14	Transportation information	Modified	

Data sources European Chemicals Agency, <http://echa.europa.eu/>. manufacturer.

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

SDS NZ 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.