

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

Safety Data Sheet

according to ICOP 2014,2019

Issue date: 13/08/2025

Revision date: 13/8/2025

Supersedes: 05/04/2023

Version: 3.0

SECTION 1: Identification of the hazardous chemical and of the supplier

1.1. Product identifier

Name	Li-Ion Battery 16S3P ANR26650 for FX 3-A tool
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. Supplier details

Supplier

Hilti (Malaysia) Sdn. Bhd.
F-5-A, Sime Darby Brunsfield Tower, No. 2, Jalan PJU 1A/7A
Oasis Square, Oasis Damansara
47301 Petaling Jaya, Selangor
Malaysia
T +60 3 5628 7222
1800 880 985 toll free - F +60 3 7848 7399

Department issuing data specification sheet

Hilti AG
Feldkircherstraße 100
9494 Schaan
Liechtenstein
T +423 234 2111
product.compliance-direct.fastening@hilti.com

1.5. Emergency phone number

Emergency number	GBK GmbH Global Regulatory Compliance +49 (0)6132-84463
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Country	Organisation/Company	Address	Emergency number	Comment
Malaysia	Malaysia National Poison Centre (NPC) Universiti Sains Malaysia	11800 Penang	+60 (0)4 6536 999 (Mon-Fri 8am-10pm; Sat, Sun & Public Holiday 8am-5pm)	

SECTION 2: Hazards identification

2.1. Classification of the hazardous chemical

Classification according to Industry Code of Practice on chemicals classification and hazard communication (2019)

Not classified

2.2. Label elements

Labelling according to Industry Code of Practice on chemicals classification and hazard communication (2019)

No labelling applicable

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2.3. Other hazards that 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 breaked 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 of the ingredients of the hazardous chemical

3.1. Substances

Not applicable

3.2. Mixtures

Comments

Lithium Ion rechargeable battery pack:

Name/Type Energy content (Wh)

16S3P ANR26650 396

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.

Name	Product identifier	%	Classification according to Industry Code of Practice on chemicals classification and hazard communication (2019)
Graphite	CAS-No.: 7782-42-5		Not classified
Lithium iron phosphate	CAS-No.: 15365-14-7		Not classified
ethyl acetate	CAS-No.: 141-78-6		Flam. Liq. 2, H225 Acute Tox. Not classified (Oral) Acute Tox. Not classified (Dermal) Eye Irrit. 2A, H319 STOT SE 3, H336 Aquatic Acute Not classified Aquatic Chronic Not classified
	-		Not classified
	-		Not classified
	-		Not classified
	-		Not classified

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.

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

Other medical advice or treatment	Treat symptomatically.
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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. Physicochemical 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 equipment and precautions for fire fighters

Hazchem Code	2Y
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.
EAC code	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. For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.
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6.1.1. For non-emergency personnel

Emergency procedures	Evacuate unnecessary personnel.
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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.

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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.

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.

Hygiene measures

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.

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.

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 and personal protection

8.1. Control parameters

Graphite (7782-42-5)	
Malaysia - Occupational Exposure Limits	
Local name	Grafit (semua bentuk kecuali gentian grafit) # Graphite (all forms except graphite fibres)
PEL (OEL TWA)	2 mg/m³ Pecahan ternafaskan. # Respirable fraction.
MEL (mg/m³)	6 mg/m³
ethyl acetate (141-78-6)	
Malaysia - Occupational Exposure Limits	
Local name	Etil asetat # Ethyl acetate
PEL (OEL TWA)	1440 mg/m³
	400 ppm
MEL (mg/m³)	4320 mg/m³
MEL (ppm)	1200 ppm

Exposure limit values for the other components

No additional information available

8.1.1 Biological monitoring

No additional information available

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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.

8.3. Individual protection measures, such as 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):



SECTION 9: Physical and chemical properties

Physical state	Solid
Appearance	No data available
Colour	Grey
Odour	No data available
Odour threshold	No data available
pH	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Explosive limits	No data available
Vapour pressure	No data available
Relative vapour density at 20°C	No data available
Relative density	No data available
Solubility	No data available
Partition coefficient n-octanol/water (Log Pow)	No data available
Partition coefficient n-octanol/water (Log Kow)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	Risk of explosion by shock, friction, fire or other sources of ignition.
Particle size	Not available

SECTION 10: Stability and reactivity

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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. 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)

Graphite (7782-42-5)	
LD50 oral rat	> 2000 mg/kg (OECD 423)
LC50 Inhalation - Rat	> 2000 mg/m³ (4h; OECD 403)

ethyl acetate (141-78-6)	
LD50 oral rat	10200 ml/kg (male)
LD50 dermal rabbit	> 20000 mg/kg bodyweight (male)
LC50 Inhalation - Rat [ppm]	> 6000 ppm (6 h)

Skin corrosion or irritation	Not classified (Based on available data, the classification criteria are not met)
Serious eye damage or eye irritation	Not classified (Based on available data, the classification criteria are not met)
Respiratory sensitization	Not classified (Based on available data, the classification criteria are not met)
Skin sensitization	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)
Specific target organ toxicity (STOT) – single exposure	Not classified (Based on available data, the classification criteria are not met)

ethyl acetate (141-78-6)	
Specific target organ toxicity (STOT) – single exposure	May cause drowsiness or dizziness.

Specific target organ toxicity (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)
Potential adverse human health effects and symptoms	This product contains an organic electrolyte. If the electrolyte is leaking out of the battery pack, the following effects are known when getting into contact: Irritation: severely irritant to eyes. Severely irritant to skin. Irritation: may cause irritation to the respiratory system.
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) (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) (Based on available data, the classification criteria are not met)
Other information	Do not allow battery packs to penetrate the soil. The battery cell may corrode and electrolyte may leak.

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Graphite (7782-42-5)	
LC50 - Fish [1]	> 100 mg/l (96h; Danio rerio; OECD 203)
EC50 - Crustacea [1]	> 100 mg/l (48h; Daphnia magna; OECD 202)
EC50 72h - Algae [1]	> 100 mg/l (72h; Pseudokirchnerella subcapitata; OECD 201)

ethyl acetate (141-78-6)	
LC50 - Fish [1]	220 mg/l (96 h; Pimephales promelas; US EPA E03-05)
NOEC chronic crustacea	2.4 mg/l (21 d; Daphnia magna; (OECD 211 method))
NOEC chronic algae	> 100 mg/l (72 h; Desmodesmus subspicatus; (OECD 201 method))
BCF - Fish [1]	30 (3 d; Leuciscus idus melanotus)

12.2. Persistence and degradability

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Persistence and degradability	Not established.
ethyl acetate (141-78-6)	
Persistence and degradability	Readily biodegradable.
Biodegradation	≈ 69 % (20 d)

12.3. Bioaccumulative potential

Li-Ion Battery 16S3P ANR26650 for FX 3-A tool	
Bioaccumulative potential	No additional information available
ethyl acetate (141-78-6)	
BCF - Fish [1]	30 (3 d; Leuciscus idus melanotus)
Bioaccumulative potential	Bioaccumulation unlikely.

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 (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)
Other adverse effects	No additional information available

SECTION 13: Disposal information

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.
Ecological waste information	Avoid release to the environment.

SECTION 14: Transportation information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3480	UN 3480	UN 3480	UN 3480	UN 3480

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ADR	IMDG	IATA	ADN	RID
14.2. UN proper shipping name				
LITHIUM ION BATTERIES	LITHIUM ION BATTERIES	Lithium ion batteries	LITHIUM ION BATTERIES	LITHIUM ION BATTERIES
Transport document description				
UN 3480 LITHIUM ION BATTERIES, 9, (E)	UN 3480 LITHIUM ION BATTERIES, 9	UN 3480 Lithium ion batteries, 9	UN 3480 LITHIUM ION BATTERIES, 9	UN 3480 LITHIUM ION BATTERIES, 9
14.3. Transport hazard class(es)				
9	9	9	9	9
14.4. Packing group				
Not applicable	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	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, 376, 377, 387, 636
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)	188, 230, 310, 348, 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
Flash point (IMDG)	
Properties and observations (IMDG)	Electrical batteries containing lithium ion may react (e.g. flame, heat, emission of toxic, corrosive or flammable gases or vapours) or disassemble due to damage, defects or short circuit.

Air transport

PCA Excepted quantities (IATA)	E0
PCA Limited quantities (IATA)	Forbidden
PCA limited quantity max net quantity (IATA)	Forbidden
PCA packing instructions (IATA)	Forbidden
PCA max net quantity (IATA)	Forbidden

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CAO packing instructions (IATA)	See 965
CAO max net quantity (IATA)	See 965
Special provisions (IATA)	A88, A99, A154, A183, A201, A213, A331, A334, A802
ERG code (IATA)	12FZ

Inland waterway transport

Classification code (ADN)	M4
Special provisions (ADN)	188, 230, 310, 348, 376, 377, 387, 636, 677
Limited quantities (ADN)	0
Excepted quantities (ADN)	E0
Equipment required (ADN)	PP
Number of blue cones/lights (ADN)	0

Rail transport

Classification code (RID)	M4
Special provisions (RID)	188, 230, 310, 348, _376, 377, 387, 636, 677
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

14.8. Hazchem or Emergency Action Code

EAC code	: 2Y.
Hazchem Code	: 2Y

SECTION 15: Regulatory information

15.1. Safety, health, and environmental regulations specific for the hazardous chemical in question

Regulation	Component/ Mixture
EHS Notification and Registration Scheme	
Environmental Quality (Chlorofluorocarbons Prohibition) Order 1993	Not applicable
Environmental Quality (Industrial Effluent) Regulations 2009	Li-Ion Battery 16S3P ANR26650 for FX 3-A tool
Environmental Quality (Scheduled Wastes) Regulations 2007	Li-Ion Battery 16S3P ANR26650 for FX 3-A tool
Control of Industrial Major Accident Hazards Regulations 1996	Li-Ion Battery 16S3P ANR26650 for FX 3-A tool
Prohibition of Use of Substance Order 1999	Li-Ion Battery 16S3P ANR26650 for FX 3-A tool
Use and Standards of Exposure of Chemical Hazardous to Health Regulations 2000	Li-Ion Battery 16S3P ANR26650 for FX 3-A tool
Chemical Weapons Convention Act	Li-Ion Battery 16S3P ANR26650 for FX 3-A tool
Corrosive and Explosive Substances and Offensive Weapons Act	Li-Ion Battery 16S3P ANR26650 for FX 3-A tool
Dangerous Drugs Act	Li-Ion Battery 16S3P ANR26650 for FX 3-A tool
Pesticides Act	Li-Ion Battery 16S3P ANR26650 for FX 3-A tool

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Petroleum (Safety Measures) Act		Li-Ion Battery 16S3P ANR26650 for FX 3-A tool
Poisons Act 1952		Li-Ion Battery 16S3P ANR26650 for FX 3-A tool
Poisons (Psychotropic Substances) Regulations 1989		Li-Ion Battery 16S3P ANR26650 for FX 3-A tool

15.2. International agreements

No additional information available

SECTION 16: Other information

Version	3.0
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Indication of changes			
Section	Changed item	Change	Comments
1	Trade name	Modified	
14	Transport information	Modified	

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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 disruptor
 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

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis.

Other information

Full text of H-statements	
Acute Tox. Not classified (Dermal)	Acute toxicity (dermal) Not classified
Acute Tox. Not classified (Oral)	Acute toxicity (oral) Not classified
Aquatic Acute Not classified	Hazardous to the aquatic environment – Acute Hazard Not classified
Aquatic Chronic Not classified	Hazardous to the aquatic environment – Chronic Hazard Not classified
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Liq. 2	Flammable liquids, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness



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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.