

SAFETY DATA SHEET

This document is prepared as a courtesy to provide persons using this product with additional safety and regulatory information. Users are also encouraged to access the applicable SDS for the internal components referenced in Section 3 (Composition and Ingredients).

Safety Data Sheet according to Regulation (EC) No 1907/2006 (REACH) and EC No 2015/830

SDS History: Date of compilation: 15.03.2016

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

1.1 PRODUCT IDENTIFIER:

Synonyms, Other Means of Identification:

Product Numbers:

Description:

SkelStart Engine Start Module (ESM)
Supercapacitor, electric double layer capacitor
SkelStart
Commercial Product

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST NOT DETERMINED

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Manufacturer/supplier:

Skeleton Technologies GmbH, Preuschwitzer Straße 20, 02625 Bautzen, Germany, Tel +49 30 3080 7458
Telephone: +372 797 7979
sales@skeletontech.com, www.skeletontech.com

1.4 EMERGENCY TELEPHONE NUMBER:

Poison information centre telephone number (Estonia):

+49 30 3080 7458 (24/7)
166662 (24/7)

SECTION 2. HAZARD IDENTIFICATION

This SkelStart Engine Start Module (ESM) is a manufactured electronic product that contains primarily non-hazardous materials, including metal and plastic and ultracapacitors. This product is a solid article consisting of an opaque plastic and metal sealed case, which is filled with an electrolyte solution that has been almost completely adsorbed and or absorbed by the activated carbon layers. Ultracapacitors are sealed, metal containers (steel or aluminum), which enclose layers of activated carbon that is saturated with an electrolyte solution, aluminum and plastic. The electrolyte solution contains a quaternary salt compound (tetraethylammonium tetrafluoroborate) dissolved in the solvent acetonitrile.

The assembled layers of activated carbon are inserted into an outer metal container and are saturated with the above mentioned electrolyte solution and then are sealed and stored in an electrically uncharged state. If the contents of these Ultracapacitors remain sealed in the outer shell and they are kept uncharged, persons handling this product will avoid most of the risks described herein for all hazardous components of the electrolyte. As such, precautions should be taken to avoid rupture or overheating the sealed metal containers.

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

Under normal conditions of use, the ultracapacitor is hermetically sealed. Classification according EC regulation 1272/2008 (CLP): not applicable. The product is not a substance or a mixture, but an article. Providing the Safety Data Sheet takes place on a voluntary basis for information purposes.

2.2 LABEL ELEMENTS:

Hazard components for labelling- not applicable. Labelling according to Regulation (EC) No. 1272/2008 [CLP] not applicable. There is no legal requirement for the product to be specially labelled.

2.3 OTHER HAZARDS:

The product should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

SECTION 3. COMPOSITION AND INFORMATION ON INGREDIENTS

3.1 SUBSTANCE: not applicable

3.2 MIXTURE: not applicable

This product is an article. Under normal use and handling, person does not come into contact with the internal materials and capacitors do not emit regulated or hazardous substances, this Safety Data Sheet is provided for informational purpose.

ULTRACAPACITOR COMPONENTS:				
CAS# / EC #	REACH registration #	Component	Classification according to CLP regulation	% w/w
75-05-8/200-835-2		Acetonitrile	Flam. Liq. 2 H225; Acute Tox. 4 H302; H312; H332; Eye Irrit. 2 H319	10-20%
7440-44-0/215-609-9		Soot (carbon black), mineral origin	Not classified	10-20%
429-06-1/207-055-1		Tetraethyl ammonium tetrafluoroborate	Acute Tox. 4 H302; H312; H332; Eye Irrit. 2 H319; Skin Irrit. 2 H315; STOT SE 3; H335	5-15%
7429-90-5/231-072-3		Aluminum	-	Proprietary

BIRESIN® RG53 FIBRE RESIN (A) (PLASTIC COVER BOX)				
CAS# / EC #	REACH registration #	Component	Classification according to CLP regulation	Percent (Weight)
102-60-3/203-041-4	A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.	N,N,N ,N -Tetrakis(2-Hydroxypropyl)ethylenediamine	Eye Irrit. 2 H319;	Proprietary

See Section 16 for full EU classification and hazard statements on product components.

SECTION 4. FIRST AID MEASURES

The module is not hazardous under normal conditions of use. Damaged ultracapacitors may release electrolyte containing acetonitrile and TEABF₄. Acetonitrile is moderately toxic by inhalation and/or skin absorption. If necessary, physicians should refer to Section 11 (Toxicological Information) in the event there is a severe inhalation, skin contact or ingestion exposure to the electrolyte solution. First-aid measures applicable to contamination with the electrolyte solution are as follows:

4.1 DESCRIPTION OF FIRST AID MEASURES

- **INHALATION:** If vapors or fumes from the electrolyte contained in this product are inhaled, remove exposed person to fresh air. If necessary, use artificial respiration to support vital functions and seek medical attention
- **SKIN EXPOSURE:** If skin exposure to electrolyte occurs, flush contaminated area liberally with water. Seek medical attention if any adverse effects occur after flushing. Skin contact with the carbon may cause mild irritation.
- **EYE EXPOSURE:** If liquid, vapors or fumes from the electrolyte contained in this product contaminate the eyes, rinse eyes under gently running water. Use sufficient force to open eyelids and then “roll” eyes while flushing. Minimum flushing is for 20 minutes. Seek medical attention.
- **INGESTION:** In the unlikely event that the electrolyte contained in this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, DO NOT INDUCE VOMITING. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow. If victim is convulsing, maintain an open airway and obtain immediate medical attention

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Skin contact with the carbon may cause mild irritation. Electrolyte solution will cause burns to mouth and throat. Ingestion of large quantities can cause tissue ulceration of the gastrointestinal tract. Inhalation of electrolyte solution mist will severely irritate the nose and throat. Electrolyte solution will cause irritation to eyes and skin.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

No specific requirements.

SECTION 5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

If involved in a fire, the chemicals contained in the case may decompose and produce toxic gases (e.g. carbon oxides, propylene glycol, hydrogen fluoride and boron compounds). During a fire involving this product care should be taken to avoid inhalation of fumes.

SUITABLE FIRE EXTINGUISHING MATERIALS: The following fire extinguishing materials are suitable for fires involving this product:

Water Spray: OK (cooling only and only if products are uncharged)	Dry Chemical: OK	Carbon Dioxide: OK
Foam: OK	Halon: OK	Other ABC Type: OK

UNSUITABLE FIRE EXTINGUISHING MATERIALS: None known.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE If involved in a fire, the materials contained in these articles may thermally decompose and produce toxic gases (e.g. nitrogen oxides, carbon oxides, hydrogen cyanide, hydrogen fluoride and other fluoride and boron compounds). Explosion Sensitivity to Mechanical Impact: Not sensitive. Explosion Sensitivity to Static Discharge: Not sensitive.

5.3 ADVICE FOR FIREFIGHTERS

This product is not flammable under normal operational and non-operational conditions. Due to the small amount of electrolyte solution in each device and the presence of activated carbon, these articles contain little or no freestanding liquid and are not anticipated to pose a significant fire hazard under normal conditions of storage, use and shipment. Sealed devices involved in a fire may rupture explosively if heated for a sufficiently long period of time.

Wear SCBA with a chemical protection suit only where personal (close) contact is likely. Fire fighter's clothing conforming to European standard EN469 should be used.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES ALWAYS WEAR IMPERVIOUS GLOVES AND EYE PROTECTION.

Eliminate sources of ignition and ensure adequate ventilation.

6.2 ENVIRONMENTAL PRECAUTIONS

Avoid releases to the environment. Accidental spills of the electrolyte should be kept away from drains, surface and ground water.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

ELECTROLYTE LEAKS: For electrolyte leaks, keep unnecessary personnel away, neutralize with dilute acetic or hydrochloric acid, then wipe up with absorbent paper towels. Place material into a tightly closed chemical waste container and dispose of as hazardous waste. Contact local regulatory authorities for advice regarding disposal of cleanup materials and cells. Call (+49 30 3080 7458) for emergency assistance.

6.4 REFERENCE TO OTHER SECTIONS

For additional information on protective measures see Section 8 and for waste management requirements see Section 13.

SECTION 7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

For damaged modules, do not breathe fumes or vapors, and prevent electrolyte contact with eyes, clothing and skin.

Wash thoroughly after handling damaged modules. Avoid exceeding of the given occupational exposure limits (see section 8). Smoking, eating and drinking should be prohibited in the application area. Follow standard hygiene measures when handling chemical products. Advice on protection against fire and explosion: Normal measures for preventive fire protection. Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store product in a well-ventilated place, keep it away from heat and flame and prevent short-circuit conditions

7.3 SPECIFIC END USE(S)

Non known.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

NORMAL USE: NOT APPLICABLE. Finished commercial product. **FOR OPENED UNITS:** As an intact, sealed, manufactured article, exposure to individual components is not possible. If this product leaks, fails, is cut or is otherwise manipulated in such a way that the contents are released, exposure to the internal components is possible. The only internal component that is dispersible is the electrolyte; therefore, the following information applies to the electrolyte solution only.

8.1 Control parameters

Chemical Name	CAS #	Applicable Exposure Limits							
		OSHA-PELs		ACGIH-TLVs		ACGIH-RELs			Other
		TWA (ppm)	STEL (ppm)	TWA (ppm)	STEL (ppm)	TWA (ppm)	Skin Note	IDLH (ppm)	
Acetonitrile	75-05-8	40	60 (15 min.)	20	NE	20	Skin	500	FG MAKs (skin) (vacated TWA = 20 ppm (skin) 1989 PEAK = 2.ppm MAX 15 min, average value, 1-hr interval, 4 PEL) per shift DFG MAK Pregnancy Risk Classification: C Carcinogen: EPA-CBD, EPA-D, TLV-A4
Tetraethylammonium tetrafluoroborate	429-06-1	NE	NE	NE	NE	NE	NE	NE	

NE = Not Established

Selection of the DNEL(s) and PNEC(s) or other hazard conclusion for critical health effects of the electrolyte.

DNELs

For Acetonitrile:

	Workers				Consumers			
Route of exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effects local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required				0.6 mg/kg bw/day		No data available	
Inhalation	68 mg/m ³	68 mg/m ³	68 mg/m ³	68 mg/m ³	22 mg/m ³	220 mg/m ³	4.8 mg/m ³	4.8 mg/m ³
Dermal	No data available			32.2 mg/kg bw/day	No data available			
Each of the cells should contain one of the following information: i) DNEL value with unit or ii) hazard identified but no DNEL available or iii) no exposure expected, iv) no hazard identified								

PNECs

For Acetonitrile:

Environmental protection target	PNEC
Fresh water	10 mg/L
Freshwater sediments	7.53 mg/kg sediment dw
Marine water	1 mg/L
Marine sediments	no exposure expected
Food chain	no hazard identified
Microorganisms in sewage treatment	32 mg/L
Soil (agricultural)	2.41 mg/kg soil dw
Air	no hazard identified
Each of the cells should contain one of the following information: i) PNEC value with unit or ii) hazard identified but no PNEC available or iii) no exposure expected or iv) no hazard identified	

Relevant data for Tetraethylammonium tetrafluoroborate is not available as this substance has not been registered under REACH and corresponding chemical safety assessment has not been carried out for the time being.

8.2 EXPOSURE CONTROLS

Appropriate engineering controls:

Not ordinarily required, need to keep away from heat and open flame. Store product in a cool & dry place

Personal protective equipment:

Eye and face protection - Not ordinarily required. Chemical goggles or safety glasses with side shields should be worn when handling a damaged module.

Skin protection: Not ordinarily required. Wear impervious gloves when handling damaged module. Wash contaminated clothing before re-use.

Respiratory protection: Not ordinarily required during normal operations

No specific requirements when working with non-damaged finished commercial product under normal conditions.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

The product is an article – general provisions of this Section are non-applicable

APPEARANCE (COLOR, PHYSICAL FORM, SHAPE):

Finished commercial product. Various sizes and shapes

VOLATILE ORGANIC COMPOUND (VOC) CONTENT:

Not applicable. Product not regulated for VOC content at state or federal level.

SECTION 10. STABILITY AND REACTIVITY

10.1 REACTIVITY

No hazardous reaction known under conditions of normal use. Prevent short-circuiting across terminals, and temperatures exceeding 150°C, avoid exposure to heat and open flame, do not puncture, crush or incinerate

10.2 CHEMICAL STABILITY

Stable under condition of normal temperature.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Non known. Hazardous polymerization will not occur.

10.4 CONDITIONS TO AVOID

Avoid exposure to or contact with sparks, flames, or other sources of ignition, extreme temperatures, and incompatible chemicals.

10.5 INCOMPATIBLE MATERIALS

Electrolyte Solution: Strong reducing agents, strong oxidizers, strong acids, diphenyl sulfoxide, trichlorosilane, n-fluoro compounds, nitrating agents.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Combustion: Products of thermal decomposition can include toxic gases (e.g. nitrogen oxides, carbon oxides, hydrogen cyanide, hydrogen fluoride and other miscellaneous fluoride and boron compounds).

SECTION 11. TOXICOLOGICAL INFORMATION

This product is a finished commercial product. It is defined as an “article” and exempt from CLP classification and REACH SDS requirements.

The following information is about the hazardous components sealed within the article and not about the article itself.

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

Acute toxicity: Classification criteria are not applicable for the article itself. Information about the relevant components is summarised in the following table.

CAS-Nr.	Designation					
	Routes of Exposure	Dose	Method	Species	Exposure time	Results
75-05-8	Acetonitrile					
	Oral	LD50 calculated 617 mg/kg for male and female mice combined (with 95% confidence limits of 450-787 mg/kg)	OECD Guideline 401	Mouse	1 administration; observation 14 d.	harmful
	Dermal	LD50 > 2 000 mg/kg bw / LD50 980 mg/kg	OECD Guideline 402 / Other: Union Carbide Chemicals Company, 1959	Rabbit / Rabbit	24h / Single exposure	harmful
	Inhalation (vapour)	LC50 3587 ppm	OECD Guideline 403	Mouse	4h	harmful
1333-86-4	Black carbon					
	Oral	LD50 >8000 mg/kg	OECD Guideline 401	Rat	1 administration; observation 4 weeks.	Not classified
	Inhalation	Effect level > 4.6 mg/m ³ air	Research Report no. 104: Health Effects Institute. October 2001, Vincent R, Kumarathasan P et al.	Rat	4h	NA
69444-47-9	Triethylmethylammoniumtetrafluoroborate					
	Oral	ATE 500 mg/kg	Information not available			
102-60-3	N,N,N,N-Tetrakis(2-Hydroxypropyl)ethylene-diamine					
	Oral	LD50 2 890 mg/kg bw	OECD Guideline 401	Rat	1 administration; observation 14 d.	Not classified
	Dermal	LD50 > 2 000 mg/kg bw	OECD Guideline 402	Rat	24 h	Not classified
	Inhalation – not required	NA				

SKIN CORROSION/IRRITATION: Classification criteria are not applicable for the article itself.

Serious eye damage/ irritation: Classification criteria are not applicable for the article itself.

RESPIRATORY OR SKIN SENSITISATION: Classification criteria are not applicable for the article itself.

Summary of evaluation of the CMR properties: Classification criteria are not applicable for the article itself. Article does not contain component substances classified for CMR properties.

SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE: Classification criteria are not applicable for the article itself.

STOT-REPEATED EXPOSURE: Classification criteria are not applicable for the article itself.

ASPIRATION HAZARD: Classification criteria are not applicable for the article itself.

SECTION 12. ECOLOGICAL TOXICITY ENVIRONMENTAL FATE AND TRANSPORT

12.1 TOXICITY:

Classification criteria are not applicable for the article itself. Information about the relevant components is summarised in the following table

CAS-Nr.	Designation					
	Aquatic Toxicity	Dose	Exposure time [h] [d]	Species	Method	Results
75-05-8	Acetonitrile					
	Acute toxicity for fish	LC50 1640 mg/l	96 h	Pimephales promelas	No data available	Based on available data not toxic to fish
	Acute toxicity for invertebrates	LC50 400 mg/L	24 h	Artemia salina	Acute Toxicity of Organic Solvents on Artemia salina, 1994, Barahona-Gomariz, M.V. et al	Based on available data, not toxic
	Toxicity to aquatic algae and cyanobacteria	LC50 9696 mg/L	72 h	Phaeodactylum tricornutum	ISO 10253	Based on available data, not toxic
1333-86-4	Black carbon					
	Acute toxicity for fish	LC0 > 1000 mg/l	96 h	Brachydanio rerio	OECD Guideline 203	Based on available data not toxic to fish
	Acute toxicity for invertebrates	EC50 > 5600 mg/L	24 h	Daphnia magna	OECD Guideline 202	Not toxic within its aqueous solubility
	Toxicity to aquatic algae and cyanobacteria	EC50 > 10 000 mg/L	72 h	Desmodesmus subspicatus	OECD Guideline 201	Not toxic within its aqueous solubility
102-60-3	N,N,N',N' -Tetrakis(2-Hydroxypropyl) ethylenediamine					
	Acute toxicity for fish	LC50 2 700 mg/L / LC50 4 600 mg/L	48h / 96h	Leuciscus idus	DIN 38 412	Based on available data not toxic to fish
	Acute toxicity for invertebrates	EC0 >= 100 mg/L	48 h	Daphnia magna	EU Method C.2	Based on available data, not toxic
	Toxicity to aquatic algae and cyanobacteria	EC50 150.67 mg/L	72 h	Desmodesmus subspicatus	EU Method C.3	Based on available data, not toxic

Chronic (long-term) toxicity: Classification criteria are not applicable for the article itself. Based on the acute hazard profile of relevant components further assessment is not required.

12.2 PERSISTENCE AND DEGRADABILITY: Not applicable for articles. Acetonitrile is readily biodegradable - OECD guideline 301C. Biodegradation results after 28 days: BOD - 65%; TOC - 84%; GC - 88%.

12.3 BIOACCUMULATION POTENTIAL: Not applicable for articles. No indication of bioaccumulation potential based on data available for hazardous components. US EPA BCFWIN generated an estimated BCF of 3.162 for acetonitrile based on the experimental log Kow of -0.34.
Partition coefficient n -octanol / water:

CAS-Nr.	Designation	Log Pow
Log Pow	Acetonitrile	-0,34

12.4 MOBILITY IN SOIL: Not applicable for articles.

12.5 RESULTS OF PBT AND VPVB ASSESSMENT: The product does not contain substances classified as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: none known.

SECTION 13. DISPOSAL CONSIDERATION

13.1 WASTE TREATMENT METHODS





The national legislation has to be observed. Waste products should be collected and handed over to a company that owns applicable treatment license.

Non -contaminated packages may be supplied to Recycling . The allocation of waste identity numbers / waste descriptions industry accordingly and EAVK process specific conduct. List of proposed waste codes / waste designations in accordance with EWC (European Waste Codes):

160605 Batteries and accumulators, 150203 Absorbents, filter materials , Wiping cloths and protective clothing

CONTAMINATED PACKAGING AND RECOMMENDED CLEANING AGENTS: Contaminated packages should be treated like the substance.

SECTION 14. TRANSPORT INFORMATION

LAND TRANSPORT (ADR / RID):						
UN-Number	UN proper shipping name	Transport hazard class		Packing Group		Label
UN 3499	CAPACITOR, electric double layer (with an Energy storage capacity of more than 0.3 Wh)	9		Classification code: M11 (Es): 0 Transport category : 4	Special provisions: 361 Excepted Quantities : E0 Tunnel restriction code: E	Label 9 
INLAND WATERWAY TRANSPORT (ADN):						
UN 3499	CAPACITOR, electric double layer (with an Energy storage capacity of more than 0.3 Wh)	9		Classification code: M11 (Es): 0 Transport category : 4	Special provisions: 361 Excepted Quantities : E0 Tunnel restriction code: E	Label 9 
SEA TRANSPORT (IMDG)						
UN 3499	CAPACITOR, electric double layer (with an Energy storage capacity of more than 0.3 Wh)	9	NO	(Es): 0 EmS : F -A , S -I	Special provisions: 361 Excepted Quantities: E0	Label 9 
AIR TRANSPORT (ICAO)						
UN 3499	CAPACITOR, electric double layer (with an Energy storage capacity of more than 0.3 Wh)	9		Excepted (Es) Passenger: Forbidden Passenger LQ : Forbidden (Es) Passenger: Forbidden IATA-packing instructions - Passenger : 971 IATA maximum quantity - Passenger: No limit IATA-packing instructions - Cargo : 971 IATA maximum quantity - Cargo : No limit	Special provisions: A186 Excepted Quantities: E0	Label 9 

SPECIAL PRECAUTIONS FOR USER: See section 6-8
Bulk according to Annex II of MARPOL 73/78 and the IBC Code not relevant
Remarks Nominal power: > 0.28 Wh - < 10 Wh Wh

SECTION 15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE:

EU-Regulations:

Information not relevant to the IE - Directive 2010/75 / EU (VOC): Not relevant

Information pursuant to VOC Directive irrelevant 2004/42 / EC Not relevant

Information about Seveso III Directive 2012/18 / EU: Is not subject to the Seveso III Directive additional
Directive 2012/19/eu Waste electrical and electronic equipment (WEEE)

Authorisations and/or restrictions on use: Substances contained in this article are not subject to authorisation or restrictions under REACH regulation.

15.2 CHEMICAL SAFETY ASSESSMENT:

No Chemical Safety Assessment has been carried out (nor is required) for this article by the supplier. However, CSA has been conducted for some of the components: acetonitrile, carbon, N,N,N ,N -Tetrakis(2-Hydroxypropyl)ethylenediamine and aluminium

SECTION 16. OTHER INFORMATION

16.1 TEXT OF H-STATEMENTS MENTIONED IN SECTION 2:

Code	Hazard class and category	Code	Hazard statement
Flam. Liq. 2	Flammable liquid, category 2	H225;	Highly flammable liquid and vapour.
Acute Tox. 4	Acute toxicity, category 4	H302	Harmful if swallowed.
Acute Tox. 4	Acute toxicity, category 4	H312	Harmful in contact with skin.
Acute Tox. 4	Acute toxicity, category 4	H332	Harmful if inhaled.
Eye Irrit. 2	Eye Irritation, category 2	H319	Causes serious eye irritation.
Skin Irrit.2	Skin Irritation, category 2	H315	Causes skin irritation.
STOT SE 3	Organ toxicity – Single exposure, category 3	H335	May cause respiratory irritation.

16.2 CLASSIFICATION ACCORDING TO REGULATION (EC) NO 1272/2008 (CLP):

Not classified; CLP regulation is not applicable; product is an article.

16.3 LITERATURE REFERENCES AND SOURCES FOR DATA:

1. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008.
2. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 (Annex II).
3. Commission Regulation (EU) No 2015/ 830.
4. REACH registration dossier and chemical safety report of relevant components of the product – as available from ECHA.
5. Guidance on the compilation of safety data sheets. Version 2.2 ECHA (European Chemicals Agency), December 2014.
6. Guidance on application of classification criteria. Version 4.1 ECHA, June 2015

16.5 INFORMATION ON REVISION OF THE SAFETY DATA SHEET:

Revised points - none: This is the first version (ver 1.0) of an SDS for product SkelStart Engine Start Module (ESM).

16.6 LEGEND TO ABBREVIATIONS AND ACRONYMS:

CMR – Carcinogen, Mutagen, or Reproductive Toxicant

CSA – Chemical Safety Assessment

CSR – Chemical Safety Report

DNEL – Derived No Effect Level

LD50 – Lethal Dose to 50% of a test population (Median Lethal Dose)

NOAEL – No Observed Adverse Effect Level

PBT – Persistent, Bioaccumulative and Toxic substance

PNEC(s) – Predicted No Effect Concentration(s)

PPE – Personal Protection Equipment

RMM – Risk Mitigation Measures

STOT – Specific Target Organ Toxicity

(STOT) RE – Repeated Exposure

(STOT) SE – Single Exposure

vPvB – Very Persistent and Very Bioaccumulative