

## SAFETY DATA SHEET

**Electronic detonator  
Daveytronic®**

The safety data sheet is in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

**SECTION 1: Identification of the substance / mixture and of the company / undertaking**

Date issued 30.08.2018

**1.1. Product identifier**

Product name Electronic detonator Daveytronic®

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

Use of the substance / preparation Pyrotechnic initiation. Detonators for initiating commercial explosives.

Standard industrial classification (NACE) C20.5.1 - Manufacture of explosives

The chemical can be used by the general public No

**1.3. Details of the supplier of the safety data sheet****Importer**

Company name OY FORCIT AB

Postal address P.O.Box 19

Postcode 10901

City Hanko

Country Finland

Telephone number +358 (0)207 440 400

Email [forcit@forcit.fi](mailto:forcit@forcit.fi)

**1.4. Emergency telephone number**

Emergency telephone Telephone number: countrywise telephone number  
Description: National poison information center / National helpdesk

**SECTION 2: Hazards identification****2.1. Classification of substance or mixture**

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]

Expl. 1.1; H201

CLP classification, notes

Pyrotechnic item with excess pressure effect (shock wave).  
Without packaging electronic detonators are classified Expl. 1.1; H201 (Explosive; mass explosion hazard).

## 2.2. Label elements

### Hazard pictograms (CLP)



Signal word

Danger

Hazard statements

H201 Explosive; mass explosion hazard.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P250 Do not subject to grinding / shock / friction.  
P372 Explosion risk in case of fire.  
P401 Store at temperature between -40°C and +70°C.  
P501 Dispose of contents / container in accordance with regulations relating to explosives.

## 2.3. Other hazards

PBT / vPvB

For results of PBT and vPvB assessment, see point 12.5.

Other hazards

Not applicable: the pyrotechnic material is not accessible in normal use.

## SECTION 3: Composition / information on ingredients

### 3.2. Mixtures

Description of the mixture

Components used in the manufacturing of the detonators are:  
- primary explosives < 0,2 g  
- secondary explosives < 0,8 g.  
- a priming cap coated with a pyrotechnic paste.

The components are contained in a metallic shell and not directly in contact with the user.

A plastic plug is crimped on the open end of the casing used for passing the electrical wires through.

Pyrotechnical substance TNT mass equivalent : 1 g TNT / detonator

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

General

Protect yourself, notify emergency responders and take the victim to safety. For injuries

	due to splinters, provide first aid then request medical advice if necessary.
Inhalation	Not determined.
Skin contact	Not determined.
Eye contact	Not determined.
Ingestion	Not determined.

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

General symptoms and effects	Not determined.
Acute symptoms and effects	Not determined.
Delayed symptoms and effects	Symptoms after smoke inhalation do not necessarily appear immediately. Patients should therefore be kept under medical observation for at least 48 hours.

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

Other information	Treat symptomatically. In case of an explosion nearby, check hearing.
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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media None. DO NOT fight fire when fire reaches explosives.

#### 5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	Fight adjacent fire with all available means to prevent fire from reaching the product. Explosion risk in case of fire. Evacuate area. After the fire has been extinguished, the fire site may only be entered after ascertaining that the entire area has cooled completely.
Hazardous combustion products	Lead compounds. Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide (CO). Nitrogen oxides (NO <sub>x</sub> ).

#### 5.3. Advice for firefighters

Personal protective equipment	Wear appropriate protective equipment and self-contained breathing apparatus.
Other information	WARNING: The risk of explosion may remain latent even after the fire has stopped, depending on the condition of the products.

### SECTION 6: Accidental release measures

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

General measures	Isolate the area. Pyrotechnic materials spilled accidentally must be collected by authorised personnel in order to be disposed of and if necessary, destroyed (see waste handling, section 13). Avoid any impacts, frictions or anything that may lead to a spark or electrostatic discharge. Keep away from incompatible chemicals.
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In case of potentially or visibly damaged products, contact immediately the seller or the manufacturer to obtain the necessary information to handle those detonators.

## 6.2. Environmental precautions

Environmental precautionary measures Not determined.

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

Clean up Not determined.

## 6.4. Reference to other sections

Other instructions  
Fire-fighting, see Section 5.  
Personal protection, see Section 8.2.  
Waste disposal: see point 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Handling  
Handle with care, avoiding impacts, friction, and exposure to heat, open flame, electromagnetic radiation (including mobile phones), electrostatic charges, etc. No smoking.  
Any use not covered in the technical instructions or by untrained personnel is prohibited.  
Never handle / use damaged or partly damaged products (impacted by shock, high temperature etc.)

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

Storage  
Protect from moisture. Storage temperature: -40°C to +70°C. National regulations must be followed with handling and storage.

### 7.3. Specific end use(s)

Specific use(s) See Section 1.2

## SECTION 8: Exposure controls / personal protection

### 8.1. Control parameters

Other Information about threshold limit values  
No applicable exposure limit values.

### 8.2. Exposure controls

#### Safety signs



**Eye / face protection**

Suitable eye protection	Goggles/face shield are recommended.
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**Hand protection**

Skin- / hand protection, long term contact	Protective gloves are recommended.
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**Skin protection**

Suitable protective clothing	Not determined.
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**Respiratory protection**

Respiratory protection, comments	Do not breathe fumes after detonation.
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**Hygiene / environmental**

Personal protection equipment, comments	Hearing protection is recommended when close to a detonation.
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Specific hygiene measures	When using the product do not eat, drink or smoke. Wash hands always after work, before eating, drinking, smoking or going to the bathroom.
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**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	Solid.
Odour	Odourless.
Odour limit	Comments: Not determined.
pH	Status: In delivery state Comments: Not determined.
Melting point / melting range	Comments: Not determined.
Boiling point / boiling range	Comments: Not determined.
Flash point	Comments: Not determined.
Evaporation rate	Comments: Not determined.
Flammability (solid, gas)	Not determined.
Explosion limit	Comments: Not determined.
Vapour pressure	Comments: Not determined.
Vapour density	Comments: Not determined.
Specific gravity	Comments: Not determined.
Solubility	Comments: Not determined.
Partition coefficient: n-octanol/water	Comments: Not determined.
Spontaneous combustibility	Comments: Not determined.

Decomposition temperature	Comments: Not determined.
Viscosity	Comments: Not determined.
Explosive properties	Explosive
Oxidising properties	Not determined.

## 9.2. Other information

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Reactivity	Product is an explosive.
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#### 10.2. Chemical stability

Stability	Stable within the storage temperatures recommended in section 7 and within the item's usage limitations (expiration date).
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#### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not determined.
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#### 10.4. Conditions to avoid

Conditions to avoid	Avoid any exposure to high temperature, impact, friction, electrostatic discharge or stray currents.
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#### 10.5. Incompatible materials

Materials to avoid	Acids and alkalis.
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#### 10.6. Hazardous decomposition products

Hazardous decomposition products	Lead fumes and possibility of carbon monoxide and nitrogen oxide fumes. (NO <sub>x</sub> , CO)
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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Other toxicological data	There is no toxicological data available about the product as such. The product is not classified as acutely toxic.
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#### Other information regarding health hazards

Assessment of skin corrosion / irritation, classification	The product is not classified as irritant or corrosive to skin.
Assessment of eye damage or irritation, classification	The product is not classified as damaging or irritating to eyes.
General respiratory or skin sensitisation	The product is not classified as a respiratory or skin sensitiser.

Mutagenicity	The product is not classified as a mutagen.
Carcinogenicity, other information	The product is not classified as a carcinogen.
Reproductive toxicity	The product is not classified as toxic to reproduction.
Assessment of specific target organ SE, classification	The product is not classified as toxic to specific target organs at a single exposure.
Assessment of specific target organ toxicity RE, classification	The product is not classified as toxic to specific target organs through repeated exposure.
Assessment of aspiration hazard, classification	The product is not classified as an aspiration hazard.
Other adverse toxicological effects	Not determined.

## Symptoms of exposure

Other information	Object made to detonate.
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## SECTION 12: Ecological information

### 12.1. Toxicity

Ecotoxicity	Not classified as dangerous to the environment. However, the product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters.
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### 12.2. Persistence and degradability

Persistence and degradability, comments	Not determined.
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### 12.3. Bioaccumulative potential

Bioaccumulative potential	Not determined.
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### 12.4. Mobility in soil

Mobility	Not determined.
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### 12.5. Results of PBT and vPvB assessment

PBT assessment results	Not Classified as PBT/vPvB by current EU criteria.
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### 12.6. Other adverse effects

Other adverse effects, comments	Not known.
Environmental details, summary	The product is not classified as hazardous to the environment. However, do not allow product to reach ground water, water course or sewage system.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Specify the appropriate methods of disposal

Do not allow runoff to sewer, waterway or ground. Do not mix with normal waste. Explosives waste and explosives-tainted containers must be collected immediately and disposed by trained, authorised personnel. All materials contaminated by the product should also be handled as explosives waste. For more information, contact supplier or manufacturer.

EWC waste code

Classified as hazardous waste: Yes

## SECTION 14: Transport information

### 14.1. UN number

ADR / RID / ADN

0456

IMDG

0456

ICAO / IATA

0456

### 14.2. UN proper shipping name

ADR / RID / ADN

DETONATORS, ELECTRIC

IMDG

DETONATORS, ELECTRIC

ICAO / IATA

DETONATORS, ELECTRIC

### 14.3. Transport hazard class(es)

ADR / RID / ADN

1.4S

IMDG

1.4S

ICAO / IATA

1.4S

### 14.4. Packing group

Comments

Not determined.

### 14.5. Environmental hazards

Comments

The product is not classified as hazardous to the environment.

### 14.6. Special precautions for user

Special safety precautions for user

Not determined.

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

#### Additional information

Additional information

Not applicable.

#### IMDG / ICAO / IATA Other information

EmS

F-B, S-X



## SECTION 15: Regulatory information

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

### 15.2. Chemical safety assessment

Chemical safety assessment performed No

## SECTION 16: Other information

List of relevant H-phrases (Section 2 and 3) H201 Explosive; mass explosion hazard.

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS] Expl. 1.1; H201

CLP classification, notes The classification is based on test data in accordance with Regulation (EC) No 1272/2008 [CLP / GHS].

Training advice Training for handling and use of explosives and detonators.

Recommended restrictions on use Restricted to professional users.

Key literature references and sources for data Material safety data sheet from the product manufacturer. (19.9.2016)

Version 2

Comments The information in this MSDS is based on the present state of our knowledge. It does not represent any guarantee with regard to product properties or their suitability for particular uses. Because the use of this information and instructions or the conditions of use of the product is not at our control, it is the user's duty to specify the circumstances for the safe use of the product.