



## SAFETY DATA SHEET

# F-Cord 10, F-Cord 10T

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 16.11.2015

Revision date 19.12.2018

#### 1.1. Product identifier

Product name F-Cord 10, F-Cord 10T

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

Use of the substance / preparation Initiation device, detonating cord.

The chemical can be used by the general public No

#### 1.3. Details of the supplier of the safety data sheet

##### Manufacturer

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]

Unst. Expl.; H201;

Additional information on classification

Classification according to the PETN in the product.

## 2.2. Label elements

### Hazard pictograms (CLP)



Signal word

Danger

Hazard statements

H201 Explosive; mass explosion hazard.

Precautionary statements

P210 Keep away from heat / sparks / open flames / hot surfaces. – No smoking.  
 P250 Do not subject to grinding / shock / friction / .  
 P280 Wear protective gloves / protective clothing / eye protection / face protection.  
 P370 + P372 + P380 + P373 In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.

Other label information (CLP)

Explosives are labeled and packaged in accordance with the requirements for explosives only.

## 2.3. Other hazards

## SECTION 3: Composition / information on ingredients

### 3.1. Substances

Substance	Identification	Classification	Contents
Pentaerythritol tetranitrate	CAS No.: 78-11-5 EC No.: 201-084-3 Index No.: 603-035-00-5 REACH Reg. No.: 01-2119557827-23	Expl. 1.1; H201;	100 %
Remarks, substance	Pentaerythritol tetranitrate (penthrite, PETN)		
Substance comments	The detonating cord contains PETN 10 g/m.		

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

Inhalation

If experiencing respiratory symptoms: Remove victim to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties oxygen may be necessary. If breathing stops, provide artificial respiration. Get medical attention.

Skin contact

Immediately remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact

Immediately flush with plenty of water for up to 15 minutes. Remove any contact

	lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Bring these instructions.
Ingestion	Rinse mouth with water. Get immediate medical advice/attention.

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

Information for health personnel	Symptoms do not necessarily appear immediately. Patients should therefore be kept under medical observation for at least 48 hours.
Delayed symptoms and effects	If decomposition products are inhaled pulmonary oedema can occur.

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

Other information	Not determined.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	DO NOT fight fire when fire reaches explosives.
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### 5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	In case of fire, toxic gases may be formed (CO, CO <sub>2</sub> , NO <sub>x</sub> ). May explode when heated or when exposed to flames or sparks.
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### 5.3. Advice for firefighters

Other information	DO NOT fight fire when fire reaches explosives. In case of fire: Evacuate area. Fight adjacent fire with all available means to prevent fire from reaching the product.
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## SECTION 6: Accidental release measures

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

General measures	Eliminate all ignition sources if safe to do so.
Personal protection measures	Warn everybody of potential hazards and evacuate if necessary. Avoid contact with eyes and prolonged skin contact. Ventilate well. For personal protection, see section 8.

### 6.2. Environmental precautions

Environmental precautionary measures	Prevent spillage entering a watercourse or sewer, contaminating soil or vegetation. If this is not possible notify police and appropriate authorities immediately.
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### 6.3. Methods and material for containment and cleaning up

Cleaning method	Remove sources of ignition. Beware of the explosion danger. Collect spilled explosive mass with suitable non-sparking tools (made of wood or aluminum). Place into marked, sealable containers and dispose of as required by the authorities.
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Containment The end of unused detonating cord should be kept sealed.

## 6.4. Reference to other sections

Other instructions Firefighting, see section 5.  
Personal protective equipment, see section 8.2.  
Disposal of waste containing product residues, see section 13.1.

## Handling and storage

### 7.1. Precautions for safe handling

Handling Do not smoke or use open fire, or other sources of ignition. Protect against physical damage and/or friction. Use non sparking handtools and explosion-proof electric equipment.  
Observe good chemical hygiene practices. Eye wash facilities must be available when handling this product.  
To prevent spillage of PETN, the cord ends should be sealed with tape immediately after cutting.

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

Storage Store locked up. Store in tightly closed original container in a dry and cool place.  
Store in a dry place.  
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 Not determined.  
Other Information Not determined.

### 8.2. Exposure controls

#### Safety signs



#### Eye / face protection

Eye protection Goggles/face shield are recommended.

#### Hand protection

Hand protection Protective gloves are recommended.

**Skin protection**

Skin protection (except hands)

Wear appropriate clothing to prevent any possibility of skin contact. (Cotton.)

**Respiratory protection**

Respiratory protection

Under normal conditions of use respiration protection should not be required. In case of inadequate ventilation: Dust filter P2 (for fine dust).

**Hygiene / environmental**

Specific hygiene measures

Wash hands always after work, before eating, drinking, smoking or going to the bathroom. When using the product do not eat, drink or smoke.

**Appropriate environmental exposure control**

Environmental exposure controls

Avoid the product from entering drains, sewers, waterways and soil.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	A plastic coated cord with PETN powder core.
Colour	Coating: Yellow. Powder: White.
Odour	Odourless.
Odour limit	Comments: Not relevant.
pH	Status: In delivery state Comments: Not relevant.
Melting point / melting range	Value: 141,3 °C Comments: (PETN)
Boiling point / boiling range	Comments: Not relevant.
Flash point	Comments: Not relevant.
Evaporation rate	Comments: Not relevant.
Flammability (solid, gas)	Not determined.
Explosion limit	Comments: Not determined.
Vapour pressure	Comments: Not relevant.
Vapour density	Comments: Not relevant.
Specific gravity	Value: 1,77 kg/dm <sup>3</sup> Comments: (PETN) Temperature: 20 °C
Solubility description	Insoluble in water. Soluble in: Acetone.
Partition coefficient: n-octanol/ water	Comments: No data recorded.
Spontaneous combustibility	Value: ~ 200 °C Comments: (PETN)

Decomposition temperature	Value: ~ 140 °C Comments: In confinement.
Viscosity	Comments: Not determined.
Explosive properties	Explosive
Oxidising properties	Not determined.

## 9.2. Other information

### Other physical and chemical properties

Comments	Not determined.
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity	No dangerous reactions known under conditions of normal use.
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### 10.2. Chemical stability

Stability	Stable under normal temperature conditions and recommended use.
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### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None known under normal storage and handling conditions.
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### 10.4. Conditions to avoid

Conditions to avoid	Risk of explosion by shock, friction, fire or other sources of ignition. Take precautionary measures against static discharge.
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### 10.5. Incompatible materials

Materials to avoid	Strong oxidising substances. Strong reducing agents.
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### 10.6. Hazardous decomposition products

Hazardous decomposition products	During fire, toxic gases (CO, CO <sub>2</sub> , NO <sub>x</sub> ) are formed.
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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Substance	Pentaerythritol tetranitrate
Acute toxicity	<b>Effect tested:</b> LD50 <b>Route of exposure:</b> Oral <b>Value:</b> 1660 mg/kg <b>Animal test species:</b> Rat

### Other information regarding health hazards

General	PETN is an antihypertensive: it has a blood pressure-lowering effect.
Assessment of acute toxicity, classification	Not known.
Irritation	Not known.
Corrosivity	Not known.
Eye damage or irritation other information	May cause eye irritation.
General respiratory or skin sensitisation	Not known.
Carcinogenicity, other information	Not known.
Teratogenic properties	Not known.
Reproductive toxicity	Not known.
STOT-single exposure	Not known.
STOT-repeated exposure	Not known.
Aspiration hazard	Not known.

### Symptoms of exposure

Symptoms of overexposure	Headache. Hypotension (low blood pressure). Possibly: Skin irritation. Irritation of eyes and mucous membranes.
Other information	No data recorded.

## SECTION 12: Ecological information

### 12.1. Toxicity

### 12.2. Persistence and degradability

Persistence and degradability description	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 determined.
vPvB evaluation results	Not determined.

### 12.6. Other adverse effects

Other adverse effects, comments	No data recorded.
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## 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 only under the supervision of experts and in accordance with given regulations. Uncleaned empty containers are to be handled in the same way as the ones containing products.

Product classified as hazardous waste

Yes

## SECTION 14: Transport information

### 14.1. UN number

ADR / RID / ADN

0065

IMDG

0065

ICAO / IATA

0065

### 14.2. UN proper shipping name

ADR / RID / ADN

CORD, DETONATING

IMDG

CORD, DETONATING

ICAO / IATA

CORD, DETONATING

### 14.3. Transport hazard class(es)

ADR / RID / ADN

1.1D

IMDG

1.1D

ICAO / IATA

1.1D

Comments

Prohibited from air transport.

### 14.4. Packing group

Comments

Not determined.

### 14.5. Environmental hazards

Comments

Not determined.

### 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

#### 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

Comments For professional users only.

### 15.2. Chemical safety assessment

CSR required No

## SECTION 16: Other information

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

Key literature references and sources for data REACH Directive (EC) 1907/2006  
CLP Regulation (EC) 1272/2008  
Material Safety Data Sheets on raw materials

Information added, deleted or revised Change to Sections: 2.

Last update date 19.12.2018

Version 4

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.