

**SAFETY DATA SHEET****Forprime**

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 15.05.2015

Revision date 11.07.2018

**1.1. Product identifier**

Product name Forprime

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

Use of the substance / preparation Booster

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]	Expl. 1.1; H201 Acute tox. 3; H301  STOT SE 1; H370  STOT RE 2; H373
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## 2.2. Label elements

### Hazard pictograms (CLP)



Signal word	Danger
Hazard statements	H201 Explosive; mass explosion hazard. H301 Toxic if swallowed. H370 Causes damage to organs (central nervous system by oral exposure). H373 May cause damage to organs (central nervous system) through prolonged or repeated exposure (oral).
Precautionary statements	P210 Keep away from heat / sparks / open flames / hot surfaces. – No smoking. P250 Do not subject to grinding/shock/friction. P370+P380 In case of fire: Evacuate area. P372 Explosion risk in case of fire. P373 DO NOT fight fire when fire reaches explosives. P281 Use personal protective equipment as required.
Other label information (CLP)	Explosives are labeled and packaged in accordance with the requirements for explosives only.

## 2.3. Other hazards

Other hazards	No data recorded.
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## SECTION 3: Composition / information on ingredients

### 3.2. Mixtures

Substance	Identification	Classification	Contents
RDX (Hexogen)	CAS No.: 121-82-4 EC No.: 204-500-1 REACH Reg. No.: 01-2119990795-17-0002	Expl. 1.1; H201 Acute tox. 3; H301 STOT SE1; H370 STOT RE2; H373	65 - 85 %
Distillates (petroleum) , hydrotreated heavy naphthenic	CAS No.: 64742-52-5 EC No.: 265-155-0 REACH Reg. No.: 01-2119467170-45-0002		9 - 20 %
Ethylene dinitrate	CAS No.: 628-96-6 EC No.: 211-063-0 Index No.: 603-032-00-9	Unst. expl.; H200 Acute tox. 1; H310 Acute tox. 2; H330 Acute tox. 2; H300 STOT RE2; H373	0,2 %

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

Inhalation	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. IF exposed or concerned: Get medical advice/attention.
Skin contact	Remove contaminated clothes and rinse skin thoroughly with water and soap. If skin irritation occurs: Get medical advice/attention.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Contact physician if discomfort continues.
Ingestion	Rinse mouth thoroughly. Drink a few glasses of water or milk. 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.
General symptoms and effects	Not determined.
Acute symptoms and effects	Ingestion of RDX can cause convulsions similar to epileptic seizures, and should be treated as such.

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

Medical treatment	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. Explosion risk in case of fire.

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

Fire and explosion hazards	When heated and in case of fire, toxic vapours/gases may be formed. May explode when heated or when exposed to flames or sparks.
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### 5.3. Advice for firefighters

Fire fighting procedures	Fight adjacent fire with all available means to prevent fire from reaching the product. DO NOT fight fire when fire reaches explosives. Leave danger zone immediately.
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## SECTION 6: Accidental release measures

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

Personal protection measures	Avoid contact with skin and eyes. For personal protection, see section 8.
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### 6.2. Environmental precautions

Environmental precautionary measures Do not discharge into drains, water courses or onto the ground.

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

Cleaning method

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.

### 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.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Handling

Risk of explosion by shock, friction or other sources of ignition. Use non sparking handtools and explosion-proof electric equipment. Do not smoke or use open fire, or other sources of ignition. Provide good ventilation.

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

Storage

Store locked up. Store in a dry place. Keep cool. Protect from sunlight. The recommended storage temperature: <25 °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

Substance	Identification	Value	TWA Year
Ethylene dinitrate	CAS No.: 628-96-6	TWA (8h) : 0,03 ppm TWA (8h) : 0,2 mg/m3 <b>OEL short term value</b> Value: 0,1 ppm <b>OEL short term value</b> Value: 0,6 mg/m3	TWA Year: 2011

### 8.2. Exposure controls

#### Safety signs



#### Eye / face protection

Eye protection Goggles/face shield are recommended.

## Hand protection

Hand protection Use suitable protective gloves if risk of skin contact.

Suitable materials No recommendation given.

## Skin protection

Skin protection (except hands) Wear appropriate clothing to prevent any possibility of skin contact.

## Respiratory protection

Respiratory protection Respiratory protection not required.

## Hygiene / environmental

Specific hygiene measures Wash hands always after work, before eating, drinking, smoking or going to the bathroom.

## 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	Mass in plastic cartridge.
Colour	Orange.
Odour	Odourless.
Odour limit	Comments: Not relevant.
pH	Status: In delivery state Comments: Not relevant.
Melting point / melting range	Value: 190 °C Comments: (RDX)
Boiling point / boiling range	Comments: Not relevant.
Flash point	Comments: Not relevant.
Evaporation rate	Comments: Not determined.
Flammability (solid, gas)	Not determined.
Vapour pressure	Comments: Not relevant.
Vapour density	Comments: Not relevant.
Specific gravity	Value: 1,40 - 1,45 kg/dm <sup>3</sup>
Solubility description	The mixture is almost insoluble.
Partition coefficient: n-octanol/water	Comments: RDX: Log Pow: 0,87

Spontaneous combustability	Comments: Not determined.
Decomposition temperature	Value: $\geq 190 - 200$ °C
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 the prescribed storage conditions.
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### 10.3. Possibility of hazardous reactions

Possibility of hazardous re- actions	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.
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### 10.5. Incompatible materials

Materials to avoid	Avoid contact with oxidising agents. Risk of explosion.
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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	RDX (Hexogen)
Acute toxicity	<b>Type of toxicity:</b> Acute <b>Effect tested:</b> LD50 <b>Route of exposure:</b> Oral <b>Value:</b> 71 mg/kg <b>Animal test species:</b> Rat
Substance	Distillates (petroleum), hydrotreated heavy naphthenic

Acute toxicity	<b>Type of toxicity:</b> Acute
	<b>Effect tested:</b> LD50
	<b>Route of exposure:</b> Oral
	<b>Value:</b> > 5000 mg/kg
	<b>Animal test species:</b> Rat
	<b>Type of toxicity:</b> Acute
	<b>Effect tested:</b> LD50
	<b>Route of exposure:</b> Dermal
	<b>Value:</b> > 2000 mg/kg
	<b>Animal test species:</b> Rabbit
	<b>Type of toxicity:</b> Acute
	<b>Effect tested:</b> LC50
	<b>Route of exposure:</b> Inhalation.
	<b>Duration:</b> 4 h
	<b>Value:</b> > 5,53 mg/l
	<b>Animal test species:</b> Rat

Substance

Ethylene dinitrate

Acute toxicity

**Type of toxicity:** Acute  
**Effect tested:** LD50  
**Route of exposure:** Oral  
**Value:** 460 mg/kg  
**Animal test species:** Rat

**Type of toxicity:** Acute  
**Effect tested:** LD50  
**Route of exposure:** Dermal  
**Value:** 3800 mg/kg  
**Animal test species:** Rat

## Other information regarding health hazards

General	The toxicological information applies to the uncartridged product mass.
Irritation	Based on available data, the classification criteria are not met.
Corrosivity	Not known.
Sensitisation	Based on available data, the classification criteria are not met.
Carcinogenicity, other information	Based on available data, the classification criteria are not met.
Teratogenic properties	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
Assessment of specific target organ toxicity RE, classification	May cause damage to organs (central nervous system) through prolonged or repeated exposure (oral).
Other adverse toxicological effects	Not determined.

## SECTION 12: Ecological information

### 12.1. Toxicity

Substance	RDX (Hexogen)
Acute aquatic, fish	<b>Value:</b> 11,1 - 15,0 mg/l <b>Test duration:</b> 96 h <b>Species:</b> Pimephales promelas <b>Method:</b> LC50
Substance	Distillates (petroleum), hydrotreated heavy naphthenic
Acute aquatic, fish	<b>Value:</b> > 100 mg/l <b>Test duration:</b> 96 h <b>Method:</b> EC50
Substance	Ethylene dinitrate
Acute aquatic, fish	<b>Value:</b> 1,9 - 3,58 mg/l <b>Test duration:</b> 96 h <b>Method:</b> LC50
Substance	Distillates (petroleum), hydrotreated heavy naphthenic
Acute aquatic, algae	<b>Value:</b> > 100 mg/l <b>Test duration:</b> 48 h <b>Method:</b> IC50
Substance	Ethylene dinitrate
Acute aquatic, algae	<b>Value:</b> 100 mg/l <b>Test duration:</b> 72 h <b>Species:</b> Desmodesmus subspicatus <b>Method:</b> EC50
Substance	Ethylene dinitrate
Acute aquatic, Daphnia	<b>Value:</b> > 100 mg/l <b>Test duration:</b> 48 h <b>Species:</b> Daphnia magna <b>Method:</b> EC50
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.

## 12.2. Persistence and degradability

Persistence and degradability, comments	RDX: Decomposes by photolysis, half-life 3-13 hours.
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## 12.3. Bioaccumulative potential

Bioaccumulative potential	The product contains potentially bioaccumulating substances.
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## 12.4. Mobility in soil

Mobility	Not considered mobile.
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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.

## 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 0042

IMDG 0042

ICAO / IATA 0042

### 14.2. UN proper shipping name

ADR / RID / ADN BOOSTERS

IMDG BOOSTERS

ICAO / IATA BOOSTERS

### 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)

H200 Unstable explosives.  
 H201 Explosive; mass explosion hazard.  
 H300 Fatal if swallowed.  
 H301 Toxic if swallowed.  
 H310 Fatal in contact with skin.  
 H330 Fatal if inhaled.  
 H370 Causes damage to organs  
 H373 May cause damage to organs through prolonged or repeated exposure

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

Expl. 1.1; H201  
 Acute tox. 3; H301  
 STOT SE 1; H370  
 STOT RE 2; H373

Key literature references and sources for data

REACH Directive (EC) 1907/2006  
 CLP Regulation (EC) 1272/2008  
 Material Safety Data Sheets on raw materials

Version 3

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.