SAFETY DATA SHEET
Forprime 1700

SDS according to Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex II-EU

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

Date issued	27.08.2015

1.1. Product identifier

Product name	Forprime 1700
REACH Reg. No., Comments	The product is a mixture.

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

Use of the substance/preparation	Explosive for civil use
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
Tel	+358 (0)207 440 400
E-mail	forcit@forcit.fi

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of substance or mixture

Classification according to 67/548/EEC or 1999/45/EC	E; R2 T+; R26/27/28 Xn; R33 Xi; R36
Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]	Expl. 1.1;H201; Acute tox. 1;H310; Acute tox. 2;H330; Acute tox. 2;H300; Eye Irrit. 2;H319; STOT RE2;H373;
Additional information on classification	The classification is for uncartridged product mass.

2.2. Label elements

Hazard Pictograms (CLP)

Signal word	Danger
Hazard statements	H201 Explosive; mass explosion hazard. H300 Fatal if swallowed. H310 Fatal in contact with skin. H330 Fatal if inhaled. H319 Causes serious eye irritation. H373 May cause damage to organs through prolonged or repeated exposure.
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. P370 + P380 In case of fire: Evacuate area. P372 Explosion risk in case of fire. P373 DO NOT fight fire when fire reaches explosives. P401 Store in accordance with national regulations.
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.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents
Ammonium Nitrate	CAS no.: 6484-52-2 EC no.: 229-347-8 Registration number: 01-2119490981-27-0004	O; R8 Xi; R36 Ox. Sol. 3;H272; Eye Irrit. 2;H319;	50 - 60 %
Ethylene dinitrate	CAS no.: 628-96-6 EC no.: 211-063-0 Index no.: 603-032-00-9	E; R3 T+; R26/27/28 R33 Unst. expl.;H200; Acute tox. 1;H310; Acute tox. 2;H330; Acute tox. 2;H300; STOT RE2;H373;	30 - 35 %
Nitrocellulose (with at least 25 % water)		F; R11	< 2 %

Substance comments	The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

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. Perform artificial respiration if breathing has stopped. 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. 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	Not determined.

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

Medical treatment	Not determined.

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.

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.

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.

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	Protect against physical damage and/or friction. 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. 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

Occupational Exposure limit values

Substance	Identification	Value	TWA Year
Ethylene dinitrate	CAS no.: 628-96-6 EC no.: 211-063-0 Index no.: 603-032-00-9	8-hour TWA: 0,03 ppm 8-hour TWA: 0,2 mg/m3 15 min.: 0,1 ppm 15 min.: 0,6 mg/m3	2011

8.2. Exposure controls

Safety signs

Respiratory protection

Respiratory protection	In case of inadequate ventilation: Use respiratory equipment with gas filter, type A2.

Hand protection

Hand protection	Chemical resistant gloves required for prolonged or repeated contact.
Suitable materials	Gloves of nitrile rubber, PVA or Viton are recommended.

Eye / face protection

Eye protection	Goggles/face shield are recommended.

Skin protection

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

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	Plastic mass in plastic casing.
Colour	Grey. Casing: Pink.
Odour	Odourless.
Comments, Odour limit	Not relevant.
Comments, pH (as supplied)	Not relevant.
Comments, Melting point / melting range	Not relevant.
Comments, Boiling point / boiling range	Not relevant.
Comments, Flash point	Not relevant.
Comments, Evaporation rate	Not determined.
Flammability (solid, gas)	Not determined.
Comments, Vapour pressure	Not relevant.
Comments, Vapour density	Not relevant.
Specific gravity	Value: 1,45-1,55 kg/dm3
Solubility description	The mixture is almost insoluble. Ammonium nitrate as such is very soluble in water.
Solubility in fat	Ethylene dinitrate is soluble.
Comments, Partition coefficient: n-octanol / water	Ammonium nitrate: <1 Ethylene dinitrate: Log Kow: 1,16 (20 °C)

Comments, Spontaneous combustability	Not determined.
Decomposition temperature	Value: ≥ 160 °C Method of testing: BAM
Comments, Viscosity	Not determined.
Explosive properties	Explosive
Oxidising properties	Ammonium nitrate: oxidizing Ethylene dinitrate: oxidizing

9.2. Other information

Other physical and chemical properties

Comments	Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No dangerous reactions known under conditions of normal use.

10.2. Chemical stability

Stability	Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None known under normal storage and handling conditions.

10.4. Conditions to avoid

Conditions to avoid	Risk of explosion by shock, friction, fire or other sources of ignition.

10.5. Incompatible materials

Materials to avoid	Strong alkalis. Strong acids. Reducing agents and organic materials. Do not let foreign materials get mixed in the product.

10.6. Hazardous decomposition products

Hazardous decomposition products	During fire, toxic gases (CO, CO2, NOx, NH3) are formed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological data for substances

Substance	Ammonium Nitrate
LD50 oral	Value: 2950 mg/kg Animal test species: Rat Test reference: IUCLID 5
LD50 dermal	Value: > 5000 mg/kg Animal test species: Rat Test reference: IUCLID 5
Substance	Ethylene dinitrate
LD50 oral	Value: 460 mg/kg Animal test species: Rat
LD50 dermal	Value: 3800 mg/kg Animal test species: Rat

Other information regarding health hazards

General	The toxicological information applies to the uncartridged product mass.

Potential acute effects

Irritation	Slightly irritating to the skin.
Corrosivity	Not known.

Delayed effects / repeated exposure

Sensitisation	Not known.
Repeated dose toxicity	Ethylene dinitrate: Oral, NOAEL: 3,04 mg/kg bw/d (chronic, rat)

Dermal, LOAEL: 15 mg/kg bw/d (chronic, rabbit)

Carcinogenic, Mutagenic or Reprotoxic

Carcinogenicity	Not known.
Teratogenic properties	No data recorded.
Reproductive toxicity	No data recorded.
Other adverse Toxicological effects	Not determined.

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.

Toxicological data for substances

Substance	Ammonium Nitrate
Acute aquatic, fish	Value: 447 mg/l Method of testing: LC50 Duration: 48 h Test reference: IUCLID 5
Acute aquatic, algae	Value: 1700 mg/l Method of testing: EC50 Duration: 10 d Test reference: IUCLID 5
Acute aquatic, Daphnia	Value: 490 mg/l Method of testing: EC50 Duration: 48 h Test reference: IUCLID 5
Substance	Ethylene dinitrate
Acute aquatic, fish	Value: 1,9-3,58 mg/l Method of testing: LC50 Duration: 96 h
Acute aquatic, algae	Value: 100 mg/l Method of testing: EC50 Species: Desmodesmus subspicatus Duration: 72 h
Acute aquatic, Daphnia	Value: > 100 mg/l Method of testing: EC50 Species: Daphnia magna Duration: 48 h

12.2. Persistence and degradability

Persistence and degradability	Ammonium nitrate: biodegradable Ethylene dinitrate: slowly biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential	Will not bio-accumulate.

12.4. Mobility in soil

Mobility	The product contains substances, which are water soluble and may spread in water systems.

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 / Remarks	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	0042
RID	0042
IMDG	0042
ICAO/IATA	0042

14.2. UN proper shipping name

ADR	BOOSTERS
RID	BOOSTERS
IMDG	BOOSTERS
ICAO/IATA	BOOSTERS

14.3. Transport hazard class(es)

ADR	1.1D
RID	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

EmS	F-B, S-X
Special safety precautions for user	Not determined.

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

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

Hazard symbol

R-phrases	R2 Risk of explosion by shock, friction, fire or other sources of ignition. R26/27/28 Very toxic by inhalation, in contact with skin and if swallowed. R33 Danger of cumulative effects. R36 Irritating to eyes.
S-phrases	S16 Keep away from sources of ignition - No smoking. S33 Take precautionary measures against static discharges. S35 This material and its container must be disposed of in a safe way. S36/37 Wear suitable protective clothing and gloves. S41 In case of fire and/or explosion do not breathe fumes. S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.
Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]	Expl. 1.1; H201; Acute tox. 2; H300; Acute tox. 1; H310; Eye Irrit. 2; H319; Acute tox. 2; H330; STOT RE2; H373;
List of relevant R-phrases (under headings 2 and 3).	R33 Danger of cumulative effects. R36 Irritating to eyes. R3 Extreme risk of explosion by shock, friction, fire or othersources of ignition. R11 Highly flammable. R8 Contact with combustible material may cause fire. R26/27/28 Very toxic by inhalation, in contact with skin and if swallowed. R2 Risk of explosion by shock, friction, fire or other sources of ignition.
List of relevant H-phrases (Section 2 and 3).	H330 Fatal if inhaled. H300 Fatal if swallowed. H373 May cause damage to organs through prolonged or repeated exposure H310 Fatal in contact with skin. H272 May intensify fire; oxidiser. H201 Explosive; mass explosion hazard. H200 Unstable explosives. H319 Causes serious eye irritation.
Important data sources used to construct the safety data sheet	REACH Directive (EC) 1907/2006 CLP Regulation (EC) 1272/2008 Material Safety Data Sheets on raw materials Chemical Safety Report for Ethylene dinitrate.
Information which has been added, deleted or revised	Change to Sections: Section 14, UN number.
Version	2
Responsible for safety data sheet	OY FORCIT AB
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.