



FORPRIME 1700

Product Information June 01, 2016

1. Description of the product and its use

Forprime 1700 is a charge manufactured by Forcit, Hanko plant. It contains nitroglycol and ammonium nitrate. It is suitable for blasting as ignition of Anfo and emulsion explosives in open mines with large drilling holes (> 70 mm). The product is filled in a propylene cartridge, which is easy to carry, and the pink colour can be seen from long distances. Forprime 1700 works in cold temperatures and under water down to 50 meter deep.

2. Packages

Name	Ø /mm	length / mm	explosive / cartridge g	cartridges / case	case / netto kg
Forprime 1700	69	370	ca. 1500	12	18

Transport classification	Forprime 1700
RID/ADR	1.1D Boosters, without detonator
IMDG	1.1 D
UN number	0042
Hazard class	1.1

3. Technical features

Product	Forprime 1700	
Specifications		
Appearance	Paste-powder	
Density	kg/dm ³	1,50 ± 10 %
Velocity of detonation	m/s	6000 ± 10 %
Transmission	cm	≥ 2
Typical and calculated values		
Density	kg/dm ³	1,50
Velocity of detonation	m/s	6000
Transmission	cm	3 – 8 (Ø 25 mm)
Oxygen balance	%	+ 2,20
Gas volume*	dm ³ /kg	830
Explosion heat*	MJ/kg	4,30
Weight strength*	S	1,08 (ANFO 1,00)
Operational temperature in cold	°C	- 30
Operational depth in water	m	50
Initiation method	Strength according to EN 13763-15 #3 detonator at least	

* Cheetah 2,0 (NTP), teoretical

4. Main raw materials and their hazard classes

Raw material	Hazard class
Ammonium nitrate	Ox. Sol. 3; H272 Eye Irrit. 2; H319
Nitroglycol (etyleneglycol dinitrate)	Unst. expl.; H200 Acute tox. 1; H310/Acute tox. 2; H330/Acute tox. 2; H300 STOT RE2; H373
Nitrocellulose	Flam. Sol. H228

5. Storage and weather tolerance

When stored dry and cool, the shelf life of Forprime 1700 is guaranteed for 2 years if it is handled and stored according to instructions. In humid and warm (> 25 °C) storage conditions the shelf life shortens. With aging and exposure to frost, the mass hardens somewhat and the velocity of detonation may slowly decrease. The products are stored in accordance with valid legislation.

Forprime has good frost resistance and its water resistance is excellent down to 50 m depth.

6. Handling safety

Forprime 1700 is a CE approved product, which has been found to fulfil the essential safety requirements of the EU decree. The testing has been performed by the notified inspection body for civil explosives, the Finnish Defence Forces Research Institute of Technology (O812). The product must fulfil, for example, the following minimum requirements describing handling safety:

Test	Requirement
Shock sensitivity (BAM)	≥ 2 J
Abrasion sensitivity (Julius Peters)	≥ 80 N
Thermal stability	75°C, 48 h (no reaction)

Skin contact should be avoided by using protective gloves. Any explosive substance on the skin must be removed and the area washed with water and soap. In case the substance gets into the eyes, rinse with lots of water. Contact a doctor if irritation persists. Overalls and other work clothes with dried explosive material on them may ignite and burn. Explosive substance that gets on work clothes is removed mechanically, after which the work clothes are washed normally in water.

7. Environmental impact

The water resistance of Forprime 1700 is good. Unexploded explosive agent, however, dissolves ammonium nitrate gradually into water. Nitroglycol does not dissolve into water and it degrades very slowly in nature. Nitrate has a eutrophic effect on the water system and it soils the ground water.

Careful and clean charging helps to minimize harmful environmental effects. Also, the quantity of harmful combustion gases (CO, NO_x) generated by the explosion can be reduced by correct use of the products.

As a general rule, the generation of gases in the explosion depends on the oxygen balance and on how complete the explosion is. In ideal conditions, in which the oxygen balance is zero and the explosion is complete, the main explosion products are carbon dioxide, water vapour and nitrogen gas. The more positive the oxygen balance is the more NO_x gases are generated in proportion to carbon monoxide. In an open space, these gases dissipate quickly. When blasting in a confined space, underground, in an excavation or other location in which toxic or harmful explosion gases may accumulate, one should not enter the blast site until the explosion gases have dissipated (for example by ventilation) enough to no longer pose a health hazard.

8. Operating instructions

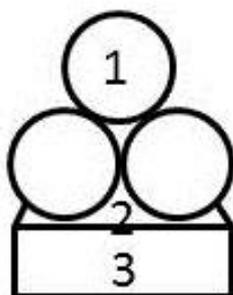
Forprime 1700 is a booster charge for blasting open mines with emulsion explosives and Anfos. The detonator is easy to insert in a hole located in the lid. The Shock tube is drawn along the groove to the locking hanger, which is in central position. High density of cartridge and mass helps the booster take the right position in the blasting hole.



If the package is opened and it is not used at once, the products exposure to moisture can be avoided for example by a plastic bag. Ammonium nitrate is hygroscopic, which means that it can absorb moisture from the air in humid conditions.

9. Disposal

Forprime 1700 that is doubted not to function must be disposed. The charger or senior charger is allowed to dispose small quantities of explosive material. Disposal is done by burning with accessory fuels. The maximum quantity to be burnt is 5 kg in one batch and as a layer of maximum 5 cm. The burning shall be done at a minimum of 100 metres from a public road or inhabited building.



1. Maximum 5 kg and as a maximum 5 cm thick layer.
2. Wood cotton or other equivalent burnable product
3. Wooden base (for example 50 x 100 plank)

Fuel oil is applied to the explosives and burnable accessory fuels and they are lit on the side from which the wind is blowing. Igniting the fire can be done using a one-meter-long stick with a wood cotton tip doused in fuel oil.

ForcIT accepts aged explosives for disposal. No compensation is paid for returned explosives and the cost of disposal is agreed separately case by case.

Explosives shipped to ForcIT for disposal must have the appropriate denotations. Contact customer care or technical services before shipping the product.

10. Reclamation instructions

If the product has detectable defects or it does not function in the expected manner, the following data shall immediately be given to ForcIT customer care or technical services:

- Product name, size and manufacturing date marked on the package
- Product or package appearance
- Description of the product's abnormality
- Operating circumstances in the blast site

Defective products are delivered to the nearest ForcIT service station from which they are delivered to the manufacturing plant for further examination. Returned products must be accompanied with a filled out ForcIT product return form, which you can print out on our website (<http://www.forcit.fi/forcit-explosives>, menu products). Contact customer care or technical services before returning the product.