

1. Identification of the substance/ preparation and of the company / undertaking

Trade name: Aniitti
Use of the preparation: Explosive for civil use.
Manufacturer: OY FORCIT AB
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2. Hazards identification

Classification of mixture: E; R2; X_n; R20/21/22; R33; R52/53

Hazards: Risk of explosion by shock, friction, fire or other sources of ignition. Penetrates easily through skin. Toxic by inhalation, if swallowed and in contact with skin. Small doses by inhalation or through skin cause irritation of the mucous membranes and coughing. Higher doses cause headache, loss of appetite, indisposition, sickness, dizziness, fall of blood pressure and unconsciousness. Danger of cumulative effects. Can irritate skin and with longer and repeated contact cause eczema and yellowish colouring of the skin. Waste from production or handling can contaminate sewage system. Information about toxicity is mainly relevant for product without a cartridge.

3. Composition and information on ingredients

Definition: Solid, powder explosive.
Hazardous ingredients: TNT, (trinitrotoluene), ammonium nitrate.

Name of ingredient:	Content :	CAS-#:	Code letters; R-phrases:
TNT	<12 %	118-976-7	E, T, N;R2-23/24/25-33-51/53
Ammoniumnitrate	82 %	6484-52-2	O; R5-9

4. First aid measures

Inhalation:	Medical help necessary in case of symptoms, e.g. irritation of the respiratory tract, which are directly related to the inhalation of dust, vapours or combustion gases. Bring victim to fresh air as quickly as possible, and contact a doctor. If the person is unconscious hold and transport in side position. Give oxygen if necessary. If breathing stops apply artificial respiration. Symptoms do not necessarily appear immediately in persons who have inhaled combustion gases. Patients should be kept under medical observation for at least 48h.
Skin:	Take off contaminated clothes and shoes. Wash the skin with soap and water.
Eyes:	Rinse with plenty of water, consult a doctor if necessary.
Ingestion:	Give a few glasses of water, if the injured person is fully conscious, and induce vomiting. Call for a doctor.

5. Fire fighting measures

General:	Fight adjacent fire with all available means to prevent fire from reaching the product. If fire is about to reach the product or the product is burning: Do not try to extinguish, risk of explosion. Immediately evacuate danger zone and warn neighborhood announcing risk of explosion.
Special exposure hazards in a fire:	In case of fire or heat toxic/harmful gases, vapours and pyrolysis products may be formed of the substance, e.g. nitrogen oxides (nitrous gases), Carbon monoxide and Ammonia. Explosion hazard. Danger of toxic lung oedema formation.

6. Accidental release measures

Personal precautions:	Avoid skin contact with the uncartridged preparation. Make sure there is adequate ventilation, or use a respiratory protection mask if necessary.
Environmental precautions:	Prevent substance from soaking into soil, waters and drains.
Methods for cleaning up:	Collect scattered cartridges by hand, spilled explosive mass with suitable non-sparking tools. Fill into marked sealable containers; dispose of as required by the authorities.

7. Handling and storage

Handling:	Ensure that the room is well ventilated. Keep away from heat and ignition sources. Do not smoke. Avoid mechanical stress and use non-sparking tools.
Storage:	Keep articles dry, cool and locked up.
Special measures:	National regulations must be followed with handling and storage.

8. Exposure controls / personal protection

Limit values for occupational safety:	TNT HTP values: 8 hours 0,1 mg/m ³ 15 min 0,2 mg/m ³
Protection from exposure:	If exceeding of air limit values cannot be avoided use a respiratory protection mask with gas filter A and dust filter P2. The use of gloves and protective goggles is not necessary if substance is cartridged or packed. Always wash hands before breaks and at the end of work.

9. Physical and chemical properties

Physical state:	Solid powder
Colour:	Light yellowish
Odor:	None
Melting point:	77,7 - 78 °C (TNT) 165 - 170 °C (ammoniunitrate)
Thermal decomposition:	> 200 °C (BAM)
Risk of explosion:	Strong shock, friction or heating, especially >200 °C, in a non-open space.
Relative density:	1 g/cm ³ (20 °C)
Solubility:	Water-solubility: ammoniumnitrate is soluble; Fat-solubility: benzene, acetone

10. Stability and reactivity

Conditions to avoid:	Risk of explosion by shock, friction, fire or other sources of ignition.
Materials to avoid:	Acids and bases, do not let foreign materials get mixed in the product.
Hazardous decomposition products:	In a fire or if heated above 200 °C, carbon monoxide, nitrogen oxides (nitrous gases), ammonia.

11. Toxicological information

Acute toxicity:	LD ₅₀ oral, rat: 795 mg/kg LD ₁₀ oral, human: 28 g/kg LD ₁₀ oral, rat: 5376 mg/kg Skin, rabbit, adult: 500 mg/24 h MLD
Empirical data on effects on humans:	Inhalation or extreme skin contact may cause undefined common feeling of discomfort, headache and feeling of weakness. A prolonged contact with the product may cause blood defects (anaemia, methaemoglobinemia) and abnormal liver function. Risk for eye cataract (lenticular cloudiness). Repeated and prolonged contact with skin may cause dermatitis.

12. Ecological information

Ecotoxicity:	Toxic to aquatic systems. May cause long term adverse effects in the aquatic environment. Fish: LC ₅₀ (96h) 0,46-2,58 mg/l. Daphnia Magna: LC ₀ 6 mg/l, LC ₅₀ 15 mg/l, LC ₁₀₀ 39 mg/l. Marine pollutant
Mobility:	Water-soluble nitrates may drift to groundwater and reduce their quality.
Degradability:	Ammonium nitrate decomposes completely in nature. TNT decomposes mainly through photolysis. Very stable to environmental, biological and chemical attack. BOD ₇ 0,52 g/g, COD 1,23 g/g. BOD ₇ /COD 0,42
Bioaccumulation:	Bioaccumulative potential log K _{ow} = 2,02. (TNT)

13. Disposal considerations

Disposal: Waste and explosive tainted containers must be disposed of only in accordance with national regulations. Uncleaned empty containers are to be handled in the same way as the ones containing the products.

14. Transport information

UN - number: 0082

Packaging group: None

Packaging code: P116

ADR/RID - class: 1

Classification code: 1.1D

Proper shipping name: Explosive, blasting, type B (Aniitti)

IMDG - class: 1.1D

EMS - number: F-B, S-Y

ICAO/IATA - class: Air transport prohibited

15. Regulatory information

Labeling: The package is labeled as required by the Finnish Ministry of Communications.

Other regulations: Products should be handled only by authorized persons and according to the specific national regulations for handling explosives.

16. Other information

R-phrases:

R2: Risk of explosion by shock, friction, fire or other sources of ignition

R5: Heating may cause an explosion.

R9: Explosive when mixed with combustible material

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed

R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.

R33: Danger of cumulative effects.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information on usage:

If the product is used for purposes other than specified in the product information sheet, its suitability must be checked from the technical customer support of OY Forcit AB.

Further information:

Technical product information sheet is available from OY Forcit AB.

(other additional information www.forcit.fi)

The information contained 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 are not at our control, it is the users duty to specify the circumstances for the safe use of the product.