



SAFETY DATA SHEET

Offshore Kemiitti

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 28.04.2015

1.1. Product identifier

Product name Offshore Kemiitti
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
Xi; R36
Classification according to Regulation (EC) No 1272/2008 [CLP/GHS] Expl. 1.1;H201;
Eye Irrit. 2;H319;

2.2. Label elements

Hazard Pictograms (CLP)



Signal word Danger
Hazard statements H201 Explosive; mass explosion hazard.
H319 Causes serious eye irritation.
Precautionary statements P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P250 Do not subject to grinding/shock/friction.

	P281 Use personal protective equipment as required.
	P370 + P380 In case of fire: Evacuate area.
	P372 Explosion risk in case of fire.
	P373 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

Other hazards	Not known.
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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;	60 - 75 %
Aluminium powder (stabilised)	CAS no.: 7429-90-5 EC no.: 231-072-3 Registration number: 01-2119529243-45-0044	Classification notes: Substance is not classified. Note T. Tests and classification according to UN Recommendations of the Transport of Dangerous Goods, Manual of Tests and Criteria, part III, sub section 33.2.1 and 33.4.1.	4 - 14 %
Lubricating oils (petroleum), C20-C50, hydrotreated neutral oilbased	CAS no.: 72623-87-1 EC no.: 276-738-4 Registration number: 01-2119474889-13-0000	Asp. tox 1;H304; Classification notes CLP: Contains DMSO extract less than 3 %	1 - 6 %
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. IF exposed or concerned: Get medical advice/attention.
Skin contact	Wash skin with soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Promptly wash eyes with plenty of water while lifting the eye lids. Get medical advice/attention.
Ingestion	Immediately rinse mouth and drink plenty of water (200-300 ml). Get medical 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.
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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 May explode when heated or when exposed to flames or sparks.

Hazardous combustion products May develop toxic or corrosive fumes if heated. (NO_x, CO, NH₃)

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 eyes and prolonged skin contact. 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 Risk of explosion by shock, friction or other sources of ignition. Isolate from hot surfaces. Use non sparking handtools and explosion-proof electric equipment. Do not smoke or use open fire, or other sources of ignition.

7.2. Conditions for safe storage, including any incompatibilities

Storage Do not apply, the product is not stored.

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
Ammonium Nitrate	CAS no.: 6484-52-2 EC no.: 229-347-8 Registration number: 01-2119490981-27-0004		

DNEL / PNEC from substances

Substance	Ammonium Nitrate
DNEL	Group: Worker Exposure route: Inhalation

	Exposure frequency: Long term (repeated)
	Type of effect: Systemic effect
	Value: 37,6 mg/m ³
DNEL	Group: Worker
	Exposure route: Dermal
	Exposure frequency: Long term (repeated)
	Type of effect: Systemic effect
	Value: 21,3 mg/kg
PNEC	Value: 4,5 mg/l
	Remarks: Periodic discharge
PNEC	Exposure route: Sewage treatment plant STP
	Value: 18 mg/l
PNEC	Exposure route: Saltwater
	Value: 0,045 mg/l
PNEC	Exposure route: Freshwater
	Value: 0,45 mg/l

8.2. Exposure controls

Safety signs



Respiratory protection

Respiratory protection Respiratory protection not required.

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 Use eye protection.

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	Water-in-oil emulsion.
Colour	Grey.
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.
Flash point	Value: > 200 °C
Comments, Evaporation rate	Not relevant.
Flammability (solid, gas)	Not determined.
Comments, Vapour pressure	Not relevant.

Comments, Vapour density	Not relevant.
Specific gravity	Value: 1,27-1,33 g/cm ³
Solubility description	The mixture is almost insoluble. Ammonium nitrate as such is very soluble in water.
Comments, Partition coefficient: n-octanol / water	Ammonium nitrate: <1 Lubricating oil: log Kow for base oil hydrocarbons: > 6
Comments, Spontaneous combustability	Not determined.
Decomposition temperature	Value: > 100 °C
Comments, Viscosity	Not determined.
Explosive properties	Explosive
Oxidising properties	Ammonium nitrate: oxidizing

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 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	Strong alkalis. Strong acids. Do not let foreign materials get mixed in the product.
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10.6. Hazardous decomposition products

Hazardous decomposition products	During fire, toxic gases (CO, CO ₂ , NO _x , NH ₃) are formed.
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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

Potential acute effects

Irritation	Irritating to the eyes. May cause skin irritation.
Corrosivity	Not known.

Delayed effects / repeated exposure

Sensitisation	Not known.
Repeated dose toxicity	Not determined.

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.
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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

12.2. Persistence and degradability

Persistence and degradability	Ammonium nitrate: biodegradable Lubricating oil: not readily degradable (OECD 301B).
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12.3. Bioaccumulative potential

Bioaccumulation evaluation	Ammonium nitrate: not bioaccumulative (LogPow <1) Lubricating oil: possibly accumulative (log Kow >6).
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12.4. Mobility in soil

Mobility	The product contains substances, which are water soluble and may spread in water systems.
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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 / Remarks	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	0241
RID	0241

IMDG 0241
ICAO/IATA 0241

14.2. UN proper shipping name

ADR EXPLOSIVE, BLASTING, TYPE E
RID EXPLOSIVE, BLASTING, TYPE E
IMDG EXPLOSIVE, BLASTING, TYPE E
ICAO/IATA EXPLOSIVE, BLASTING, TYPE E

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.
R36 Irritating to eyes.

S-phrases

S17 Keep away from combustible material.
S25 Avoid contact with eyes.
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.
S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

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

Expl. 1.1; H201;
Eye Irrit. 2; H319;

List of relevant R-phrases (under headings 2 and 3).

R36 Irritating to eyes.
R2 Risk of explosion by shock, friction, fire or other sources of ignition.
R8 Contact with combustible material may cause fire.

List of relevant H-phrases (Section 2 and 3).	H304 May be fatal if swallowed and enters airways. H272 May intensify fire; oxidiser. H201 Explosive; mass explosion hazard. 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
Version	1
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.