

SAFETY DATA SHEET

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

1.1 Product identifier

- Product Name: AR6900-D MAX
- Product Part Number: AR6900-D MAX
- Contains 2-ethylhexyl nitrate; hydrocarbons, C10, aromatics, <1% naphthalene; and hydrocarbons, C10, aromatics, >1% naphthalene

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

- Use of the substance/mixture: Fuel treatment
- Use advised against: No information available

1.3 Details of the supplier of the safety data sheet

- Name of Supplier: Archoil EU
- Address of Supplier: Unit 14 Rookery Business Park
Silver Street
Besthorpe
Norfolk
UK
NR17 2LD
- Telephone: +44 (0)1953 456896
- Email: support@archoil.eu

1.4 Emergency telephone number

- Emergency Telephone: (+)1 760 476 3962
3E Contract Number: 334068

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

- Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]: Acute Tox. 4, H302; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Aquatic Chronic 2, H411; EUH044; EUH066
- Additional information: For full text of Hazard- and EU Hazard-statements: see section 16

2.2 Label elements



- Signal Word: Danger
- Hazard statements
 - H302 - Harmful if swallowed.
 - H304 - May be fatal if swallowed and enters airways.
 - H312 - Harmful in contact with skin.
 - H332 - Harmful if inhaled.
 - H411 - Toxic to aquatic life with long lasting effects.
- Precautionary statements
 - P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
 - P273 - Avoid release to the environment.
 - P280 - Wear protective gloves/eye protection/face protection.
 - P301+P310+P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.
 - P405 - Store locked up.

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SECTION 2: Hazards identification (....)

P501 - Dispose of contents/container to an authorised waste collection point

Supplemental Hazard Information (EU)

EUH044: Risk of explosion if heated under confinement

EUH066 - Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

- 2-ethylhexyl nitrate decomposes violently above 100°C

SECTION 3: Composition/information on ingredients

3.1 Substances

3.2 Mixtures

Chemical Name	Conc.	CAS No.	EC No.	Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]	REACH Registration Number	WEL /OEL
2-ethylhexyl nitrate	60-80%	27247-96-7	248-363-6	Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Aquatic Chronic 2, H411; EUH044; EUH066	01 -2119539586-27-XXXX	Yes
Hydrocarbons, C10, aromatics, <1% naphthalene	5-10%	1189173-42-9 [64742-94-5]	918-811-1	Asp. Tox. 1, H304; STOT SE 3, H336; Aquatic Chronic 2, H411; EUH066	01 -2119463583-34-XXXX	Yes
Hydrocarbons, C10, aromatics, >1% naphthalene	<5%	1189173-42-9 [64742-94-5]	919-284-0	Asp. Tox. 1, H304; STOT SE 3, H336; Aquatic Chronic 2, H411; EUH066	01 -2119463588-24-XXXX	Yes
2-ethylhexan-1-ol	<5%	104-76-7	203-234-3	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Acute Tox. 4, H332; EUH066	01 -2119487289-20-XXXX	Yes
Solvent naphtha (petroleum), heavy arom.	<5%	64742-94-5	265-198-5	Asp. Tox. 1, H304; STOT SE 3, H336; Aquatic Chronic 2, H411; EUH066	01 -2119510128-50-XXXX	No
1,2,4-trimethylbenzene	<1%	95-63-6	202-436-9	Flam. Liq. 3, H226; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Acute Tox. 4, H332; STOT SE 3, H335; Aquatic Chronic 2, H411	01 -2119472135-42-XXXX	Yes
Naphthalene	<1%	91-20-3	202-049-5	Acute Tox. 4, H302; Carc. 2, H351; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	01 -2119561346-37-XXXX	No

SECTION 3: Composition/information on ingredients (....)

Chemical Name	Conc.	CAS No.	EC No.	Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]	REACH Registration Number	WEL /OEL
Phenol, dodecyl-, branched	<0.3%	121158-58-5	310-154-3	Skin Corr. 1C, H314; Eye Dam. 1, H318; Repr. 1B, H360F; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	01 -2119513207 -49-XXXX	No
Ferrocene	<0.3%	102-54-5	203-039-3	Flam. Sol. 1, H228; Acute Tox. 4, H302; Acute Tox. 4, H332; Repr. 1B, H360; STOT RE 2, H373; Aquatic Chronic 1, H410	01 -2119978280 -34-XXXX	No

SECTION 4: First aid measures
4.1 Description of first aid measures

- Rescuers should put on approved personal protective equipment (PPE) before administering first aid
- Rescuers should take suitable precautions to avoid becoming casualties themselves
- Contact with eyes
 - If substance has got into eyes, immediately wash out with plenty of water for several minutes
 - Remove contact lenses, if present and easy to do. Continue rinsing.
 - If eye irritation persists: Get medical advice/attention.
- Contact with skin
 - Remove contaminated clothing
 - Gently wash with plenty of soap and water.
 - If skin irritation occurs: Get medical advice/attention.
 - Contaminated clothing should be laundered before reuse
- Ingestion
 - Do not induce vomiting because of risk of aspiration into the lungs. If aspiration is suspected obtain immediate medical attention
 - If vomiting occurs turn patient on side
 - Rinse mouth with water (only if the person is conscious)
 - Keep warm and at rest, in a half upright position. Loosen clothing
 - Get medical advice/attention.
- Inhalation
 - Remove person to fresh air and keep comfortable for breathing.
 - Apply artificial respiration only if patient is not breathing but do not use mouth to mouth resuscitation
 - Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

- Contact with eyes
 - May cause irritation
- Contact with skin
 - May cause vasodilation
 - May cause irritation
 - Repeated exposure may cause skin dryness or cracking
 - May cause dermatitis

SECTION 4: First aid measures (....)

- Ingestion
 - Harmful if swallowed.
 - The ingestion of significant quantities may cause damage to lungs
 - The ingestion of significant quantities may cause chronic pneumonitis
- Inhalation
 - May cause vasodilation
 - May cause respiratory irritation
 - May cause drowsiness or dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically
- Symptoms of poisoning may occur even after several hours; therefore provide medical observation for at least 48 hours after the accident.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

- In case of fire: use foam, carbon dioxide or dry agent to extinguish.
- Unsuitable extinguishing media: high volume water jet

5.2 Special hazards arising from the substance or mixture

- 2-ethylhexyl nitrate decomposes violently above 100°C
- Risk of explosion if heated under confinement
- In a fire or if heated, a pressure increase will occur and the container may burst
- Gives off irritating or toxic fumes (or gases) in a fire.
- Decomposition products may include nitrogen and carbon oxides

5.3 Advice for firefighters

- Special protective equipment: Wear self-contained breathing apparatus (SCBA). Wear full protective clothing including chemical protection suit.
- Keep container(s) exposed to fire cool, by spraying with water
- Collect contaminated fire extinguishing water separately. This MUST not be discharged into drains. Prevent fire extinguishing water from contaminating surface or ground water.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- No action shall be taken involving any personal risk or without suitable training
- Only trained and authorised personnel should carry out emergency response
- Personal precautions for non-emergency personnel: In case of leakage, eliminate all ignition sources.; Ensure adequate ventilation; Avoid contact with skin and eyes; Avoid breathing vapours, mist or gas; Wear protective clothing as per section 8; Wash thoroughly after handling.
- Personal precautions for emergency responders: Wear chemical protection suit; Wear self-contained breathing apparatus (SCBA)

6.2 Environmental precautions

- Avoid release to the environment.
- If contamination of drainage systems or water courses is unavoidable, immediately inform appropriate authorities

6.3 Methods and material for containment and cleaning up

- Stop leak if safe to do so.
- Contain leaking liquid in earth or sand and remove to safe place when solid
- Use non-sparking tools.
- Contaminated absorbent must be removed in sealed, plastic lined drums.
- Seal containers and label them
- Remove contaminated material to safe location for subsequent disposal
- Seek expert advice for removal and disposal of all contaminated materials and wastes

SECTION 6: Accidental release measures (....)

- Ventilate the area and wash spill site after material pick-up is complete

6.4 Reference to other sections

- See section(s): 7, 8 & 13
-

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Ensure adequate ventilation
- Avoid breathing vapours, mist or gas
- Do not get in eyes, on skin, or on clothing.
- Wear protective gloves/protective clothing/eye protection/face protection.
- When using do not eat, drink or smoke
- Shut off all ignition sources
- Contaminated work clothing should not be allowed out of the workplace.
- Contaminated clothing should be laundered before reuse
- Wash hands and working surfaces thoroughly after handling.
- Ensure eyewash stations and safety showers are close to hand.

7.2 Conditions for safe storage, including any incompatibilities

- Keep away from oxidisers, heat, flames or ignition sources
- Keep away from alkalis (strong bases)
- Keep away from reducing agents
- Protect from sunlight.
- Store locked up.
- Keep only in original packaging.
- Store in a well-ventilated place. Keep cool.
- Do not reuse empty containers without commercial cleaning or reconditioning
- This material and/or its container must be disposed of as hazardous waste

7.3 Specific end use(s)

- Fuel treatment
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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- For currently recommended monitoring procedures, see HSE series 'Methods for the Determination of Hazardous Substances' (MDHS)
 - BMGV (Biological Monitoring Guidance Value) (UK) Polycyclic aromatic hydrocarbons (PAHs) 4 umol 1-hydroxypyrene/mol creatine in urine. Sampling Time: Post shift (urine)
 - 2-ethylhexyl nitrate
 - WEL (long term) 1 ppm (Supplier)
 - WEL (short term) 1 ppm (Supplier)
 - DNEL (inhalational) 350 ug/m³ Industry, Long Term, Systemic Effects
 - DNEL (dermal) 1 mg/kg (bw/day) Industry, Long Term, Systemic Effects
 - DNEL (dermal) 44 ug/cm² Industry, Long Term, Local Effects
 - DNEL (inhalational) 87 ug/m³ Consumer, Long Term, Systemic Effects
 - DNEL (dermal) 520 ug/kg (bw/day) Consumer, Long Term, Systemic Effects
 - DNEL (dermal) 22 ug/cm² Consumer, Long Term, Local Effects
 - DNEL (oral) 25 ug/kg (bw/day) Consumer, Long Term, Systemic Effects
 - PNEC aqua (freshwater) 800 ng/l
 - PNEC aqua (marine water) 80 ng/l
 - PNEC (STP) 10 mg/l
 - PNEC sediment (freshwater) 740 ng/kg
 - PNEC sediment (marine water) 740 ng/kg
 - PNEC terrestrial (soil) 191 ng/kg
 - Hydrocarbons, C10, aromatics, <1% naphthalene
 - WEL (long term) 151 mg/m³ (Supplier)
-

SECTION 8: Exposure controls/personal protection (....)

- DNEL (inhalational) 151 mg/m³ Industry, Long Term, Systemic Effects
 DNEL (dermal) 12.5 mg/kg (bw/day) Industry, Long Term, Systemic Effects
 DNEL (inhalational) 32 mg/m³ Consumer, Long Term, Systemic Effects
 DNEL (dermal) 7.5 mg/kg (bw/day) Consumer, Long Term, Systemic Effects
 DNEL (oral) 7.5 mg/kg (bw/day) Consumer, Long Term, Systemic Effects
- Hydrocarbons, C10, aromatics, >1% naphthalene
 - WEL (long term) 151 mg/m³ (Supplier)
 - DNEL (inhalational) 151 mg/m³ Industry, Long Term, Systemic Effects
 - DNEL (dermal) 12.5 mg/kg (bw/day) Industry, Long Term, Systemic Effects
 - DNEL (inhalational) 32 mg/m³ Consumer, Long Term, Systemic Effects
 - DNEL (dermal) 7.5 mg/kg (bw/day) Consumer, Long Term, Systemic Effects
 - DNEL (oral) 7.5 mg/kg (bw/day) Consumer, Long Term, Systemic Effects
 - 2-ethylhexan-1-ol
 - (EU) OELV (long term TWA) 1 ppm 5.4 mg/m³
 - DNEL (inhalational) 12.8 mg/m³ Industry, Long Term, Systemic Effects
 - DNEL (inhalational) 53.2 mg/m³ Industry, Long Term, Local Effects
 - DNEL (inhalational) 53.2 mg/m³ Industry, Acute/Short Term, Local Effects
 - DNEL (dermal) 23 mg/kg (bw/day) Industry, Long Term, Systemic Effects
 - DNEL (inhalational) 2.3 mg/m³ Consumer, Long Term, Systemic Effects
 - DNEL (inhalational) 26.6 mg/m³ Industry, Long Term, Local Effects
 - DNEL (inhalational) 26.6 mg/m³ Consumer, Acute/Short Term, Local Effects
 - DNEL (dermal) 11.4 mg/kg (bw/day) Consumer, Long Term, Systemic Effects
 - DNEL (oral) 1.1 mg/kg (bw/day) Consumer, Long Term, Systemic Effects
 - PNEC aqua (freshwater) 17 ug/l
 - PNEC aqua (intermittent releases, freshwater) 170 ug/l
 - PNEC aqua (marine water) 1.7 ug/l
 - PNEC (STP) 10 mg/l
 - PNEC sediment (freshwater) 284 ug/kg
 - PNEC sediment (marine water) 28.4 ug/kg
 - PNEC terrestrial (soil) 47 ug/kg
 - PNEC secondary poisoning (food) 55 mg/kg
 - Solvent naphtha (petroleum), heavy arom.
 - DNEL (oral) 2.1 mg/kg (bw/day) Consumer, Long Term, Systemic Effects
 - 1,2,4-trimethylbenzene
 - (EU) OELV (long term TWA) 20 ppm 100 mg/m³
 - WEL (long term) 25 ppm 125 mg/m³ (UK)
 - DNEL (inhalational) 100 mg/m³ Industry, Long Term, Systemic Effects
 - DNEL (inhalational) 100 mg/m³ Industry, Long Term, Local Effects
 - DNEL (inhalational) 29.4 mg/m³ Consumer, Long Term, Systemic Effects
 - DNEL (inhalational) 29.4 mg/m³ Consumer, Long Term, Local Effects
 - DNEL (dermal) 9 512 mg/kg (bw/day) Consumer, Long Term, Systemic Effects
 - PNEC aqua (freshwater) 120 ug/l
 - PNEC aqua (intermittent releases, freshwater) 120 ug/l
 - PNEC aqua (marine water) 120 ug/l
 - PNEC (STP) 2.41 mg/l
 - PNEC sediment (freshwater) 13.56 mg/kg
 - PNEC sediment (marine water) 13.56 mg/kg
 - PNEC terrestrial (soil) 2.34 mg/kg
 - Naphthalene
 - DNEL (inhalational) 25 mg/m³ Industry, Long Term, Systemic Effects
 - DNEL (inhalational) 25 mg/m³ Industry, Long Term, Local Effects
 - DNEL (dermal) 3.57 mg/kg (bw/day) Industry, Long Term, Systemic Effects
 - PNEC aqua (freshwater) 2.4 ug/l
 - PNEC aqua (intermittent releases, freshwater) 20 ug/l
 - PNEC aqua (marine water) 2.4 ug/l
 - PNEC (STP) 2.9 mg/l
 - PNEC sediment (freshwater) 67.2 ug/kg
 - PNEC sediment (marine water) 67.2 ug/kg
 - PNEC terrestrial (soil) 53.3 ug/kg

SECTION 8: Exposure controls/personal protection (....)

- Phenol, dodecyl-, branched
 - DNEL (inhalational) 44.18 mg/m³ Industry, Long Term, Local Effects
 - DNEL (dermal) 250 ug/kg (bw/day) Industry, Long Term, Systemic Effects
 - DNEL (dermal) 166 mg/kg (bw/day) Industry, Acute/Short Term, Local Effects
 - DNEL (inhalational) 790 ug/m³ Consumer, Long Term, Systemic Effects
 - DNEL (inhalational) 13.26 mg/m³ Consumer, Acute/Short Term, Systemic Effects
 - DNEL (dermal) 75 ug/kg (bw/day) Consumer, Long Term, Systemic Effects
 - DNEL (dermal) 50 mg/kg (bw/day) Consumer, Acute/Short Term, Systemic Effects
 - DNEL (oral) 75 ug/kg (bw/day) Consumer, Long Term, Systemic Effects
 - DNEL (oral) 1.26 mg/kg (bw/day) Consumer, Acute/Short Term, Systemic Effects
 - PNEC aqua (freshwater) 74 ng/l
 - PNEC aqua (intermittent releases, freshwater) 370 ng/l
 - PNEC aqua (marine water) 7.4 ng/l
 - PNEC (STP) 100 mg/l
 - PNEC sediment (freshwater) 226 ug/kg
 - PNEC sediment (marine water) 26.6 ug/kg
 - PNEC terrestrial (soil) 118 ug/kg
 - PNEC secondary poisoning (food) 4 mg/kg
- Ferrocene
 - DNEL (inhalational) 20 ug/m³ Industry, Long Term, Systemic Effects
 - DNEL (inhalational) 40 ug/m³ Industry, Acute/Short Term, Systemic Effects
 - DNEL (dermal) 25 ug/kg (bw/day) Industry, Long Term, Systemic Effects
 - DNEL (inhalational) 5 ug/m³ Consumer, Long Term, Systemic Effects
 - DNEL (dermal) 13 ug/kg (bw/day) Consumer, Long Term, Systemic Effects
 - DNEL (oral) 13 ug/kg (bw/day) Consumer, Long Term, Systemic Effects
 - PNEC aqua (freshwater) 30 ng/l
 - PNEC aqua (intermittent releases, freshwater) 10.3 ug/l
 - PNEC aqua (marine water) 3 ng/l
 - PNEC (STP) 876 ug/l

8.2 Exposure controls

- Selection and use of personal protective equipment should be based on a risk assessment of exposure potential
- Engineering controls
 - Engineering controls should be provided which maintain airborne concentrations below the relevant guidelines
 - Use local exhaust ventilation and/or enclosures.
- Respiratory protection
 - In case of insufficient ventilation, wear suitable respiratory equipment
 - Where a reusable half mask respirator is required, use EN 140, with gas/vapour filter EN 14387 type ABEK, or EN 405; EN 1827
 - Where a full face mask respirator is required, use EN 136, with gas/vapour filter EN 14387 type ABEK
- Skin protection
 - Wear suitable protective clothing, including eye/face protection and gloves (rubber are recommended)
 - The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.
 - The selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances. Breakthrough time is dependent on the characteristics of the brand of glove used and the supplier should be consulted.
- Eye/face protection
 - Wear goggles giving complete eye protection approved to standard EN 166.
- Hygiene measures
 - Use good personal hygiene practices
 - Contaminated work clothing should not be allowed out of the workplace.
 - Contaminated clothing should be laundered before reuse
 - Eyewash bottles should be available

SECTION 8: Exposure controls/personal protection (....)


SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance: Liquid; brown; amber
- Odour: Pungent odour
- Odour threshold: No information available
- pH: No information available
- Melting point/freezing point: No information available
- Initial boiling point and boiling range: No information available
- Flashpoint: > 60°C c.c.
- Evaporation Rate: No information available
- Flammability (solid,gas): Not flammable
- Upper/lower flammability or explosive limits: No information available
- Vapour Pressure: No information available
- Vapour Density: No information available
- Relative Density: 0.949
- Solubility(ies): Insoluble in water
- Partition Coefficient (n-Octanol/Water): Log Pow 5.24 @ 40 °C and pH 7.1 (2-ethylhexyl nitrate)
- Autoignition Temperature: > 200°C @ 101.325 kPa
- Decomposition temperature: 2-ethylhexyl nitrate decomposes violently above 100 °C
- Viscosity: No information available
- Explosive Properties: Risk of explosion if heated under confinement
- Oxidising Properties: Not oxidising

9.2 Other information

- None

SECTION 10: Stability and reactivity

10.1 Reactivity

- No hazardous reactions known if used for its intended purpose

10.2 Chemical stability

- Stable under normal conditions

10.3 Possibility of hazardous reactions

- Risk of explosion if heated under confinement

10.4 Conditions to avoid

- Keep away from heat and sources of ignition
- Keep away from direct sunlight

10.5 Incompatible materials

- Incompatible with oxidizing substances
- Incompatible with reducing agents
- Incompatible with alkalis (strong bases)

10.6 Hazardous decomposition products

- Decomposition products may include toxic and irritant fumes
- Decomposition products may include nitrogen and carbon oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Acute Toxicity
Classification based on calculation and concentration thresholds
Harmful if swallowed, in contact with skin or if inhaled

Chemical Name	LD50 (oral, rat)	LC50 (inhalation, rat)	LD50 (dermal, rabbit)
2-ethylhexyl nitrate	10 ml/kg	No data available	(LDLo) 5 ml/kg
Hydrocarbons, C10, aromatics, <1% naphthalene	5 210 - 10 650 mg/kg	No data available	2 000 mg/kg
Hydrocarbons, C10, aromatics, >1% naphthalene	5 210 - 10 650 mg/kg	No data available	2 000 mg/kg
2-ethylhexan-1-ol	2 047 mg/kg	890 - 5 300 mg/m ³ (4 hr)	LD0 3 000 mg/kg (rat)
Solvent naphtha (petroleum), heavy arom.	2 000 - 5 000 mg/kg	2.7 - 30 000 mg/m ³ (4 hr)	2 000 mg/kg
1,2,4- trimethylbenzene	6 000 mg/kg	10.2 mg/l (4 hr)	No data available
Naphthalene	(mouse) 533 -710 mg/kg	400 mg/m ³ (4 hr)	(rat) 2 500 - 16 000 mg/kg
Phenol, dodecyl-, branched	2 100 - 2 200 mg/kg	No data available	15 000 mg/kg
Ferrocene	1 320 mg/kg	No data available	(rat) 3 000 mg/kg

- Skin corrosion/irritation
Based on available data, the classification criteria are not met
- Serious eye damage/irritation
Based on available data, the classification criteria are not met
- Respiratory or skin sensitisation
Based on available data, the classification criteria are not met
- Germ cell mutagenicity
No evidence of mutagenic effects
- Carcinogenicity
Naphthalene is a Category 2 Carcinogen in concentrations $\geq 1\%$
- Reproductive toxicity
Ferrocene is a Category 1B Reproductive Toxicant in concentrations $\geq 0.3\%$
Phenol, dodecyl-, branched is a Category 1B Reproductive Toxicant in concentrations $\geq 0.3\%$
NOAEL (oral, rat): 10 mg/kg bw/day (effect on fertility, ferrocene)
NOAEL (oral, rat): 5 mg/kg bw/day (effect on developmental toxicity, ferrocene)
NOAEL (oral, rat): 60 - 100 mg/kg bw/day (phenol, dodecyl-, branched)
NOEL (oral, rat): 5 - 50 mg/kg bw/day (phenol, dodecyl-, branched)
- Specific target organ toxicity (STOT) - single exposure
Based on available data, the classification criteria are not met
- Specific target organ toxicity (STOT) - repeated exposure
Based on available data, the classification criteria are not met
- Aspiration hazard
Classification based on calculation and concentration thresholds
May be fatal if swallowed and enters airways.
- Contact with eyes
May cause eye irritation

SECTION 11: Toxicological information (....)

- Contact with skin
 - May cause vasodilation
 - May cause skin irritation
 - Repeated exposure may cause skin dryness or cracking.
 - May cause dermatitis
 - Ingestion
 - Harmful if swallowed.
 - The ingestion of significant quantities may cause damage to lungs
 - The ingestion of significant quantities may cause chronic pneumonitis
 - Inhalation
 - May cause vasodilation
 - May cause respiratory irritation.
 - May cause drowsiness or dizziness.
-

SECTION 12: Ecological information

12.1 Toxicity

- Toxic to aquatic life with long lasting effects.
- Classification based on calculation and concentration thresholds
- 2-ethylhexyl nitrate
 - LC50 (fish) 2 mg/l (4 days)
 - EC50 (aquatic invertebrates) 12.6 mg/l (48 hr)
 - EC50 (aquatic algae) 3.26 mg/l (72 hr)
- Hydrocarbons, C10, aromatics, <1% naphthalene
 - LL50 (fish) 2 - 5 mg/l (4 days)
 - EL50 (aquatic invertebrates) 3 -10 mg/l (48 hr)
 - EL50 (aquatic algae) 1 - 3 mg/l (72 hr)
- Hydrocarbons, C10, aromatics, >1% naphthalene
 - LL50 (fish) 2 - 5 mg/l (4 days)
 - EL50 (aquatic invertebrates) 3 -10 mg/l (48 hr)
 - EL50 (aquatic algae) 1 - 3 mg/l (72 hr)
- 2-ethylhexan-1-ol
 - LC50 (fish) 17.1 - 28.2 mg/l (4 days)
 - EC50 (aquatic invertebrates) 39 mg/l (48 hr)
 - EC50 (aquatic algae) 11.5 - 16.6 mg/l (72 hr)
- Solvent naphtha (petroleum), heavy arom.
 - LC50 (fish) 580 - 8 410 ug/l (4 days)
 - EC50 (aquatic invertebrates) 760 - 4 700 ug/l (48 hr)
 - EC50 (aquatic algae) 12.4 - 18.9 mg/l (72 hr)
- 1,2,4-trimethylbenzene
 - LC50 (fish) 7.72 mg/l (4 days)
 - LC50 (aquatic invertebrates) 3.6 mg/l (48 hr)
 - EC50 (aquatic algae) 2.356 mg/l (96 hr)
- Naphthalene
 - LC50 (fish) 1.6 - 7.9 mg/l (4 days)
 - EL50 (aquatic invertebrates) 2.16 mg/l (48 hr)
 - EL50 (aquatic algae) 400 - 500 ug/l (72 hr)
- Phenol, dodecyl-, branched
 - EL50 (fish) 40 mg/l (4 days)
 - EC50 (aquatic invertebrates) 37 - 92.7 ug/l (48 hr)
 - EC50 (aquatic algae) 150 - 765 ug/l (72 hr)
- Ferrocene
 - LC50 (fish) 24.5 mg/l (48 hr)

SECTION 12: Ecological information (....)

EC50 (aquatic invertebrates) 1.5 - 4 mg/l (24 hr)

EC50 (aquatic algae) 1.03 mg/l (72 hr)

12.2 Persistence and degradability

- No information available
- 2-ethylhexyl nitrate
Not readily biodegradable

12.3 Bioaccumulative potential

- No information available
- 2-ethylhexyl nitrate
Bioaccumulation is significant
Log Pow: 3.74 - 5.24
BCF: 1332

12.4 Mobility in soil

- No information available
- 2-ethylhexyl nitrate
This substance is volatile
Partition coefficient : soil/water (Koc) 3.75

12.5 Results of PBT and vPvB assessment

- Not a PBT according to REACH Annex XIII
- Not a vPvB according to REACH Annex XIII

12.6 Other adverse effects

- No information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

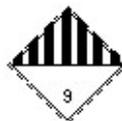
- This material and its container must be disposed of as hazardous waste
- Disposal should be in accordance with local, state or national legislation
- Contaminated absorbent must be removed in sealed, plastic lined drums.
- Dispose of contents/container to an authorised waste collection point
- Do not empty into drains; dispose of this material and its container in a safe way

13.2 Classification

- The waste must be identified according to the List of Wastes (2000/532/EC)
- Hazardous Property Code(s): HP 5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity; HP 6 Acute Toxicity; HP 14 Ecotoxic

SECTION 14: Transport information

UN 3077 and UN 3082, when carried in single or combination packagings containing a net quantity per single or inner packaging of 5L/kg or less, are not subject to the provisions of ADR, RID, IMDG or IATA, provided the package meets the general packing quality provisions.



14.1 UN number

- UN No.: 3082

14.2 UN proper shipping name

SECTION 14: Transport information (....)

- Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (2-ethylhexyl nitrate)

14.3 Transport hazard class(es)

- Hazard Class: 9

14.4 Packing group

- Packing Group: III

14.5 Environmental hazards

- Marine pollutant

14.6 Special precautions for user

- Protect from heat

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

- Not applicable

14.8 Road/Rail (ADR/RID)

- ADR UN No.: 3082
- Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (2-ethylhexyl nitrate)
- ADR Hazard Class: 9
- ADR Packing Group: III
- Tunnel Code: Not applicable

14.9 Sea (IMDG)

- IMDG UN No.: 3082
- Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (2-ethylhexyl nitrate)
- IMDG Hazard Class: 9
- IMDG Pack Group.: III

14.10 Air (ICAO/IATA)

- ICAO UN No.: 3082
- Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (2-ethylhexyl nitrate)
- ICAO Hazard Class: 9
- ICAO Packing Group: III

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- This safety data sheet is provided in compliance with REACH Regulation (EC) No 1907/2006 as amended by Regulation (EU) 2015/830
- Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe
- UN 3077 and UN 3082, when carried in single or combination packagings containing a net quantity per single or inner packaging of 5L/kg or less, are not subject to the provisions of ADR, RID, IMDG or IATA, provided the package meets the general packing quality provisions.

15.2 Chemical safety assessment

- No information available

SECTION 16: Other information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only

SECTION 16: Other information (....)

as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

Revision No. 2.0.0. Revised October 2016.
Changes made: Minor revisions to text

Revision No. 3.0.0. Revised May 2019.
Changes made: New formula, revised classifications in Section 2, revisions to all sections and re-issue of SDS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Asp. Tox. 1, H304:	Classification based on calculation and concentration thresholds
Acute Tox. 4, H302:	Classification based on calculation and concentration thresholds
Acute Tox. 4, H312:	Classification based on calculation and concentration thresholds
Acute Tox. 4, H332:	Classification based on calculation and concentration thresholds
Aquatic Chronic 2, H411:	Classification based on calculation and concentration thresholds

Text not given with phrase codes where they are used elsewhere in this safety data sheet:

- H226: Flammable liquid and vapour
- H228: Flammable solid
- H302: Harmful if swallowed
- H304: May be fatal if swallowed and enters airways
- H312: Harmful in contact with skin.
- H314: Causes severe skin burns and eye damage
- H315: Causes skin irritation.
- H318: Causes serious eye damage
- H319: Causes serious eye irritation.
- H332: Harmful if inhaled
- H335: May cause respiratory irritation
- H336: May cause drowsiness or dizziness
- H351: Suspected of causing cancer
- H360: May damage fertility or the unborn child.
- H360F: May damage fertility.
- H373: May cause damage to organs through prolonged or repeated exposure
- H400: Very toxic to aquatic life
- H410: Very toxic to aquatic life with long lasting effects
- H411: Toxic to aquatic life with long lasting effects
- EUH044: Risk of explosion if heated under confinement
- EUH066: Repeated exposure may cause skin dryness or cracking

Acronyms

- CAS: Chemical Abstracts Service
- DNEL: Derived No-Effect Level
- EC: European Community
- EC50: Effective Concentration, 50%
- EL50: Effective Loading Rate resulting in 50% effect.
- GHS: Globally Harmonised System
- IARC: International Agency for Research on Cancer
- LC50: Lethal Concentration, 50%
- LD50: Lethal Dose, 50%
- LL50: Lethal Loading Rate resulting in 50% effect.
- NOAEL: No observed adverse effect level
- NOEC: No observed effect concentration
- OEL: Occupational Exposure Limit
- PBT: Persistent, Bioaccumulative and Toxic
- PNEC: Predicted No-Effect Concentration
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals



Revision: 13 May 2019

SECTION 16: Other information (....)

- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- WEL: Workplace Exposure Limit

--- end of safety datasheet ---
