

## SAFETY DATA SHEET

**NATURET STRONG / NATURET STRONG GeoSafe  
-maalämpöneste**

The safety data sheet is in accordance with Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued	01.11.2021
Revision date	20.02.2023

**1.1. Product identifier**

Product name	NATURET STRONG / NATURET STRONG GeoSafe -maalämpöneste
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**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of the substance / mixture	Solvent
Main intended use	PC-TEC-7 Heat transfer fluids

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Company name	Anora Group Plc / Anora Industrial / Rajamäki
Office address	Valta-akseli 9
Postcode	05200
City	Rajamäki
Country	Finland
Telephone number	+358 207 013 648

**Manufacturer**

Company name	Anora Group Plc
Postal address	PL 350
Postcode	00101
City	HELSINKI
Country	FINLAND
Telephone number	+358 207 013 013
Website	<a href="https://www.altiacorporation.fi">https://www.altiacorporation.fi</a>

## 1.4. Emergency telephone number

Emergency telephone Telephone number: 0800 147 111, (09) 471 977, Myrkytystietokeskus / HUS

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS] Flam. Liq. 2; H225  
Eye Irrit. 2; H319

### 2.2. Label elements

#### Hazard pictograms (CLP)



Signal word	Warning
Hazard statements	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation.
Precautionary statements	P210 Keep away from heat / sparks / open flames / hot surfaces. – No smoking. P233 Keep container tightly closed. P241 Use explosion-proof [electrical / ventilating / lighting / ] equipment. P243 Take action to prevent static discharge. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P403+P235 Store in a well-ventilated place. Keep cool.

### 2.3. Other hazards

PBT / vPvB	None.
Other hazards	Avoid breathing dust / fume / gas / mist / vapours / spray.

## SECTION 3: Composition / information on ingredients

### 3.2. Mixtures

Substance	Identification	Classification	Contents	Notes
Ethanol	CAS No.: 64-17-5 EC No.: 200-578-6 REACH Reg. No.: 01-2119457610-43-xxxx	Flam. Liq. 2; H225 Eye Irrit. 2; H319	88,8 %	
Propan-2-ol	CAS No.: 67-63-0 EC No.: 200-661-7 Index No.: 603-117-00-0 REACH Reg. No.: 01-2119457558-25-xxxx	Flam. Liq. 2; H225; Eye Irrit. 2; H319; STOT SE 3; H336;	1,8 %	
Butanone	CAS No.: 78-93-3 EC No.: 201-159-0 Index No.: 606-002-00-3 REACH Reg. No.: 01-2119457290-43-xxxx	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	1,8 %	

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

General	Remove/Take off immediately all contaminated clothing.
Inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Skin contact	Rinse immediately with plenty of water. Get medical attention if irritation persists after washing.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Contact physician if irritation persists.
Ingestion	DO NOT induce vomiting. Get medical attention immediately.

### 4.2. Most important symptoms and effects, both acute and delayed

General symptoms and effects	If large quantities of this material are swallowed, call a physician immediately. Ingestion of larger amounts may cause defects to the nervous system (e.g. dizziness, headache).
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### 4.3. Indication of any immediate medical attention and special treatment needed

Medical treatment	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide (CO <sub>2</sub> ). Extinguish with water fog.
Improper extinguishing media	Water spray.

### 5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	Highly flammable liquid and vapour.
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### 5.3. Advice for firefighters

Fire fighting procedures	Wear full protective clothing. Containers close to fire should be removed or cooled with water. Use face mask with gas filter during fire fighting.
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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	Eliminate all ignition sources if safe to do so.
Personal protection measures	Provide adequate ventilation. Stop leak if possible without risk. DO NOT touch spilled material! Do not smoke or use open fire, or other sources of ignition. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.

### 6.2. Environmental precautions

**Environmental precautionary measures**

Do not discharge into drains, water courses or onto the ground. Contact local authorities in case of spillage to drain/aquatic environment.

**6.3. Methods and material for containment and cleaning up****Containment**

Small Spillages: Absorb with sand or other inert absorbent. Large Spillages: Collect larger spills and deliver for recycling. Inform Authorities if large amounts are involved.

**6.4. Reference to other sections****SECTION 7: Handling and storage****7.1. Precautions for safe handling****Handling**

Avoid inhalation of vapours and contact with skin and eyes. Static electricity and formation of sparks must be prevented. Use spark-proof tools and explosion-proof equipment. Do not smoke or use open fire, or other sources of ignition.

**7.2. Conditions for safe storage, including any incompatibilities****Storage**

Store in closed original container at temperatures between 5°C and 25°C. Store in tightly closed original container in a dry, cool and well-ventilated place. Flammable/combustible - Keep away from oxidisers, heat and flames. Large amounts and storages should be stored in accordance with national regulation on storage of flammable liquids.

**7.3. Specific end use(s)****SECTION 8: Exposure controls / personal protection****8.1. Control parameters**

Substance	Identification	Exposure limits	TWA Year
Ethanol	CAS No.: 64-17-5	Limit value (8 h) : 1000 ppm <b>Limit value (short term)</b> Value: 1300 ppm	
Propan-2-ol	CAS No.: 67-63-0	Limit value (8 h) : 400 ppm Limit value (8 h) : 999 mg/m <sup>3</sup> <b>Limit value (short term)</b> Value: 500 ppm <b>Limit value (short term)</b> Value: 1250 mg/m <sup>3</sup>	
Butanone	CAS No.: 78-93-3	Limit value (8 h) : 200 ppm Limit value (8 h) : 600 mg/m <sup>3</sup> <b>Limit value (short term)</b> Value: 300 ppm <b>Limit value (short term)</b> Value: 899 mg/m <sup>3</sup> <b>Exposure limit letter</b> Letter code: Sk; BEI	

**DNEL / PNEC**

## DNEL

Group: Professional  
Route of exposure: Long-term inhalation (local)  
Value: 950 mg/m<sup>3</sup>  
Comments: Ethanol

Group: Professional  
Route of exposure: Acute inhalation (local)  
Value: 1900 mg/m<sup>3</sup>  
Comments: Ethanol

Group: Professional  
Route of exposure: Long-term dermal (local)  
Value: 343 mg/kg  
Comments: Ethanol

Group: Consumer  
Route of exposure: Acute inhalation (local)  
Value: 950 mg/m<sup>3</sup>  
Comments: Ethanol

Group: Consumer  
Route of exposure: Long-term dermal (local)  
Value: 206 mg/kg  
Comments: Ethanol

Group: Consumer  
Route of exposure: Long-term inhalation (local)  
Value: 114 mg/m<sup>3</sup>  
Comments: Ethanol

Group: Consumer  
Route of exposure: Long-term oral (local)  
Value: 87 mg/kg  
Comments: Ethanol

Group: Professional  
Route of exposure: Long-term inhalation (systemic)  
Value: 600 mg/m<sup>3</sup>  
Comments: MEK

Group: Professional  
Route of exposure: Long-term dermal (systemic)  
Value: 1161 mg/kg bw/day  
Comments: MEK

Group: Consumer  
Route of exposure: Long-term inhalation (systemic)  
Value: 106 mg/m<sup>3</sup>  
Comments: MEK

Group: Consumer  
Route of exposure: Long-term dermal (systemic)  
Value: 412 mg/kg bw/day  
Comments: MEK

PNEC	Group: Consumer
	Route of exposure: Long-term oral (systemic)
	Value: 31 mg/kg bw/day
	Comments: MEK
	Route of exposure: Freshwater
	Value: 0,96 mg/l
	Comments: Ethanol
	Route of exposure: Saltwater
	Value: 0,79 mg/l
	Comments: Ethanol
Route of exposure: Freshwater sediments	
Value: 3,6 mg/kg	
Comments: Ethanol	
Route of exposure: Soil	
Value: 0,63 mg/kg	
Comments: Ethanol	
Route of exposure: Freshwater	
Value: 55,8 mg/l	
Comments: MEK	
Route of exposure: Saltwater	
Value: 55,8 mg/l	
Comments: MEK	
Route of exposure: Sewage treatment plant STP	
Value: 709 mg/l	
Comments: MEK	
Route of exposure: Freshwater sediments	
Value: 284,74 mg/kg dw	
Comments: MEK	
Route of exposure: Saltwater sediments	
Value: 284,7 mg/kg dw	
Comments: MEK	

## 8.2. Exposure controls

### Safety signs



### Precautionary measures to prevent exposure

#### Appropriate engineering controls

Provide adequate ventilation. Observe occupational exposure limits and minimize the risk of inhalation of dust.

#### Product related measures to prevent exposure

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard

EN 14387) is used.

## Eye / face protection

Required Properties Wear approved, tight fitting safety glasses where splashing is probable.

## Hand protection

Skin- / hand protection, short term contact Protective gloves must be used if there is a risk of direct contact or splash. Butyl rubber gloves are recommended.

Unsuitable materials Rubber (natural, latex).

## Skin protection

Suitable protective clothing Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

## Respiratory protection

Respiratory protection necessary at In case of inadequate ventilation use suitable respirator.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	Colourless liquid.
Odour	Odour of alcohol.
Odour limit	Comments: Not determined.
Freezing point	Value: -95 °C
Boiling point / boiling range	Value: 78.2 °C Test reference: Ethanol
Flash point	Value: ~ 18 °C
Lower explosion limit with unit of measurement	Value: 3.3 % Test reference: Ethanol
Upper explosion limit with units of measurement	Value: 19 % Test reference: Ethanol
Vapour pressure	Value: 5.85 kPa Test reference: Ethanol
Density	Value: 0,812 kg/l
Solubility	Medium: Water Name: 100 %
Partition coefficient: n-octanol/ water	Value: -0.31 Comments: Ethanol
Auto-ignition temperature	Value: 363 - 425 °C Test reference: Ethanol

## 9.2. Other information

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Reactivity Heating may cause a fire.

#### 10.2. Chemical stability

Stability Stable under normal temperature conditions and recommended use.

#### 10.3. Possibility of hazardous reactions

#### 10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

#### 10.5. Incompatible materials

#### 10.6. Hazardous decomposition products

### SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity	Effect tested: LD50
	Route of exposure: Oral
	Value: 10470 mg/kg
	Species: Rat
	Comments: Ethanol
Effect tested: LD50	
Route of exposure: Dermal	
Value: 15800 mg/kg	
Species: Rabbit	
Comments: Ethanol	
Effect tested: LC50	
Route of exposure: Inhalation.	
Duration: 4 hour(s)	
Value: 51 - 55 mg/l	
Species: Rat	
Comments: Ethanol	
Effect tested: LC50	
Route of exposure: Inhalation.	
Duration: 1 hour(s)	
Value: 30000 mg/m <sup>3</sup>	
Species: Mouse	
Comments: Ethanol	
Effect tested: LD50	
Route of exposure: Oral	
Method: OECD 401	



Value: 5840 mg/kg bw  
 Species: Rat  
 Comments: Isopropanol

Effect tested: LD50  
 Route of exposure: Dermal  
 Method: OECD 402  
 Value: 13900 mg/kg bw  
 Species: Rabbit  
 Comments: Isopropanol

Effect tested: LC50  
 Route of exposure: Inhalation.  
 Method: OECD 403  
 Duration: 6 hour(s)  
 Value: > 25 mg/l  
 Species: Rat  
 Comments: Isopropanol

Effect tested: LD50  
 Route of exposure: Oral  
 Method: OECD 403  
 Value: 2193 mg/kg  
 Species: Rat  
 Comments: MEK

Effect tested: LD50  
 Route of exposure: Dermal  
 Value: > 8050 mg/kg  
 Species: Rabbit  
 Test reference: OECD 402  
 Comments: MEK

Effect tested: LC50  
 Route of exposure: Inhalation.  
 Value: > 5000 ppm  
 Species: Rat  
 Comments: MEK

## Other information regarding health hazards

Assessment of eye damage or irritation, classification

Causes serious eye irritation.

Assessment of carcinogenicity, classification

Did not show carcinogenic or mutagenic effects in animal experiments. In animal testing, risk of impaired fertility was shown only after administration of very high doses of this substance. Ethanol: A Chemical Safety Assessment has been carried out for this substance.

## 11.2 Other information

Endocrine disruption

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 12: Ecological information

### 12.1. Toxicity

Aquatic toxicity, fish	<p>Toxicity type: Acute Value: 11200 mg/l Effect dose concentration: LC50 Exposure time: 96 hour(s) Comments: Ethanol</p> <p>Toxicity type: Unreported Value: 9600 mg/l Effect dose concentration: LC50 Test duration: 96 hour(s) Species: Pimephales promelas Comments: Isopropanol</p> <p>Toxicity type: Unreported Value: 2993 mg/l Effect dose concentration: LC50 Exposure time: 96 hour(s) Species: Pimephales promelas Method: OECD 203 Comments: MEK</p>
Aquatic toxicity, algae	<p>Toxicity type: Unreported Value: 1800 mg/l Effect dose concentration: EC50 Test duration: 7 day(s) Species: Green algae Comments: Isopropanol</p>
Aquatic toxicity, crustacean	<p>Toxicity type: Acute Value: 5012 mg/l Effect dose concentration: EC50 Exposure time: 48 hour(s) Comments: Ethanol</p> <p>Toxicity type: Unreported Value: 10000 mg/l Effect dose concentration: EC50 Test duration: 48 hour(s) Species: Daphnia magna Comments: Isopropanol</p> <p>Toxicity type: Unreported Value: 308 mg/l Effect dose concentration: EC50 Test duration: 48 hour(s) Species: Daphnia magna Method: OECD 202 Comments: MEK</p> <p>Toxicity type: Unreported Value: 2029 mg/l Effect dose concentration: EC50</p>

	<p>Test duration: 96 hour(s)  Species: Pseudokirchneriella subcapitata  Method: OECD TG 201  Comments: MEK</p>
Plant toxicity	<p>Toxicity type: Unreported  Value: 2104 mg/kg  Test duration: 3 day(s)  Species: Lactuca sativa  Comments: Isopropanol</p>

## 12.2. Persistence and degradability

Persistence and degradability description/evaluation	The substance is readily biodegradable.
Biodegradability	<p>Value: &gt; 80 %  Method: OECD TG 301  Comments: Ethanol</p> <p>Value: 98 %  Method: OECD 301 D  Comments: MEK  Test period: 28 day(s)</p>

## 12.3. Bioaccumulative potential

Bioaccumulation, comments	Ethanol Bioaccumulation: Is not expected to be bioaccumulable. Log Pow = -0.3
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## 12.4. Mobility in soil

Mobility	The product is soluble in water.
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## 12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This product does not contain any PBT or vPvB substances.
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## 12.6. Endocrine disrupting properties

Endocrine disrupting properties	This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.
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## 12.7. Other adverse effects

# SECTION 13: Disposal considerations

## 13.1. Waste treatment methods

Appropriate methods of disposal for the chemical	Dispose of waste and residues in accordance with local authority requirements. Do not allow runoff to sewer, waterway or ground.
Appropriate methods of disposal for the contaminated packaging	Make sure containers are empty before discarding (explosion risk).

## SECTION 14: Transport information

### 14.1. UN number

ADR/RID/ADN	1170
IMDG	1170
ICAO/IATA	1170

### 14.2. UN proper shipping name

Proper shipping name English	ETHANOL SOLUTION
ADR/RID/ADN	ETHANOL SOLUTION
ADR/RID/ADN	ETHANOL SOLUTION
IMDG	ETHANOL SOLUTION
ICAO/IATA	ETHANOL SOLUTION

### 14.3. Transport hazard class(es)

ADR/RID/ADN	3
Classification code ADR/RID/ADN	F1

### 14.4. Packing group

ADR/RID/ADN	II
IMDG	II
ICAO/IATA	II

### 14.5. Environmental hazards

### 14.6. Special precautions for user

### 14.7. Maritime transport in bulk according to IMO instruments

Product name	ETHANOL SOLUTION
Pollution category	Z

### Additional information

Hazard label ADR/RID/ADN	3
Hazard label IMDG	3
Hazard label ICAO/IATA	3

### ADR/RID Other information

Tunnel restriction code	D/E
Transport category	2
Hazard No.	33

**IMDG Other information**

EmS	F-E, S-D
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**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture**

Restriction of chemicals according to Annex XVII (REACH)	None.
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**15.2. Chemical safety assessment**

Chemical safety assessment performed	Yes
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**SECTION 16: Other information**

List of relevant H-phrases (Section 2 and 3)	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.
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Key literature references and sources for data	(EU) N:o 1272/2008 Chemical Safety Report
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