



# Eni Aquamet 104 Plus

## Safety Data Sheet

According to Regulation (EU) No. 830/2015

Revision date: 13/12/2018 Supersedes: 12/09/2018 Version: 2.1

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

#### 1.1. Product identifier

Product form : Mixture  
Trade name : Eni Aquamet 104 Plus  
Product code : 7522  
Type of product : Refrigerant  
Formula : 1209-2018  
Product group : Trade product

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

##### 1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use  
Industrial/Professional use spec : Wide dispersive use  
Use of the substance/mixture : Refrigerant  
Metalworking fluid  
----  
Do not use the product for any purposes that have not been advised by the manufacturer.  
Function or use category : Lubricants and additives

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

ENI S.p.A.  
P.le E. Mattei 1 - 00144 Rome Italy  
Phone: (+39) 06 59821  
www.eni.com

Contact:  
Refining & Marketing

Competent person responsible for the Safety Data Sheet (Reg. EC nr. 1907/2006): SDSInfo@eni.com

#### 1.4. Emergency telephone number

Emergency number : CNIT +39 0382 24444 (24h) (IT + EN)  
  
Poison centre (UK):  
National Poisons Information Service Edinburgh (24h)  
(+44) 844 892 0111  
0870 600 6266 (UK only)  
(Source: UN-WHO)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]

Serious eye damage/eye irritation, Category 1 H318  
Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412  
Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

Causes serious eye damage. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. For specific information about the toxicological/ecotoxicological properties and classification of this product, see Sect. 11 and/or Sect. 12.

# Eni Aquamet 104 Plus

## Safety Data Sheet

According to Regulation (EU) No. 830/2015

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS05

CLP Signal word

: Danger

Hazardous ingredients and/or with relevant occupational exposure limits

: N,N-bis(2-hydroxyethyl)oleamide; Benzene, C10-12-alkyl derivatives, distillation residues, sulfonated, sodium salts

Hazard statements (CLP)

: H318 - Causes serious eye damage.  
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P273 - Avoid release to the environment.  
P280 - Wear eye protection, protective gloves.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 - Immediately call a POISON CENTER/doctor.  
P501 - Dispose of contents and container to according to national or local regulations.

### 2.3. Other hazards (not relevant for classification)

Other hazards not contributing to the classification

: Non flammable. If the product is handled or used at high temperature, contact with hot product or vapours may cause burns. Any substance, in case of accidents involving pressurized circuits and the like, may be accidentally injected under the skin, even without external damage. In such a case, the victim should be brought to an hospital as soon as possible, to get specialized medical treatment. Do not wait for symptoms to develop.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Notes

: Composition/ Information on ingredients:

Mixture of hydrocarbons

alcohols

Water

Additives

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]
Distillates (petroleum), hydrotreated light naphthenic (see note [*])	(CAS-No.) 64742-53-6 (EC-No.) 265-156-6 (EC Index-No.) 649-466-00-2 (REACH-no) 01-2119480375-34	>= 5 < 25	Asp. Tox. 1, H304
N,N-bis(2-hydroxyethyl)oleamide	(CAS-No.) 93-83-4 (EC-No.) 202-281-7 (EC Index-No.) N/A (REACH-no) N/A	>= 1 < 5	Skin Irrit. 2, H315 Eye Dam. 1, H318
Benzene, C10-12-alkyl derivatives, distillation residues, sulfonated, sodium salts	(CAS-No.) 91844-64-3 (EC-No.) 295-131-5 (EC Index-No.) N/A (REACH-no) N/A	>= 1 < 3	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412
Alcohols, C14-18, ethoxylated propoxylated	(CAS-No.) 68002-96-0 (EC-No.) 614-209-5 (EC Index-No.) N/A (REACH-no) N/A	>= 1 < 3	Aquatic Chronic 3, H412
Pyridine-2-thiol 1-oxide, sodium salt	(CAS-No.) 3811-73-2 (EC-No.) 223-296-5 (EC Index-No.) N/A (REACH-no) 01-2119493385-28	>= 0,1 < 0,25	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=10)

Notes

: Note [\*]:

# Eni Aquamet 104 Plus

## Safety Data Sheet

According to Regulation (EU) No. 830/2015

this product has a value of DMSO extract < 3 % wt, according to IP 346/92. According to the criteria laid out by the EU (note L, Annex VI of Regulation (CE) 1272/2008), this product must be regarded as non carcinogenic.

Note [\*\*]:

substance with a Community workplace exposure limit

Note [\*\*\*]:

substance with national workplace exposure limit(s)

Full text of H-statements: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures after inhalation	: In case of disturbances owing to inhalation of vapours or mists, remove the victim from exposure; keep at rest; if necessary, seek medical attention. If casualty is unconscious and not breathing: ensure that there is no obstruction to breathing and give artificial respiration by trained personnel. If necessary, give external cardiac massage and obtain medical advice. If the casualty is breathing: Place in the recovery position. Administer oxygen if necessary.
First-aid measures after skin contact	: Take off contaminated clothing and shoes. Wash thoroughly with soap and water. If inflammation or irritation persists, seek medical advice. When using high-pressure equipment, injection of product can occur. Send the casualty immediately to hospital. Do not wait for symptoms to develop.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do so. Rinse eyes thoroughly for at least 15 minutes. Keep eyelids well apart. If irritation persists, seek medical advice.
First-aid measures after ingestion	: If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anything to drink. Call immediately for medical assistance or transport the victim to an hospital. In case of spontaneous vomiting, keep head low, to avoid the risk of aspiration into the lungs. Do not give anything by mouth to an unconscious person.

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

Symptoms/effects after inhalation	: Overexposure to vapours (e.g. through prolonged use in confined, insufficiently ventilated spaces) may cause irritation to airways, nausea and dizziness.
Symptoms/effects after skin contact	: Prolonged or repeated contact may cause skin to become dry. Contact with hot product may cause thermal burns.
Symptoms/effects after eye contact	: Risk of serious damage to eyes. Burning sensation, tearing, redness or swelling. Contact with hot product or vapours may cause burns.
Symptoms/effects after ingestion	: Accidental ingestion of small quantities of the product may cause irritation, nausea and gastric disturbances. Taking into account the taste of the product, however, ingestion of dangerous quantities is very unlikely.
Symptoms/effects upon intravenous administration	: No information available.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical attention if casualty has an altered state of consciousness or if symptoms do not resolve.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Dry chemical, CO <sub>2</sub> , dry sand, or alcohol-resistant foam. Other extinguishing gases (according to regulations).
Unsuitable extinguishing media	: Do not use water jets. They could cause splattering, and spread the fire. Use extinguishing media and procedures appropriate for the surrounding materials. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

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

Fire hazard	: The vapours are flammable and may form explosive mixtures with air.
Explosion hazard	: None.
Hazardous decomposition products in case of fire	: Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, NO <sub>x</sub> (harmful/toxic gases). Corrosive vapours. BO <sub>x</sub> . Chlorine.

#### 5.3. Advice for firefighters

Precautionary measures fire	: Do not breathe fumes. Eliminate all ignition sources if safe to do so.
Firefighting instructions	: Shut off source of product, if possible. If possible, move containers and drums away from danger area. Spilled product which is not burning should be covered with sand or foam. Use water sprays to cool containers and surfaces exposed to the flames. If the fire cannot be controlled, evacuate area.
Special protective equipment for firefighters	: Personal protection equipment for firefighters (see also sect. 8). EN 443. EN 469. EN 659. Self-contained breathing apparatus.
Other information	: In case of fire, do not discharge residual product, waste materials and runoff water: collect separately and use a proper treatment.

# Eni Aquamet 104 Plus

## Safety Data Sheet

According to Regulation (EU) No. 830/2015

### SECTION 6: Accidental release measures

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

General measures : Stop or contain leak at the source, if safe to do so. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares). Avoid accidental sprays on hot surfaces or electrical contacts. Avoid direct contact with released material. Keep upwind.

##### 6.1.1. For non-emergency personnel

Protective equipment : See Section 8.  
Emergency procedures : Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency.

##### 6.1.2. For emergency responders

Protective equipment : Small spillages: normal working clothes are usually adequate. Large spillages: full body suit of chemically resistant material. Work gloves (preferably gauntlets) providing adequate chemical resistance. Non-skid safety shoes or boots, chemical resistant. Work helmet. Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory protection: a half or full-face respirator with filter(s) for organic vapours (AX), or a Self-contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.

Emergency procedures : Notify local authorities according to relevant regulations.

#### 6.2. Environmental precautions

Clear spills immediately. Prevent product from entering sewers, rivers or other bodies of water. In case of contamination of environment compartments (soil, subsoil, surface or underground waters), remove contaminated soil when possible, and in any case treat all involved compartments in accordance with local regulations. The site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

#### 6.3. Methods and material for containment and cleaning up

For containment : Confine the spillage. Remove from surface by skimming or suitable absorbents. Collect recovered product and other materials in suitable waterproof containers. Notify local authorities according to regulations. If necessary dike the product with dry earth, sand or similar non-combustible materials. When inside buildings or confined spaces, ensure adequate ventilation. Absorb spilled product with suitable non-combustible materials. Collect free liquid and waste materials in suitable waterproof and oil resistant containers. Clean the contaminated area. Dispose of in accordance with relevant local regulations. Do not use solvents or dispersants, unless specifically advised by an expert, and, if required, approved by local authorities.

Methods for cleaning up : Wash contaminated area with large amounts of water.

Other information : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. Local regulations may also prescribe or limit actions to be taken. For this reason, local experts should be consulted when necessary.

#### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation. Keep away from heat/sparks/open flames/hot surfaces. Do not use electrical equipment (mobile phones etc.) not approved for use, according to the risk rating of the area. Do not use compressed air for filling, discharging, or handling operations. Use and store only outdoors or in a well-ventilated area. Use adequate personal protective equipment as needed. Before entering storage tanks and commencing any operation in a confined area (e.g. tunnels), carry out an adequate clean-up, and check the atmosphere for oxygen content and flammability. If the product is supplied in containers: Keep containers tightly closed and properly labelled. Keep only in the original container or in a suitable container for this kind of product.

Hygiene measures : Avoid contact with skin. Do not breathe fume/ mist/ vapours. Do not ingest. Do not smoke. Do not eat and do not drink during use. Do not clean hands with dirty or oil-soaked rags. Do not re-use clothes, if they are still contaminated. Keep away from food and beverages. Contaminated materials should not be allowed to accumulate in the workplaces and should never be kept inside the pockets. Take off immediately all contaminated clothing and wash it before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, well ventilated area. Keep away from open flames, hot surfaces and sources of ignition. Do not smoke. Protect against frost.

Incompatible products : Keep away from: strong acids and strong oxidants.

# Eni Aquamet 104 Plus

## Safety Data Sheet

According to Regulation (EU) No. 830/2015

Storage temperature	: 5 - 40 °C
Storage area	: Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation. Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.
Packages and containers:	: If the product is supplied in containers: Keep only in the original container or in a suitable container for this kind of product. Store in a well-ventilated place. Keep containers tightly closed and properly labelled. Empty containers may contain combustible product residues. Do not weld, solder, drill, cut or incinerate empty containers, unless they have been properly cleaned.
Packaging materials	: For containers, or container linings use materials specifically approved for use with this product.

### 7.3. Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Distillates (petroleum), hydrotreated light naphthenic (64742-53-6)		
Austria	MAK (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Belgium	Limit value (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark	Grænseværdi (langvarig) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Denmark	Grænseværdi (kortvarig) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Hungary	AK-érték	5 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Netherlands	MAC TGG 8h (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain	VLA-ED (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Spain	VLA-EC (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden	Nivågränsvärde (NVG) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Sweden	Kortidsvärde (KTV) (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Canada (Quebec)	VECD (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH	ACGIH TLV®-TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - ACGIH	ACGIH TLV®-STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (Mineral base oil mist, severely refined, DMSO extract <3% m/m)

### Monitoring methods

Monitoring methods	Monitoring procedures should be chosen according to the indications set by national authorities or labour contracts, Refer to relevant legislation and in any case to the good practice of industrial hygiene.
--------------------	--

### Eni Aquamet 104 Plus

DNEL/DMEL (additional information)	
Additional information	Not applicable

# Eni Aquamet 104 Plus

## Safety Data Sheet

According to Regulation (EU) No. 830/2015

Eni Aquamet 104 Plus	
PNEC (additional information)	
Additional information	Not applicable

Note : The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accord with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a governmental regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.

### 8.2. Exposure controls

#### Appropriate engineering controls:

Before entering storage tanks and commencing any operation in a confined area (e.g. tunnels), carry out an adequate clean-up, and check the atmosphere for oxygen content and flammability. Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

#### Personal protective equipment (for industrial or professional use):

Protective clothing. Gloves. Safety glasses. Dust/aerosol mask. Safety shoes or boots.

#### Hand protection:

Chemical resistant gloves (according to European standard NF EN 374 or equivalent). Adequate materials: nitrile (NBR) or neoprene with a protection index  $\geq 5$  (permeation time  $\geq 240$  mins). Protective gloves made of PVC. Butyl rubber. Thickness of glove material:  $> 0,4$  mm. Personal hygiene is a key element for an effective hand care. Gloves must be worn only with clean hands. After wearing gloves, hands must be carefully washed and dried. Use gloves respecting all the conditions and within the limits set by the manufacturer. Replace gloves immediately in case of cuts, holes or other signs of damages or degradation. If necessary, refer to the EN 374 standard.

#### Eye protection:

Chemical goggles or face shield. DIN EN 166

#### Skin and body protection:

Long-sleeved overalls. If necessary, refer to the EN 340 and related standards, for definition of characteristics and performance according to the risk rating of the area. Non-skid safety shoes or boots, chemical resistant.

#### Respiratory protection:

Not necessary with sufficient ventilation. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Open or well ventilated spaces: if the product is handled without adequate containment means for the vapours: use full or half-face masks with filter for hydrocarbon vapours (AX). (EN 136/140/145). Combination filter device (DIN EN 141). Closed or confined areas (e.g. tank interiors): the use of protection measures for airways (masks or self-contained breathing apparatus), must be assessed according to the specific activity, as well as level and duration of predicted exposure. (EN 136/140/145)

#### Personal protective equipment symbol(s):



#### Thermal hazard protection:

None in normal use conditions.

#### Environmental exposure controls:

Do not discharge the product into the environment. Storage areas/installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Onsite wastewater treatment required. Prevent discharge of undissolved substance to or recover from onsite wastewater. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

#### Consumer exposure controls:

Not applicable.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Liquid, bright & clear.
Molecular mass	: Not applicable for mixtures
Colour	: Amber.



# Eni Aquamet 104 Plus

## Safety Data Sheet

According to Regulation (EU) No. 830/2015

Odour	: characteristic.
Odour threshold	: There are no data available on the preparation/mixture itself.
pH	: 8 - 11 (5%)
Relative evaporation rate (butylacetate=1)	: Negligible.
Melting point	: No data available
Freezing point	: No data available
Boiling point	: $\approx 110\text{ }^{\circ}\text{C}$ (760 mm Hg)
Flash point	: No data available
Critical temperature	: Not applicable for mixtures
Auto-ignition temperature	: No data available
Decomposition temperature	: $200\text{ }^{\circ}\text{C}$
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Critical pressure	: Not applicable for mixtures
Relative vapour density at $20\text{ }^{\circ}\text{C}$	: No data available
Relative density	: No data available
Density	: $0,98 - 1,08\text{ g/ml}$ ( $20^{\circ}\text{C}$ )
Solubility	: No data available
Log Pow	: Not applicable for mixtures
Log Kow	: Not applicable for mixtures
Viscosity, kinematic	: $\approx 50\text{ cSt}$ ( $40^{\circ}\text{C}$ )
Viscosity, dynamic	: No data available
Explosive properties	: None (according to composition).
Oxidising properties	: None (according to composition).
Explosive limits	: No data available

### 9.2. Other information

VOC content :  $< 1\%$

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This mixture does not offer any further hazard for reactivity, except what is reported in the following paragraphs.

### 10.2. Chemical stability

Stable product, according to its intrinsic properties (in normal conditions of storage and handling).

### 10.3. Possibility of hazardous reactions

None (in normal conditions of storage and handling). Contact with strong oxidizers (peroxides, chromates, etc.) may cause a fire hazard. Heating up due to reaction with acids is possible.

### 10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

### 10.5. Incompatible materials

Strong oxidants and strong acids.

### 10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature. Thermal decomposition may produce : Toxic fumes.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)

Eni Aquamet 104 Plus	
LC50 inhalation rat (mg/l)	$\geq 5\text{ mg/l/4h}$
Distillates (petroleum), hydrotreated light naphthenic (64742-53-6)	
LD50 oral rat	$> 5000\text{ mg/kg}$ (OECD 401)
LD50 dermal rat	$> 5000\text{ mg/kg}$ (OECD 402)
LC50 inhalation rat (mg/l)	$> 5\text{ mg/l/4h}$ (OECD 403)

# Eni Aquamet 104 Plus

## Safety Data Sheet

According to Regulation (EU) No. 830/2015

### Pyridine-2-thiol 1-oxide, sodium salt (3811-73-2)

LD50 oral rat	1208 mg/kg bodyweight
LD50 dermal rabbit	1800 - 1900 mg/kg bodyweight
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 8 - 11 (5%)
Additional information	: (according to composition) Prolonged and repeated skin contact may cause reddening, irritation and dermatitis.
Serious eye damage/irritation	: Causes serious eye damage. pH: 8 - 11 (5%)
Additional information	: (according to composition)
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition) This product contains : Distillates (petroleum), hydrotreated light naphthenic; Baseoil—unspecified; [A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C15 through C30 and produces a finished oil with a viscosity of less than 100 SUS at 100 °F (19cSt at 40 °C). It contains relatively few normal paraffins.] this product has a value of DMSO extract < 3 % wt, according to IP 346/92. According to the criteria laid out by the EU (note L, Annex VI of Regulation (CE) 1272/2008), this product must be regarded as non carcinogenic.
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)

### Pyridine-2-thiol 1-oxide, sodium salt (3811-73-2)

LOAEL (oral, rat)	1,5 mg/kg bodyweight
LOAEC (inhalation, rat, vapour)	8,1 mg/m <sup>3</sup>
NOAEL (oral, rat)	0,5 mg/kg bodyweight
NOAEL (dermal, rat/rabbit)	5 - 15 mouse
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (according to composition)

### Distillates (petroleum), hydrotreated light naphthenic (64742-53-6)

LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day (OECD TG 408)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: Viscosity, kinematic: > 20,5 mm <sup>2</sup> /s (40 °C) (ASTM D 445)

### Eni Aquamet 104 Plus

Viscosity, kinematic	≈ 50 mm <sup>2</sup> /s (40°C)
Potential adverse human health effects and symptoms	: Causes serious eye damage. Inhalation of vapours may cause respiratory irritation. Avoid all eye and skin contact and do not breathe vapour and mist.
Other information	: Likely routes of exposure: skin and eye.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. An uncontrolled release to the environment may produce a contamination of different environmental compartments (air, soil, underground, surface water bodies, aquifers). Handle according to general working hygiene practices to avoid pollution and release into the environment.
Ecology - water	: Harmful to aquatic life. Forms emulsion in presence of water.
Acute aquatic toxicity	: Not classified (Based on available data, the classification criteria are not met)
Chronic aquatic toxicity	: Harmful to aquatic life with long lasting effects.

### Distillates (petroleum), hydrotreated light naphthenic (64742-53-6)

LC50 fish 1	> 100 mg/l (LL 50)
EC50 Daphnia 1	> 10000 mg/l WAF, 48 h (OECD 202)



# Eni Aquamet 104 Plus

## Safety Data Sheet

According to Regulation (EU) No. 830/2015

### Pyridine-2-thiol 1-oxide, sodium salt (3811-73-2)

LC50 fish 1	7,3 µg/l
EC50 Daphnia 1	600 µg/l

### 12.2. Persistence and degradability

#### Eni Aquamet 104 Plus

Persistence and degradability	Product is biodegradable with difficulty.
-------------------------------	---

#### Distillates (petroleum), hydrotreated light naphthenic (64742-53-6)

Persistence and degradability	The most significant constituents of the product should be considered as "inherently biodegradable", but not "readily biodegradable", and they may be moderately persistent, particularly in anaerobic conditions.
-------------------------------	--

### 12.3. Bioaccumulative potential

#### Eni Aquamet 104 Plus

Log Pow	Not applicable for mixtures
Log Kow	Not applicable for mixtures
Bioaccumulative potential	Low bioaccumulation potential.

### 12.4. Mobility in soil

#### Eni Aquamet 104 Plus

Ecology - soil	Slightly soluble product, readily forms deposits.
----------------	---

### 12.5. Results of PBT and vPvB assessment

#### Eni Aquamet 104 Plus

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Results of PBT-vPvB assessment	The components in this formulation do not meet the criteria for classification as PBT or vPvB. The product should be considered prudentially as "Persistent" in the environment, according to the REACH Annex XIII criteria (point 1.1)
--------------------------------	---

Component	
Distillates (petroleum), hydrotreated light naphthenic (64742-53-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII This substance does not meet the criteria for classification as PBT or vPvB. The product should be considered prudentially as "Persistent" in the environment, according to the REACH Annex XIII criteria (point 1.1)

### 12.6. Other adverse effects

Other adverse effects	: None.
Additional information	: No other effects known

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods	: Do not dispose of the product, either new or used, by discharging into sewers, tunnels, lakes or water courses. Deliver to a qualified official collector. Dispose of empty containers and wastes safely.
Sewage disposal recommendations	: Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed. Dispose of in a safe manner in accordance with local/national regulations.
Product/Packaging disposal recommendations	: European Waste Catalogue code(s) (Decision 2001/118/CE): 12 01 08* (machining emulsions and solutions containing halogens) (as emulsion/solution) (Ref: 2001/118/CE), 12 01 06* (mineral-based machining oils containing halogens (except emulsions and solutions)) (Ref: 2001/118/CE). This EWC code is only a general indication, and takes into account the original composition of the product and its intended use. The user has the responsibility of choosing the right EWC code, considering the actual use of the product, alterations and contaminations.
Additional information	: Empty containers may contain combustible product residues. Do not cut, weld, drill, burn or incinerate empty containers or drums, unless they have been cleaned, and declared safe. Dispose of empty, not cleaned containers safely, according to local regulations.
Ecology - waste materials	: The product as it is CONTAINS HALOGENATED SUBSTANCES.
EURAL code (EWC)	: 12 01 06* - Mineral-based machining oils containing halogens (except emulsions and solutions) 12 01 08* - machining emulsions and solutions containing halogens

## SECTION 14: Transport information

In accordance with ADN / ADR / IATA / IMDG / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

# Eni Aquamet 104 Plus

## Safety Data Sheet

According to Regulation (EU) No. 830/2015

ADR	IMDG	IATA	ADN	RID
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

### 14.6. Special precautions for user

#### - Overland transport

Not regulated

#### - Transport by sea

Not regulated

#### - Air transport

Not regulated

#### - Inland waterway transport

Not regulated

#### - Rail transport

Not regulated

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

IBC code : Not applicable.

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	Distillates (petroleum), hydrotreated light naphthenic - Pyridine-2-thiol 1-oxide, sodium salt
3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	Eni Aquamet 104 Plus - Distillates (petroleum), hydrotreated light naphthenic - Pyridine-2-thiol 1-oxide, sodium salt - N,N-bis(2-hydroxyethyl)oleamide - Benzene, C10-12-alkyl derivatives, distillation residues, sulfonated, sodium salts
3(c) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1	Eni Aquamet 104 Plus - Pyridine-2-thiol 1-oxide, sodium salt - Benzene, C10-12-alkyl derivatives, distillation residues, sulfonated, sodium salts - Alcohols, C14-18, ethoxylated propoxylated

No ingredients are included in the REACH Candidate list (> 0,1 % m/m).

Contains no REACH Annex XIV substances

VOC content : < 1 %

# Eni Aquamet 104 Plus

## Safety Data Sheet

According to Regulation (EU) No. 830/2015

Other information, restriction and prohibition regulations : Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). (et sequens). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (et sequens). Directives 89/391/CEE, 89/654/CEE, 89/655/CEE, 89/656/CEE, 90/269/CEE, 90/270/CEE, 90/394/CEE, 90/679/CEE, 93/88/CEE, 95/63/CE, 97/42/CE, 98/24/CE, 99/38/CE, 99/92/CE, 2001/45/CE, 2003/10/CE, 2003/18/CE (Health and safety on the workplace). Directive 2012/18/CE (Control of major-accident hazards involving dangerous substances). Directive 2004/42/CE (Limitation of emissions of Volatile Organic Compounds). Directive 98/24/EC (protection of the health and safety of workers from the risks related to chemical agents at work). Directive 92/85/CE (measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding). Substances Depleting the Ozone layer (1005/2009) - Annex I Substances (ODP). Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC. Regulation EU (649/2012) - Export and Import of hazardous chemicals (PIC).

### 15.1.2. National regulations

National adoption of EU Directives concerning health and safety on the workplace.

National adoption of EU Directives concerning control of major-accident hazards involving dangerous substances (2012/18/CE).

Relevant national laws on prevention of water pollution.

Relevant national laws on protection of the health of pregnant workers (National adoption of Dir. 92/85/EEC).

National adoption of Directives 75/439/CEE - 87/101/CEE concerning disposal of used oils.

#### France

Maladies professionnelles (F) : RG 36 - Affections provoquées par les huiles et graisses d'origine minérale ou de synthèse

#### Germany

Reference to AwSV : Water hazard class (WGK) (D) 2, significant hazard to water (Classification according to AwSV, Annex 1)

WGK remark : Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS)

VbF class (D) : Not applicable.

Storage class (LGK) (D) : LGK 10 - Combustible liquids

Employment restrictions : Employment prohibitions or restrictions on the protection of young people at work according to § 22 JArbSchG in the case of formation of hazardous substances have to be observed.  
Employment prohibitions and restrictions according to § 4 and § 5 MuSchArbV have to be observed.

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Other information, restrictions and prohibition regulations : TRGS 400: Hazard assessment for activities involving Hazardous Substances  
TRGS 401: Risks resulting from skin contact - identification, assessment, measures  
TRGS 402: Identification and Assessment of the Risks from Activities involving Hazardous Substances: Inhalation Exposure  
TRGS 500: Protective measures  
TRGS 510: Storage of hazardous substances in non-stationary containers  
TRGS 555: Working instruction and information for workers  
TRGS 900: Occupational Exposure Limits

#### Netherlands

Waterbezwaarlijkheid : 8 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment  
9 - Harmful to aquatic organisms

Saneringsinspanningen : C - Minimize discharge

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

#### Denmark

Danish National Regulations : Pregnant/breastfeeding women working with the product must not be in direct contact with it

# Eni Aquamet 104 Plus

## Safety Data Sheet

According to Regulation (EU) No. 830/2015

### 15.2. Chemical safety assessment

For this mixture a chemical safety assessment has been not carried out

**A chemical safety assessment has been carried out for the following components of this mixture:**

Distillates (petroleum), hydrotreated light naphthenic  
Pyridine-2-thiol 1-oxide, sodium salt

### SECTION 16: Other information

Indication of changes:

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

Composition/information on ingredients.

Abbreviations and acronyms:

	Complete text of the H phrases quoted in this Safety Data Sheet. These phrases are reported here for information only, and MAY NOT correspond to the classification of the product.
	N/A = not applicable
	N/D = not available
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Effective concentration for 50 percent of test population (median effective concentration)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Lethal concentration for 50 percent of test population (median lethal concentration)
LD50	Lethal dose for 50 percent of test population (median lethal dose)
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals, Regulation (EC) No 1907/2006
RID	Regulation concerning the International Carriage of Dangerous Goods by Railways
SDS	Safety Data Sheet
STP	Sewage treatment plant
vPvB	Very Persistent and Very Bioaccumulative

Data sources : This Safety Data Sheet is based on the real characteristics of the components and their combination, taking into account the information provided by the suppliers.

Training advice : Provide adequate training to professional operators for the use of PPEs, according to the information contained in this Safety Data Sheet.

Other information : Do not use the product for any purposes that have not been advised by the manufacturer.

Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.

# Eni Aquamet 104 Plus

## Safety Data Sheet

According to Regulation (EU) No. 830/2015

H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

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

Eye Dam. 1	H318	Calculation method
Aquatic Chronic 3	H412	Calculation method

SDS EU (REACH Annex II)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*