

Material Safety Data Sheet According to Regulation (EC) No. 1907/2006

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

1.1 Product identifier

1.1.1 Identification on the label / trade name

Trade Name: AVISTA Fuel Premium 10

1.1.2 EINECS-Name, EINECS-Number, Index-Number, CAS-Number

EINECS-Name: Fuel Oil No. 4
EINECS- No.: 270-673-5
Index- No.: 649-226-00-7
CAS- No.: 68476-31-3

1.1.2 REACH registration number

The substance must not be registered according to REACH (article 2.7 d).

1.1.3 Main use of the product

Distillate for thermal use or for further processing.

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

1.2.1 Identified uses

Recommendation:

Distillate for thermal use or for further processing.
Consideration of CONCAWE's suggested identified uses.

1.2.2 Uses advised against

Not applicable.

1.3. Details of the supplier of the safety data sheet

AVISTA OIL Danmark A/S
Juelsmindevej 6 – 18
4400 Kalundborg
Denmark
Telefon +45 59 56 56 44
Fax +45 59 56 56 88

E-Mail (competent person): msds@avista-oil.de

1.4. Emergency telephone number (only during business hours, Mo - Thu 9 - 15, Fr 9 - 12)

Telephone: +49 (0) 5177 85 -100 (Frau Dr. Ohnesorge)
E-mail: msds@avista-oil.de

2. Hazardous Identification

2.1. Classification of the substance or mixture

2.1.1 Regulation (EC) No. 1272/2008 (CLP)

Carc. 2 Carcinogenicity category 2
H351 Suspected of causing cancer.
Asp. 1 Aspiration hazard category 1
H304 May be fatal if swallowed and enters airways.

2.1.2 67/548/EEC or 1999/45/EC

Carc. Cat. 3 Carcinogenicity category 3
R40 Limited evidence of a carcinogenic effect.

2.1.3 Additional hints

Use: Formation of ignitable vapour/air mixtures possible.

2.2. Label elements

Pictogram:



Signal word:

Warning

Hazards Statements:

H304 May be fatal if swallowed and enters airways.
H351 Suspected of causing cancer.

Precautionary Statements:

P201 Obtain special instructions before use.
P281 Use personal protective equipment as required.
P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P308+313 IF exposed or concerned: Get medical advice/attention.
P331 Do NOT induce vomiting.
P501 Dispose of contents/container to

Contains:

Fuel Oil No. 4

2.3. Other hazards

Product can build up a film on the water surface which can inhibit the oxygen exchange.
See also sections 11, 12 and 15.

3. Composition / information on Ingredients

3.1. Substances

3.1.1 General description

Complex hydrocarbon mixture containing paraffinic, cycloparaffinic, aromatic and olefinic hydrocarbons

3.1.2 Hazard ingredients

<i>Chemical name</i>	<i>EG-No. CAS-No. Index-No. Reg.-No.</i>	<i>Conc. [%]</i>	<i>Classification according Regulation (EC) No 1272/2008</i>	<i>Classification according 67/548/EEC</i>
Fuel Oil No. 4	270-673-5 68476-31-3 649-226-00-7 ---	100	Carc. 2; H351 Asp. 1; H304	Carc. Cat. 3; R40

3.1.3 Additional hints

Full text of hazard symbols and R-phrases: see section 16.

3.2. Mixtures

3.2.1 General description

Not applicable. The product is a substance.

3.2.2 Hazard ingredients

Not applicable. The product is a substance.

3.2.3 Additional hints

Not applicable. The product is a substance.

4. First Aid Measures

4.1. Description of first aid measures

4.1.1 In case of inhalation

Provide affected person with fresh air. In case of accident or illness/indisposition, seek medical advice immediately (show doctor directions for use or safety data sheet if possible).

4.1.2 In case of skin contact

After skin contact, wash immediately with soap and plenty of water, remove contaminated, saturated clothing. In case of skin irritation (redness etc.), consult a doctor.

4.1.3 In case of eye contact

In case of eye contact, rinse immediately thoroughly with plenty of water and if necessary consult a doctor. Carry along safety data sheet.

4.1.4 In case of ingestion

Do not induce vomiting, consult a doctor immediately. Observe risk of aspiration.

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

No data available.

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

No data available.

5. Fire Fighting Measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media

Carbon dioxide
Foam
Dry fire-extinguishing media

5.1.2 Extinguishing media which must not be used for safety reasons

Water

5.2. Special hazards arising from the substance or mixture

Formation of ignitable vapour/air mixtures possible.
Hot product may produce flammable vapours.

Substances potentially set free in case of fire:

Toxic pyrolysis products
Smoke
Carbon oxides
Cracking products
Toxic gases

5.3. Advice for fire fighters

Wear self-contained breathing apparatus.
According to extend of fire wear full protective clothing if necessary.
Dispose contaminated fire extinguishing water according to official directives.

5.3.1 Fire class (EN 2)

B (fires involving flammable or combustible liquids)

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation.
Keep away from sources of ignition, do not smoke.
Avoid eye and skin contact as well as inhalation.
Do not put any rags impregnated with the product into your trouser pockets.
Attention, risk of slipping.

6.2. Environmental precautions

Contain spillage.
Do not allow to enter drains.
Avoid entering surface waters or groundwater as well as into soil.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. general-purpose binder), treat recovered material as prescribed in section 13.

6.4. Reference to other sections

See section 13. As well as personal protective equipment see section 8.

7. Handling and Storage

7.1. Precautions for safe handling

7.1.1 Hints for safe handling

See section 6.1.

Avoid eye and skin contact.

Avoid formation of oil spray.

Keep away from sources of ignition - refrain from smoking.

Wash hands before breaks and on finishing work.

Apply the general hygienic measures for handling of chemicals.

Pay attention to the indications on the label and to the instructions for use.

Do not heat up to temperatures near flashpoint ($T > 61\text{ °C}$).

Possibly take precautionary measures against electrostatic loading.

Possibly take precautionary measures against risk of explosion.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Requirements for storage rooms and vessels

Do not store product in alley ways and staircases.

Store only in original container and keep locked up.

Do not store together with fire promoting or spontaneously combustible substances.

7.2.2 Further information on storage conditions

See section 10.2.

Keep locked up and avoid humidity.

Do store in a cool place.

Do not store at temperatures exceeding 50°C.

Storage class acc. to VCI: 10

7.3. Specific end use(s)

Observe technical data sheet.

8. Exposure controls / Personal protection

8.1. Control parameters

8.1.1 Exposure limit values

8.1.1.1 Air limit values

Limit value type (country of origin)	Substance name	EG-Nr. CAS-Nr.	Limit Value	Remark
TLV-ACGIH	Mineralölnebel	---	5 mg/m ³	
	Fuel Oil No. 4	270-673-5 68476-31-3	1000 mg/m ³ 200 mL/m ³	

8.1.1.2 Biological limit values

No data available.

8.1.1.3 Additional exposure limits under the conditions of use

No data available.

8.2. Exposure controls

8.2.1. Occupational exposure controls

8.2.1.1 Product related measures to prevent exposure

No data available.

8.2.1.2 Instructual measures to prevent exposure

No data available.

8.2.1.3 Organisational measures to prevent exposure

No data available.

8.2.1.4 Technical measures to prevent exposure

Ensure sufficient aeration. This can be achieved by local exhaust ventilation or general exhaust air. If this is not sufficient to keep concentrations below AGW-values suitable respiratory protection apparatus has to be worn.

8.2.1.5 Personal protection equipment

Respiratory protection:

Not required in normal case.

In case of mineral oil mist formation, in case of vapour formation: Filter A - P2 (EN 141)

Hand protection:

Suitable are for example hand gloves from the company KCL GmbH, D-36124 Eichenzell, e-mail: vertrieb@kcl.de with the following specification (test according to EN374):

In full contact / splash contact:

	Product name	Glove material	Layer thickness (min.)	Breakthrough time
731	Camatril	Nitril	0,33 mm	480 min
740	Dermatril	Nitril	0,11 mm	30 min

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374. The breakthrough times stated above were determined by KCL in laboratory tests according to EN374 and are only authoritative for the recommended glove types. Skin cream is recommendable.

Eye protection:

If there is a risk of eye contact: Eye glasses with side protection (EN 166).

Protective clothing:

Protective clothing (e.g. safety shoes EN 344, work clothes with long sleeves). According to working process wear Apron, Boots (EN 347).

8.2.2 Environmental exposure controls

8.2.2.1 Product related measures to prevent exposure

No data available.

8.2.2.2 Instructual measures to prevent exposure

No data available.

8.2.2.3 Organisational measures to prevent exposure

No data available.

8.2.2.4 Technical measures to prevent exposure

See section 6.

8.2.3 Consumer exposure control

8.2.3.1 Measures related to consumer uses of the substance (as such or in preparations)

No data available.

8.2.3.2 Measures related to the service life of the substance in articles

No data available.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

9.1.1 Physical and chemical properties

Physical state:	Liquid
Colour:	ASTM 5
Colour:	Brown
Odour:	Characteristic
Odour threshold:	No data available (lack of data).
pH:	Not applicable.

9.1.2 Safety relevant basis data

Initial boiling point / boiling range:	180 – 380 °C	
Melting point / freezing point:	No data available (lack of data).	
Flash point:	> 61 °C	DIN EN ISO 2719
Ignition Temperature:	> 200 °C	ASTM E 659
Decomposition temperature:	No data available (lack of data).	
Oxidizing properties:	No data available (lack of data).	
Flammability:	No data available (lack of data).	
Evaporation range:	No data available (lack of data).	
Lower explosion limit:	In case of formation of oil sprays, ~ 0.6 Vol%	
Upper explosion limit:	In case of formation of oil sprays, ~ 6.5 Vol%	
Vapour pressure:	1013 mbar @ 170 °C	
Vapour density:	No data available (lack of data).	
Relative Density:	~ 860 kg/m ³ @ 15 °C	DIN 51757
Water solubility:	Insoluble	
Partition coefficient (n-octanol/water):	No data available.	
Vapour density (air = 1):	Vapours, heavier than air	
Viscosity:	10 – 30 mm ² /s @ 20 °C	DIN 51562
	5 - 15 mm ² /s @ 40 °C	

9.2. Other information

No data available.

10. Stability and Reactivity

10.1. Reactivity

See section 9.

10.2. Chemical stability

If product is stored and handled as prescribed it is stable.

10.3. Possibility of hazardous reactions

Formation of ignitable vapours/gases possible.

10.4. Conditions to avoid

Avoid contact with strong oxidizing agents.

See section 7.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

See section 5.3.

11. Toxicological information

11.1. Information on toxicological effects

11.1.1 Acute toxicity and immediately occurring effects

	Effect dose		Value	Spezies	Remark
Oral	LD50	mg/kg	> 2,000 > 2,000	Rat	OECD 401, limit test test of a similar formulation, literature
Inhalation	LC50	mg/L (4h)	No data available.	---	---
Dermal	LD50	mg/kg	No data available.	---	---
Eyes	---	---	No data available.	---	---

11.1.2 Delayed occurring and chronic effects

Effect	Value	Method	Remark
Sensitizing effects	No.	---	test of a similar formulation, literature
Carcinogenic effects	Carc. Cat. 3 (67/548/EEC)	---	test of a similar formulation, literature
Mutagenic effects	No data available.	---	---
Reproductive effects	No data available.	---	---
Narcotic effects	No data available.	---	---

11.2 Other information

It can occur:

Eye irritation.

In case of prolonged exposure:

Skin dehydration.

Skin irritation.

Dermatitis.

If swallowed:

Pulmonary damage

Pulmonary oedema

Impact on central nervous system

12. Ecological information

12.1. Toxicity

Aquatic toxicity	Parameter	Exposure time	Value	Remark
Acute fish toxicity	LC50	96 h	---	---
Acute daphnia toxicity	EC50	48 h	> 100 mg/L	OECD 202, part 1
Acute algae toxicity	IC50	72 h	---	---

12.2. Persistence and degradability

Not readily biodegradable (according to OECD criteria)
Inherently biodegradable (main ingredient indication)

12.3. Bioaccumulative potential

Accumulation in organisms possible.

12.4. Mobility in soil

Adsorption at soil.

12.5. Results of PBT and vPvB assessment

Behaviour in waste water treatment plants:

Can be separated mechanically.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

13.1.1 Appropriate disposal / product

Saturated contaminated cloth, paper or other organic material pose a fire danger and have to be collected and disposed in a controlled way.

Waste code EC:

13 07 01 – Fuel oil and diesel

13 07 03 – Other fuels (including mixtures)

The named waste codes are recommendations because of the likely use of this product.

Due to specific use and disposal circumstances at the user other waste codes may be suitable.

13.2 Appropriate disposal / packaging

See section 13.1

Observe official regulations.

Non-contaminated packages can be reused.

Packages that cannot be cleaned have to be disposed like the product.

Waste code for not cleaned packaging (contaminated packages):

15 01 10 – Packaging containing residues of or contaminated by dangerous substances

14. Transport information

14.1 ADR/RID

Not classified.

14.2 ADNR

14.2.1 UN-Number

UN 9003

14.2.2 Ordnungsgemäße UN-Versandbezeichnung

Substances having a flashpoint between 60°C and 100°C

14.2.3 Transport hazard class(es)

Class 9 (CMR, F, tank ship type N)

14.2.4 Umweltgefahren

None.

14.3 IMDG

Not classified.

14.4 IATA

Not classified.

15. Regulatory information

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

15.1.1 National Regulations (Germany)

WGK: Water hazardous (WGK – 2, self-classification, VwVwS)

TA-Luft: No data available.

Additions: Observe youth labour law.
Observe law on the protection of expectant and nursing mothers.

15.2 Chemical safety assessment

No data available.

16. Other information

16.1 R-phrases named in item 3

H304 May be fatal if swallowed and enters airways.

H351 Suspected of causing cancer.

R40 Limited evidence of a carcinogenic effect.

16.2 Additional information

This information refers to the product in delivery condition.

Revised particulars: 1 – 14

Legend

ACGIH:	American Conference of Governmental Industrial Hygienists
AGW:	Occupational exposure limit value (Arbeitsplatzgrenzwert)
AOX:	Adsorbable Organohalogens
BGW:	Biological Limit Value (Biologischer Grenzwert)
VbF:	Regulation concerning flammable liquids (Verordnung über brennbare Flüssigkeiten)
TLV:	Threshold Limit Value (Schwellenwert)
TRbF:	Technical guideline for flammable liquids (Technische Regeln für brennbare Flüssigkeiten)
VCI:	(Verband der chemischen Industrie)
VOC:	Volatile organic compounds
VwVwS:	Regulation for non-hazardous to water substances (Verwaltungsvorschrift wassergefährdende Stoffe, German regulation)
WGK:	Water hazard class (Wassergefährdungsklasse)

The information herein are to describe the product with regard to the required safety precautions, they do not intend to assure certain properties and are based upon today's standard of knowledge.

Liability excluded.