

SAFETY DATA SHEET

According to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
30-11-2022 (Revision date); 30-11-2022 (Printing date)
Issue date: 22-5-2018 Revision date: 30-11-2022 Supersedes version of: 29-9-2022 Version: 2.7

AREOL
PREMIUM QUALITY
IN EVERY DROP

1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier

Product form: Mixture
Trade name: AREOL ECO Energy DX1 0W-20
Product code: AREOL NS-A.06.09
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, Consumer use.
Use of the substance/mixture: Engine oil.
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:

ATH&S GmbH
Broenninghauser Str. 33
33729 Bielefeld, Deutschland
www.areollub.com

Department providing information:

Product Safety Department: safety@areollub.com

Emergency telephone number:

+49 521 55 35 938 (monday - friday, 9-18)



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2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Not classified.

Adverse physicochemical, human health and environmental effects:

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2 Label elements

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

EUH-statements:

EUH208 - Contains Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs, calcium salts.
May produce an allergic reaction.

EUH210 - Safety data sheet available on request.

2.3 Other hazards

Contains no PBT/vPvB substances \geq 0.1% assessed in accordance with REACH Annex XIII.

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

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3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable.

3.2 Mixtures

Comments: Highly refined mineral oils and additives.

| PRODUCT/INGREDIENT NAME | IDENTIFIERS | % | REGULATION (EC) № 1272/2008 [CLP] |
|--|--|-----------|-----------------------------------|
| Distillates (petroleum), hydrotreated heavy paraffinic (Note L) | CAS-No.: 64742-54-7 EC-No.: 265-157-1 EC Index-No.: 649-467-00-8 REACH-no: 01-2119484627-25 | 50 - 80 | Asp. Tox. 1, H304 |
| Blend of mineral oils * (*)(Note L) | - | 5 - 10 | Asp. Tox. 1, H304 |
| Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts | CAS-No.: 722503-68-6 EC-No.: 682-816-2 | 0,1 - 0,3 | Skin Sens. 1B, H317 |

SPECIFIC CONCENTRATION LIMITS

| PRODUCT/INGREDIENT NAME | IDENTIFIERS | % |
|--|---|-----------------------------------|
| Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts | CAS-No.: 722503-68-6 EC-No.: 682-816-2 | (2 ≤C < 100) Skin Sens. 1B, H317 |

Comments: The highly refined mineral oil contains <3% (w/w) DMSOextract, according to Ip346.

*: contains one or more of the following CAS-numbers (REACH registration numbers):

64741-88-4 (01-2119488706-23), 64741-89-5 (01-2119487067-30), 64741-95-3 (01-2119487081-40), 64741-96-4 (01-2119483621-38), 64741-97-5 (01-2119480374-36), 64742-01-4 (01-2119488707-21), 64742-52-5 (01-2119467170-45), 64742-53-6 (01-2119480375-34), 64742-54-7 (01-2119484627-25), 64742-55-8 (01-2119487077-29), 64742-56-9 (01-2119480132-48), 64742-57-0 (01-2119489287-22), 64742-62-7 (01-2119480472-38), 64742-65-0 (01-2119471299-27), 64742-71-8 (01-2119485040-48), 72623-85-9 (01-2119555262-43), 72623-86-0 (01-2119474878-16), 72623-87-1 (01-2119474889-13), 74869-22-0 (01-2119495601-36).

Note L : The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346 'Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions – Dimethyl sulphoxide.

Extraction refractive index method', Institute of Petroleum, London. This note applies only to certain complex oil-derived substances in Part 3.

Full text of H- and EUH-statements: see section 16.

4 FIRST AID MEASURES

4.1. Description of first aid measures

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact: Wash skin with plenty of water.

First-aid measures after eye contact: Rinse eyes with water as a precaution.

First-aid measures after ingestion: Call a poison center or a doctor if you feel unwell.

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

No additional information available.

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

Treat symptomatically.

5 FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Combustible liquid.

Hazardous decomposition products in case of fire: Toxic fumes may be released. Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

5.3. Advice for firefighters

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures: Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Take up liquid spill into absorbent material.

Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

7 HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling: Provide good ventilation in process area to prevent formation of vapour.

Hygiene measures: 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: Keep container closed when not in use. Keep in a cool, well-ventilated place away from heat.

Storage temperature : 0 – 40 °C.

7.3. Specific end use(s)

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No additional information available.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

AREOL ECO Energy DX1 0W-20

EU - Indicative Occupational Exposure Limit (IOEL)

Exposure limits/standards for materials that can be formed when handling this product. When mists/aerosols can occur the following is recommended

5 mg/m³ - ACGIH TLV (inhalable fraction)

8.1.2. Recommended monitoring procedures

No additional information available.

8.1.3. Air contaminants formed

No additional information available.

8.1.4. DNEL and PNEC

No additional information available.

8.1.5. Control banding

No additional information available.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection: Safety glasses.

EYE PROTECTION

| TYPE | FIELD OF APPLICATION | CHARACTERISTICS | STANDARD |
|----------------|----------------------|-----------------|----------|
| Safety glasses | Droplet | clear | EN 166 |

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing.

Hand protection: Protective gloves.

HAND PROTECTION

| TYPE | MATERIAL | PERMEATION | THICKNESS (MM) | PENETRATION | STANDARD |
|-----------------|----------------------|-------------------|----------------|-------------|------------|
| Reusable gloves | Nitrile rubber (NBR) | 6 (> 480 minutes) | ≥0.35 | | EN ISO 374 |

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Other skin protection:

Materials for protective clothing: Wear suitable protective clothing.

8.2.2.3. Respiratory protection

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

8.2.2.4. Thermal hazards

No additional information available.

8.2.3. Environmental exposure controls

Environmental exposure controls: Avoid release to the environment.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state: Liquid.

Colour: brown.

Odour: characteristic.

Odour threshold: Not available.

Melting point: Not applicable.

Freezing point: -42 °C - ASTM D5950 (pour point).

Boiling point: Not available.

Flammability: Not applicable.

Explosive properties: Presents no particular fire or explosion hazard.

Explosive limits: Not available.

Lower explosion limit: Not available.

Upper explosion limit: Not available.

Flash point: 226 °C - ASTM D92 (COC).

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

pH: Not available.

Viscosity, kinematic: 44,5 mm²/s (40 °C) - ASTM D7279.

Solubility: Water: Insoluble / Slightly miscible.

Partition coefficient n-octanol/water (Log Kow): Not available.

Vapour pressure: Not available.

Vapour pressure at 50°C: Not available.

Density: 0,844 kg/l (15 °C) - ASTM D4052.

Relative density: Not available.

Relative vapour density at 20°C: Not available.

Particle characteristics: Not applicable.

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available.

9.2.2. Other safety characteristics

VOC content: 0 %

10 STABILITY AND REACTIVITY

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Reacts violently with (strong) oxidizers.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available.

10.6. Hazardous decomposition products

No decomposition if stored normally.

11 TOXICOLOGICAL INFORMATION

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

Acute toxicity (oral): Not classified.

Acute toxicity (dermal): Not classified.

Acute toxicity (inhalation): Not classified.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC (64742-54-7)

| | |
|-----------------------|----------------|
| LD50 oral rat | > 5000 mg/kg |
| LD50 dermal rabbit | > 2000 mg/kg |
| LC50 Inhalation - Rat | > 5,53 mg/l/4h |

BLEND OF MINERAL OILS *

| | |
|-----------------------------------|--|
| LD50 oral rat | > 5000 mg/kg Data from similar product |
| LD50 dermal rabbit | > 5000 mg/kg Data from similar product |
| LC50 Inhalation - Rat (Dust/Mist) | > 5 mg/l/4h Data from similar product |

Skin corrosion/irritation: Not classified.

Serious eye damage/irritation: Not classified.

Respiratory or skin sensitisation: Not classified.

Germ cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive toxicity: Not classified.

STOT-single exposure: Not classified.

STOT-repeated exposure: Not classified.

Aspiration hazard: Not classified.

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| | |
|----------------------|--|
| Viscosity, kinematic | 44,5 mm ² /s (40 °C) - ASTM D7279 |
|----------------------|--|

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC (64742-54-7)

| | |
|--|---------------------------|
| Viscosity, kinematic | < 20,5 mm ² /s |
| Aliphatic, alicyclic or aromatic hydrocarbon | Yes |

BLEND OF MINERAL OILS *

| | |
|--|---------------------------|
| Viscosity, kinematic | < 20,5 mm ² /s |
| Aliphatic, alicyclic or aromatic hydrocarbon | Yes |

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12 ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute): Not classified.

Hazardous to the aquatic environment, long-term (chronic): Not classified.

Not rapidly degradable.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC (64742-54-7)

| | |
|------------------------|--|
| LC50 - Fish [1] | > 100 mg/l (Pimephales promelas, 96h) (OECD 203 method) |
| EC50 - Crustacea [1] | > 10000 mg/l (Gammarus pulex, 48h) (OECD 202 method) |
| EC50 72h - Algae [1] | > 100 mg/l |
| NOEC (acute) | ≥ 100 mg/l (Pseudokirchnerella subcapitata, 72h) (OECD 201 method) |
| NOEC chronic crustacea | 10 mg/l (Daphnia magna, 21d) (OECD 211 method) |

BLEND OF MINERAL OILS *

| | |
|------------------------|--|
| LC50 - Fish [1] | > 100 mg/l Data from similar product |
| EC50 - Crustacea [1] | > 10000 mg/l Data from similar product |
| EC50 72h - Algae [1] | > 100 mg/l Data from similar product |
| NOEC chronic crustacea | > 10 mg/l |
| NOEC chronic algae | > 10 mg/l (Water flea (Daphnia magna), 21 d) |

12.2. Persistence and degradability

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC (64742-54-7)

| | |
|----------------|-------------------------------|
| Biodegradation | 31 % (28d) (OECD 301F method) |
|----------------|-------------------------------|

12.3. Bioaccumulative potential

No additional information available.

12.4. Mobility in soil

No additional information available.

12.5. Results of PBT and vPvB assessment

No additional information available.

12.6. Endocrine disrupting properties

No additional information available.

12.7. Other adverse effects

No additional information available.

13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste treatment methods:

Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations:

Dispose in a safe manner in accordance with local/national regulations.

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European List of Waste (LoW) code:
13 02 05* - mineral-based non-chlorinated engine, gear and lubricating oils.

14 TRANSPORT INFORMATION

| ADR | IMDG | IATA | AND | RID |
|---|---------------|---------------|---------------|---------------|
| 14.1. UN number or ID number | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.2. UN proper shipping name | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.3. Transport hazard class(es) | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.4. Packing group | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.5. Environmental hazards | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |

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. Maritime transport in bulk according to IMO instruments

Not applicable.

15 REGULATORY INFORMATION

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

| EU RESTRICTION LIST (REACH ANNEX XVII) | |
|--|--|
| REFERENCE CODE | APPLICABLE ON |
| 3(b) | Distillates (petroleum), hydrotreated heavy paraffinic ; Blend of mineral oils * |

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List).

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List.

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals).

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants).

Ozone Regulation (1005/2009)

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Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer).

VOC Directive (2004/42)

VOC content: 0 %

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors).

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances).

15.1.2. National regulations

No additional information available.

16 OTHER INFORMATION

INDICATION OF CHANGES

| SECTION | CHANGED ITEM | CHANGE | COMMENTS |
|---------|--|----------|----------|
| 1.1 | Name | Modified | |
| 1.1 | Trade name | Modified | |
| 2.2 | EUH-statements | Modified | |
| 3 | Composition/information on ingredients | Modified | |
| 9.1 | Density | Modified | |
| 9.1 | Viscosity, kinematic | Modified | |
| 9.1 | Flash point | Modified | |
| 9.1 | Freezing point | Modified | |

Abbreviations and acronyms:

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.

BLV = Biological limit value.

BOD = Biochemical oxygen demand (BOD).

COD = Chemical oxygen demand (COD).

DMEL = Derived Minimal Effect level.

DNEL = Derived-No Effect Level.

EC-No. = European Community number.

EC50 = Median effective concentration.

EN = European Standard.

IARC = International Agency for Research on Cancer.

IATA = International Air Transport Association.

IMDG = International Maritime Dangerous Goods.

LC50 = Median lethal concentration.

LD50 = Median lethal dose.

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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.
OEL = Occupational Exposure Limit.
PBT = Persistent Bioaccumulative Toxic.
PNEC = Predicted No-Effect Concentration.
RID = Regulations concerning the International Carriage of Dangerous Goods by Rail.
SDS = Safety Data Sheet.
STP = Sewage treatment plant.
ThOD = Theoretical oxygen demand (ThOD).
TLM = Median Tolerance Limit.
VOC = Volatile Organic Compounds.
CAS-No. = Chemical Abstract Service number.
N.O.S. = Not Otherwise Specified.
vPvB = Very Persistent and Very Bioaccumulative.
ED = Endocrine disrupting properties.

Full text of H- and EUH-statements:

Asp. Tox. 1 = Aspiration hazard, Category 1.
EUH208 = Contains Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs, calcium salts.
May produce an allergic reaction.
EUH210 = Safety data sheet available on request.
H304 = May be fatal if swallowed and enters airways.
H317 = May cause an allergic skin reaction.
Skin Sens. 1B = Skin sensitisation, category 1B.

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.