SAFETY DATA SHEET

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

1.1 Product identifier

Product name Aral HVO

UFI: 2MU4-X0EA-H004-244E

Other means of identification Hydrotreated Vegetable Oil; Paraffinic diesel fuel from synthesis or hydrotreatment in accordance with standard EN 15940.

Proper shipping name MARPOL Annex 1 rules apply for bulk shipments by sea.
Category: Alkanes (C10–C26), linear and branched, (flashpoint ≤60°C)

SDS # SGY2724

Product type Clear, Liquid.

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

Use of the substance/ mixture Fuel
For specific application advice see appropriate Technical Data Sheet or consult our company representative.

1.3 Details of the supplier of the safety data sheet

Supplier
Aral Aktiengesellschaft
Wittener Str. 45
44789 Bochum
Germany
Telefon: +49 (0) 234 315-0

E-mail address MSDSadvice@bp.com

1.4 Emergency telephone number

EMERGENCY TELEPHONE NUMBER +49 (0) 30 30686 790 (Giftnotruf Berlin/Emergency Poison Centre)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition Mixture

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

Flam. Liq. 3, H226
Asp. Tox. 1, H304

See Section 16 for the full text of the H statements declared above.

See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.

2.2 Label elements

UFI: 2MU4-X0EA-H004-244E

Hazard pictograms

Signal word Danger

Hazard statements
H226 - Flammable liquid and vapour.
H304 - May be fatal if swallowed and enters airways.

Precautionary statements

General
P102 - Keep out of reach of children.
P101 - If medical advice is needed, have product container or label at hand.

Prevention P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

Storage P405 - Store locked up.

SECTION 2: Hazards identification

Disposal P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients Renewable hydrocarbons (diesel type fraction)

Supplemental label elements Repeated exposure may cause skin dryness or cracking.

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings Yes, applicable.

Tactile warning of danger Yes, applicable.

2.3 Other hazards

Results of PBT and vPvB assessment Product does not meet the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII.

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification Prolonged or repeated contact may dry skin and cause irritation.

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapour may cause flash fire or explosion.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Product definition Mixture

May also contain small quantities of proprietary performance additives.

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Renewable hydrocarbons (diesel type fraction)	REACH #: 01-2120043692-58 EC: 700-571-2	≥90	Flam. Liq. 3, H226 Asp. Tox. 1, H304 EUH066	-	[1]

See Section 16 for the full text of the H statements declared above.

[1] Substance classified with a health or environmental hazard

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

Skin contact Wash skin thoroughly with soap and water or use recognised skin cleanser. Drench contaminated clothing with water before removing. This is necessary to avoid the risk of sparks from static electricity that could ignite contaminated clothing. Contaminated clothing is a fire hazard. Contaminated leather, particularly footwear, must be discarded. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.

Inhalation If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Ingestion Do not induce vomiting. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Aspiration hazard if swallowed. Can enter lungs and cause damage. Get medical attention immediately.

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 4: First aid measures

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

Potential acute health effects

Inhalation Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.

Ingestion Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.

Skin contact No known significant effects or critical hazards.

Eye contact No known significant effects or critical hazards.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Inhalation May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs. Vapour, mist or fume may irritate the nose, mouth and respiratory tract.

Ingestion If swallowed, may irritate the mouth, throat and digestive system. If swallowed, may cause abdominal pain, stomach cramps, nausea, vomiting, diarrhoea, dizziness and drowsiness.

Skin contact Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.

Eye contact Vapour, mist or fume may cause eye irritation. Exposure to vapour, mist or fume may cause stinging, redness and watering of the eyes.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician Treatment should in general be symptomatic and directed to relieving any effects. Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media In case of fire, use water fog, foam, dry chemical or carbon dioxide extinguisher or spray.

Unsuitable extinguishing media Do not use water jet. The use of a water jet may cause the fire to spread by splashing the burning product.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. Vapours can form explosive mixtures with air. Vapours are heavier than air and can spread along the ground or float on water surfaces to remote ignition sources. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Hazardous combustion products Combustion products may include the following:
carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)

5.3 Advice for firefighters

Special precautions for fire-fighters No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Immediately contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Eliminate all ignition sources. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment.

SECTION 6: Accidental release measures

For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Small spill

Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. The method and equipment used must be in conformance with appropriate regulations and industry practice on explosive atmospheres.

Large spill

Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Dike spill area and do not allow product to reach sewage system and surface or ground water. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilt product. The method and equipment used must be in conformance with appropriate regulations and industry practice on explosive atmospheres. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 5 for firefighting measures.
See Section 8 for information on appropriate personal protective equipment.
See Section 12 for environmental precautions.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment. Do not swallow. Aspiration hazard if swallowed. Can enter lungs and cause damage. Never siphon by mouth. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Do not reuse container. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Keep away from heat and direct sunlight. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store and use only in equipment/containers designed for use with this product. Do not store in unlabelled containers.

Germany - Storage code

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7.3 Specific end use(s)

Recommendations

See section 1.2 and Exposure scenarios in annex, if applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures

Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Biological exposure indices

Product/ingredient name	Exposure indices
No exposure indices known.	

Derived No Effect Level

Product/ingredient name	Type	Exposure	Value	Population	Effects
Renewable hydrocarbons (diesel type fraction)	DNEL	Long term Inhalation -	147 mg/m³	Workers	Systemic
	DNEL	Long term Dermal -	42 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation -	94 mg/m³	General population	Systemic
	DNEL	Long term Dermal -	18 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral -	18 mg/kg bw/day	General population	Systemic

Predicted No Effect Concentration

Product/ingredient name	Compartment Detail	Value	Method Detail
Renewable hydrocarbons (diesel type fraction)	Secondary Poisoning	33.3 mg/kg	-
	Fresh water	0.01 mg/l	Assessment Factors
	Marine water	0.01 mg/l	Assessment Factors
	Intermittent release	0.1 mg/l	Assessment Factors
	Fresh water sediment	3810 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	3.73 mg/kg dwt	Assessment Factors
	Sewage Treatment Plant	10 mg/l	Assessment Factors
	Soil	761 mg/kg dwt	Equilibrium Partitioning

8.2 Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.
All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.
Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.
The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

If local exhaust ventilation or other methods of ventilation are not possible or are insufficient, wear suitable respiratory protective devices. Wear suitable respiratory protective devices if there is a risk of exposure limits being exceeded. The choice of suitable respiratory device will depend upon a risk assessment of the workplace environment and the task being carried out. If required, the respiratory device must be certified as safe in defined explosive atmospheres (EX Label). Respiratory protective devices must be checked to ensure they fit correctly each time they are worn. Please consult European standard EN 529 for further guidance on the selection, use, care and maintenance of respiratory protective devices.

SECTION 8: Exposure controls/personal protection

Suitable breathing apparatus (independent of ambient atmosphere) must be worn if any of the following situations apply.
- When the workplace atmosphere is considered to be immediately dangerous to life and health.
- When there is a risk of the workplace atmosphere being oxygen deficient.
- When the workplace atmosphere is uncontrolled.
- When the workplace atmosphere is unknown.
- When there is a risk of loss of consciousness or asphyxiation
- When entry into a confined space is required.
- When there is a risk of gases being released that could be a fire or explosion hazard.
- When the concentration of contaminants in the atmosphere exceeds the level of protection (maximum allowed concentration) given by a filtering device
- When the contaminants have a low odour that would not be tasted or smelt by the wearer of a filtering device if the filter became exhausted or saturated.
- When there is a risk of hydrogen sulphide exposure limits being exceeded.

If there is a requirement for the use of a respiratory protective device, but the use of breathing apparatus (independent of ambient atmosphere) is not required, then a suitable filtering device must be worn.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.

Recommended: Combined filter suitable for gases, vapours and particles (dust, smoke, mist, aerosol). Filter type: AP

Eye/face protection

Chemical splash goggles.

Skin protection

Hand protection

General Information:

Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures).

Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions.

Wear chemical resistant gloves.
Do not re-use gloves.
Protective gloves will deteriorate over time due to physical and chemical damage. Inspect and replace gloves on a regular basis.
Protective gloves must give suitable protection against mechanical risks (i.e. abrasion, blade cut and puncture).
The frequency of replacement will depend upon the circumstances of use.

Breakthrough time:

Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type.
Our recommendations on the selection of gloves are as follows:

Continuous contact:

Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained.
If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.

Short-term / splash protection:

Recommended breakthrough times as above.
It is recognised that for short-term, transient exposures, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.

Glove Thickness:

For general applications, we recommend gloves with a thickness typically greater than 0.35 mm.

SECTION 8: Exposure controls/personal protection

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.
Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

• Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.

• Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

Skin and body

Wear suitable protective clothing.
Footwear highly resistant to chemicals.
When there is a risk of ignition wear inherently fire resistant protective clothes and gloves.
Refer to standard: ISO 11612
When there is a risk of ignition from static electricity, wear anti-static protective clothing. For greatest effectiveness against static electricity, overalls, boots and gloves should all be anti-static.
Refer to standard: EN 1149
Cotton or polyester/cotton overalls will only provide protection against light superficial contamination.
When the risk of skin exposure is high (from experience this could apply to the following tasks: cleaning work, maintenance and service, filling and transfer, taking samples and cleaning up spillages) then a chemical protective suit and boots will be required.
Work clothing / overalls should be laundered on a regular basis. Laundering of contaminated work clothing should only be done by professional cleaners who have been told about the hazards of the contamination. Always keep contaminated work clothing away from uncontaminated work clothing and uncontaminated personal clothes.

Refer to standards:

Respiratory protection: EN 529
Gloves: EN 420, EN 374
Eye protection: EN 166
Filtering half-mask: EN 149
Filtering half-mask with valve: EN 405
Half-mask: EN 140 plus filter
Full-face mask: EN 136 plus filter
Particulate filters: EN 143
Gas/combined filters: EN 14387

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Physical state	Clear, Liquid.
Colour	Colourless to light yellow.
Odour	Characteristic. Mild.
Odour threshold	Not available.
Melting point/freezing point	<-20°C (<-4°F) [BS 4633 EU A.1]
Initial boiling point and boiling range	180 to 390°C (356 to 734°F)
Flammability	Flammable liquid and vapour.
Lower and upper explosion limit	Lower: 0.8% Upper: 5.4% (Based on n-Decane)
Flash point	Closed cup: >55°C (>131°F) [ISO 2719]

SECTION 9: Physical and chemical properties

Auto-ignition temperature 204°C (399.2°F) [EU A.15]

Decomposition temperature Not observed to decompose by final boiling point: >390°C (>734°F)

pH Not applicable. Product is non-soluble (in water).

Kinematic viscosity Dynamic: <0.005 Pa·s (<5 cP) at 20°C
Kinematic: 2.6 mm^2/s (2.6 cSt) at 40°C
Kinematic: 4 mm^2/s (4 cSt) at 20°C (OECD 114)

Solubility

Media	Result
water	Not soluble
methanol	Soluble
n-octanol	Soluble

Partition coefficient n-octanol/ water (log value) >6.5 [EU A.8]

Vapour pressure 0.087 kPa (0.65255 mm Hg) [25°C (77°F)]

Density and/or Relative density 0.77 to 0.79 [EU A.3]

Density and/or Relative density 765 to 800 kg/m^3 (0.765 to 0.8 g/cm^3) at 15°C

Relative vapour density >1 [Air = 1]

Particle characteristics

Median particle size Not applicable.

9.2 Other information

Evaporation rate Not applicable. Based on low volatility.

Explosive properties Not considered to be a product presenting a risk of explosion. (EC A14)

Oxidising properties Not an oxidiser.

Miscible with water No.

Remarks Physical and chemical properties: Based on: Renewable hydrocarbons (diesel type fraction)

SECTION 10: Stability and reactivity

10.1 Reactivity No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.

10.2 Chemical stability The product is stable.

10.3 Possibility of hazardous reactions Under normal conditions of storage and use, hazardous reactions will not occur.
Under normal conditions of storage and use, hazardous polymerisation will not occur.

10.4 Conditions to avoid Avoid all possible sources of ignition (spark or flame). Avoid excessive heat.

10.5 Incompatible materials Reactive or incompatible with the following materials: oxidising materials.

10.6 Hazardous decomposition products Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/ingredient name	Result / Route	Test authority / Number		Species	Dose	Exposure	Remarks
Renewable hydrocarbons (diesel type fraction)	LC50 Inhalation Vapour	Equivalent to OECD	403	Rat - Male	4467 ppm	8 hours	Based on n-nonane
	LD50 Dermal	EU	B3	Rat	>2000 mg/kg No mortality	-	-
	LD50 Oral	EU	B1 tris	Rat - Female	>2000 mg/kg No mortality	-	-

Conclusion/Summary Not classified. Based on available data, the classification criteria are not met.

Acute toxicity estimates

Not available.

SECTION 11: Toxicological information

Irritation/Corrosion

Product/ingredient name	Test authority / Test number		Species	Route / Result	Test concentration	Remarks
Renewable hydrocarbons (diesel type fraction)	EU	B5	Rabbit	Eyes - Non-irritating to the eyes.	-	-
	EU	B4	Rabbit	Skin - Non-irritant to skin.	-	-

Skin Not classified. Based on available data, the classification criteria are not met.

Eyes Not classified. Based on available data, the classification criteria are not met.

Sensitiser

Product/ingredient name	Route	Test authority / Test number		Species	Result	Remarks
Renewable hydrocarbons (diesel type fraction)	skin	EU	B6	Guinea pig	Not sensitising	-

Skin Not classified. Based on available data, the classification criteria are not met.

GERM CELL MUTAGENICITY

Product/ingredient name	Test authority / Test number	Cell		Type	Result	Remarks
Renewable hydrocarbons (diesel type fraction)	EU B17	Cell: Somatic	Experiment: In vitro	Subject: Mammalian-Animal	Negative	-
	EU B10	Cell: Somatic	Experiment: In vitro	Subject: Mammalian-Human	Negative	-
	EU B13/14	-	-	Subject: Bacteria	Negative	-

Conclusion/Summary Not classified. Based on available data, the classification criteria are not met.

Carcinogenicity

Not available.

Conclusion/Summary Not classified. Based on available data, the classification criteria are not met.

Reproductive toxicity

Product/ ingredient name	Test authority / Test number		Species	Route	Exposure	Developmental	Maternal toxicity	Fertility	Remarks
Renewable hydrocarbons (diesel type fraction)	Equivalent to OECD	416	Rat	Oral	-	Negative	Negative	Negative	-

Conclusion/Summary Not classified. Based on available data, the classification criteria are not met.

Aspiration hazard

Product/ingredient name	Result
Renewable hydrocarbons (diesel type fraction)	ASPIRATION HAZARD - Category 1

Conclusion/Summary May be fatal if swallowed and enters airways. Classification on basis substance is a hydrocarbon and has a kinematic viscosity of 20.5 mm2/s or less, measured at 40°C.

Specific target organ toxicity

Product/ ingredient name	Hazard	Test authority / Test number		Species	Route	Type	Dose	Exposure	Target organs	Remarks
Renewable hydrocarbons (diesel type fraction)	-	Equivalent to OECD	408	Rat	Oral	NOAEL	1000 mg/kg	-	-	-

Conclusion/Summary Not classified. Based on available data, the classification criteria are not met.

Information on likely routes of exposure Routes of entry anticipated: Dermal, Inhalation, Eyes.

Potential acute health effects

SECTION 11: Toxicological information

Inhalation Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.

Ingestion Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.

Skin contact No known significant effects or critical hazards.

Eye contact No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation No specific data.

Ingestion Adverse symptoms may include the following:
nausea or vomiting

Skin contact Adverse symptoms may include the following:
irritation
dryness
cracking

Eye contact No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Inhalation May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs. Vapour, mist or fume may irritate the nose, mouth and respiratory tract.

Ingestion If swallowed, may irritate the mouth, throat and digestive system. If swallowed, may cause abdominal pain, stomach cramps, nausea, vomiting, diarrhoea, dizziness and drowsiness.

Skin contact Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.

Eye contact Vapour, mist or fume may cause eye irritation. Exposure to vapour, mist or fume may cause stinging, redness and watering of the eyes.

Potential chronic health effects

General Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Test authority / Test number		Species	Type / Result	Exposure	Effects	Remarks
Renewable hydrocarbons (diesel type fraction)	OECD	209	Micro-organism	EC50 >1000 mg/l Nominal Fresh water	30 minutes	Respiration rate	-
	OECD	209	Micro-organism	EC50 >1000 mg/l Nominal Fresh water	3 hours	Respiration rate	-
	OECD	201	Algae	Acute EL50 >100 mg/l Nominal Fresh water	72 hours	(growth rate)	-
	OECD	202	Daphnia	Acute EL50 >100 mg/l Nominal Fresh water	48 hours	Immobilisation	-
	OECD	203	Fish	Acute LL50 >1000 mg/l Nominal Fresh water	96 hours	Mortality	-
	OECD	211	Daphnia	Chronic LOEC 3.2 mg/l Nominal Fresh water	21 days	Reproduction	-
	OECD	211	Daphnia	Chronic NOEC 1 mg/l Nominal Fresh water	21 days	Reproduction	-

Environmental hazards Not classified as dangerous

SECTION 12: Ecological information

12.2 Persistence and degradability

Readily biodegradable

Product/ingredient name	Test authority / Test number	Result - Exposure	Remarks
Renewable hydrocarbons (diesel type fraction)	OECD 301B	82 % - Readily - 28 days	-

12.3 Bioaccumulative potential

There is potential for the product to bioaccumulate.

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Renewable hydrocarbons (diesel type fraction)	8.4	116	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) Not available.

Mobility If released to soil it will evaporate at a low rate. This material may accumulate in sediments. insoluble in water.

12.5 Results of PBT and vPvB assessment

Product does not meet the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII.

12.6 Endocrine disrupting properties Not available.

12.7 Other adverse effects No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

Hazardous waste Yes.

European waste catalogue (EWC)

Waste code	Waste designation
13 07 01*	fuel oil and diesel

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

Packaging

Methods of disposal Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

Special precautions This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Empty packages may contain some remaining product. Hazard warning labels are a guide to the safe handling of empty packaging and should not be removed.

References Commission 2014/955/EU
Directive 2008/98/EC

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN1202	UN1202	UN1202	UN1202
14.2 UN proper shipping name	DIESEL FUEL	DIESEL FUEL	DIESEL FUEL	Diesel fuel
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	**Hazard identification number** 30 **Tunnel code** D/E	**Remarks** Table: C. Danger: 3+F	**Emergency schedules** F-E, S-E	-

14.6 Special precautions for user Not available.

ADR/RID Classification code: F1

ADN Classification code: F1

14.7 Maritime transport in bulk according to IMO instruments

Proper shipping name MARPOL Annex 1 rules apply for bulk shipments by sea. Category: Alkanes (C10–C26), linear and branched, (flashpoint ≤60°C)

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
Aral HVO	95-100	3 3 [Lamp fuel] 3 [Grill lighter fluid]
toluene	<0.001	48

Labelling Not applicable.

Other regulations

REACH Status The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

United States inventory (TSCA 8b) Not determined.

Australia inventory (AIIC) Not determined.

Canada inventory Not determined.

China inventory (IECSC) Not determined.

Japan inventory (CSCL) At least one component is not listed.

Korea inventory (KECI) Not determined.

Philippines inventory (PICCS) Not determined.

SECTION 15: Regulatory information

Taiwan Chemical Substances Inventory (TCSI) Not determined.

Explosive precursors Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

EU - Water framework directive - Priority substances

None of the components are listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P5c

National regulations

Hazardous incident ordinance

This product is controlled under the Germany Hazardous Incident Ordinance.

Danger criteria

Category	Reference number
P5c	1.2.5.3

Hazard class for water 1 (classified according AwSV)

Prohibited Chemicals Regulation (ChemVerbotsV) When placed on the market in Germany, this product is not subject to the Prohibited Chemicals Regulation (ChemVerbotsV).

Occupational restrictions Observe employment restrictions in the following:
Gesetz zum Schutz der arbeitenden Jugend (Jugendarbeitsschutzgesetz – JArbSchG)
Gesetz zum Schutz von Müttern bei der Arbeit, in der Ausbildung und im Studium (Mutterschutzgesetz – MuSchG)

15.2 Chemical safety assessment A Chemical Safety Assessment has been carried out for one or more of the substances within this mixture. A Chemical Safety Assessment has not been carried out for the mixture itself.

SECTION 16: Other information

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

SECTION 16: Other information

OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SADT = Self-Accelerating Decomposition Temperature
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVCB = Complex hydrocarbon substance
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative
Varies = may contain one or more of the following 64741-88-4 / RRN 01-2119488706-23, 64741-89-5 / RRN 01-2119487067-30, 64741-95-3 / RRN 01-2119487081-40, 64741-96-4/ RRN 01-2119483621-38, 64742-01-4 / RRN 01-2119488707-21, 64742-44-5 / RRN 01-2119985177-24, 64742-45-6, 64742-52-5 / RRN 01-2119467170-45, 64742-53-6 / RRN 01-2119480375-34, 64742-54-7 / RRN 01-2119484627-25, 64742-55-8 / RRN 01-2119487077-29, 64742-56-9 / RRN 01-2119480132-48, 64742-57-0 / RRN 01-2119489287-22, 64742-58-1, 64742-62-7 / RRN 01-2119480472-38, 64742-63-8, 64742-65-0 / RRN 01-2119471299-27, 64742-70-7 / RRN 01-2119487080-42, 72623-85-9 / RRN 01-2119555262-43, 72623-86-0 / RRN 01-2119474878-16, 72623-87-1 / RRN 01-2119474889-13

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 3, H226 Asp. Tox. 1, H304	Expert judgment Calculation method

Full text of abbreviated H statements	H226 H304 EUH066	Flammable liquid and vapour. May be fatal if swallowed and enters airways. Repeated exposure may cause skin dryness or cracking.
Full text of classifications [CLP/GHS]	Asp. Tox. 1 Flam. Liq. 3	ASPIRATION HAZARD - Category 1 FLAMMABLE LIQUIDS - Category 3
Exposure Scenario information	Aspiration hazard : Relevant safety measures have been included into the applicable sections of this safety data sheet, in place of appending an exposure scenario.	

History

Date of issue/ Date of revision	15/11/2024.
Date of previous issue	15/11/2024.
Prepared by	Product Stewardship

Indicates information that has changed from previously issued version.

Notice to reader

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