

GAS OIL (SR MIDDLE)

REV: F OF THE 23/01/2023	Replaced REV E OF THE 02/11/2020	PREPARED BY: ICARO Srl	ON BEHALF OF: ALMA PETROLI S.p.A.
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SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name:	GASOLIO (SR MIDDLE)
Synonym	Distillates (petroleum), full range straight-run middle
CAS Number	68814-87-9
EC Number	272-341-5
Index number	not applicable
Registration number	01-2119486887-13-0058
Unique Formula Identifier (UFI)	Not applicable

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

Relevant identified uses: Refining

Life cycle

Manufacture: manufacture of intermediate under SCC

Uses at industrial sites: Use at intermediate under SCC.

Uses advised against: all uses, besides those identified above

Reasons why uses advised against this substance has been registered as an intermediate in SCC, other uses are discouraged

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1.3 Details of the safety data sheet supplier

Company name	ALMA PETROLI S.p.A.
Address	Via di Roma 67 - Via Baiona 195
City / State	Ravenna Italy
Telephone	0039054434317-00390544696411
Competent Technician E-mail	info@almapetroli.com

1.4 Emergency number

For Appropriate National Emergency Information Services see the following link:

<https://echa.europa.eu/it/support/helpdesks>

SECTION 2. HAZARDS IDENTIFICATION

Physico-chemical hazards:	Flammable Product
Human health hazard:	Harmful if inhaled. Due to the low viscosity, the product may be aspirated into the lungs, either directly or following ingestion, or after consequent spontaneous or induced vomit, in such cases there may be a chemical pneumonia. May cause damage to organs through prolonged or repeated exposure
Environmental hazard:	Toxic to aquatic life with long lasting effects.

2.1 Classification of the substance or mixture

Flam. Liq. 3	H226
Asp. Tox. 1:	H304
Acute Tox 4	H332
STOT RE 2	H373 ((liver, spleen and bone marrow)
Aquatic Chronic 2	H411

Full text of hazard statements see section 16

Note: The classification has been attributed for the following characteristics: Viscosity $\leq 20.5 \text{ mm}^2 / \text{s}$ at 40°C and conservatively flash point $\geq 23^\circ \text{C}$ and $\leq 75^\circ \text{C}$

2.2 Label elements

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Signal Word: Danger

Hazard Statements

H226: Flammable liquid and vapour.

H332: Harmful if inhaled.

H304: May be fatal if swallowed and enters airways.

H373: May cause damage to organs through prolonged or repeated exposure (Liver, spleen, bone marrow)

H411: Toxic to aquatic life with long lasting effects.

EUH066: Repeated exposure may cause skin dryness or cracking.

Precautionary Statements

Prevention

P210: keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection

Response

P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P331: Do NOT induce vomiting.

Disposal

P501: Dispose of contents/container in accordance with local/regional/national/international

Other informations: n.a.

Authorization number: n.a.

2.3 Other hazards

Hot product may form explosive and flammable vapour-air. The vapour product is heavier than air and in the event of a leak, vapour may accumulate in confined spaces and low lying areas where it may easily be accidentally ignited.

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There is a risk of thermal burns in case of direct contact with skin or eyes when the product is handled at high temperature.

For this substance, as intermediate a chemical safety report , is not prescribed; therefore, the results of the PBT and vPvB assessments are not available.

The substance is not a substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 (3) or Commission Regulation (EU) 2018/605. See also sections 9 to 12.

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SECTION 3. Composition/information on ingredients

3.1 Substances

Product name	EC Number	CAS Number	Index Number	Registration Number
Distillates (Petroleum), Full-Range Straight-Run Middle ¹	272-341-5	68814-87-9	n.d.	01-2119486887-13-0058

SECTION 4. First aid measures

4.1 Description of first aid measures

- Eye contact:** Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do so. Irrigate exposed eyes with 0.9% normal saline if available or water for at least 15 minutes. Irrigate before and after removing the lenses to prevent a carry-over of the substances to the shielded area of the lens
- Skin contact:** Remove contaminated clothing, contaminated footwear and dispose of safely. Wash area with soap and water for 10 to 15 minutes
- Swallowing:** Do not induce vomiting as there is high risk of aspiration. Do not give anything by mouth to an unconscious person. If vomiting occurs, the head should be kept low so that the vomit does not enter the lungs (aspiration)
- Inhalation:** If breathing is difficult, remove victim to fresh air. Monitor for respiratory distress, administer oxygen and assist ventilation as required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Check vital signs regularly and act accordingly

¹ Distillates (petroleum), full-range straight-run middle

A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C25 and boiling in the range of approximately 150°C to 400°C

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4.2 Most important symptoms and effects, both acute and delayed

Skin contact symptoms: may cause skin irritation,

Eye contact symptoms: may cause mild reversible eye irritation.

Inhalation symptoms of vapours: may cause headache, nausea, dizziness. Acute, high dose exposure may cause central nervous system depression, confusion, altered mental status, seizures, cardiac arrhythmias

Ingestion (swallowing) symptoms: altered state of consciousness and loss of coordination

4.3 Indication of any immediate medical attention and special treatment needed

In case of inhalation 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: small fires: sand or earth, carbon dioxide), foam ,dry chemical powder. Large fires: foam, water fog (trained personnel only. Other inert gases (subject to regulations).

Unsuitable extinguishing media: do not use direct water jets on the burning product; they could cause splattering and spread the fire. 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

Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including CO (carbon monoxide), and other unidentified organic and inorganic compounds.

5.3 Advice for firefighters

In case of a large fire or in confined or poorly ventilated spaces, wear full fire-resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode).

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Stop or contain leak at the source, if safe to do so. Avoid direct contact with released material. Stay upwind. In case of large spillages, alert occupants in downwind areas. 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

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advised, if possible, by a trained, competent person in charge of managing the emergency. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares. If required, notify relevant authorities according to all applicable regulations.

Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations.

6.1.2 For emergency personnel

Small spillages: normal antistatic working clothes are usually adequate.

Large spillages: full body suit of chemically resistant and antistatic material.) Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Gloves made of PVA are not water-resistant and are not suitable for emergency use. Wear work helmet, antistatic non-skid safety shoes or boots. Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated. A half or full-face respirator with filter(s) for organic 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.

6.2 Environmental precautions

Prevent product from entering sewers, rivers or other bodies of water.

6.3 Methods and material for containment and cleaning up

Spillages onto land: prevent product from entering sewers, rivers, waterways or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use direct jets. When inside buildings or confined spaces, ensure adequate ventilation. Absorb spilled product with suitable non-combustible materials. 3.6. Collect free product with suitable means. Transfer collected product and other contaminated materials to suitable containers for recycle, recovery or safe disposal. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations.

Spillages on water or at sea. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents 4.2. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. Control the spreading of the spillage. Collect the product by skimming or other suitable mechanical means, only if fire/explosion risks can be adequately prevented. The use of dispersants should be advised by an expert, and, if required, approved by local authorities. Collect recovered product and other materials in suitable tanks or containers for recovery or safe disposal. Additional information Note: 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. For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken.

6.4 Reference to other sections

For more information on personal protective equipment, refer to the "Exposure control and personal protection" section.

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SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Protective measures (containment and preventive measures)

Risk of explosive mixtures of vapour and air. Ensure that all relevant regulations regarding explosive atmospheres, and handling and storage facilities of flammable products, are followed). Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Use and store only outdoors or in a well-ventilated area. Use adequate personal protective equipment as needed. Do not use compressed air for filling, discharging, or handling operations. The vapour is heavier than air. Beware of accumulation in pits and confined spaces. Avoid contact with skin and eyes. Do not ingest. Do not breathe vapours. For more information regarding protective equipment and operational conditions. Prevent the risk of slipping. Avoid release to the environment.

7.1.2 General recommendations on occupational hygiene

Ensure that proper housekeeping measures are in place. Contaminated materials should not be allowed to accumulate in the workplaces and should never be kept inside the pockets. Keep away from food and beverages.). Do not eat, drink or smoke when using this product). Wash the hands thoroughly after handling. Do not reuse contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities

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. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content and flammability. Store separately from oxidising agents.

Recommended materials for containers, or container linings use mild steel, stainless steel.). Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer.

If the product is supplied in containers. Keep only in the original container or in a suitable container for this kind of product.

Keep containers tightly closed and properly labelled.

These can cause flammability / explosion hazards. Open slowly in order to control possible pressure release. Keep only in the original container or in a suitable container for this kind of product.). Empty containers may contain combustible product residues. Do not weld, solder, drill, cut or incinerate empty containers, unless they have been properly cleaned.

7.3 Specific end uses

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The substance / product is / or registered / or strictly controlled conditions, in accordance with Article 17 (3) and 18 (4) of Regulation (EC) no. 1907/2006 and should therefore be treated as such.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

DIESEL

ACGIH 2023:

TLV®-TWA: 100 mg/m³

Recommended Monitoring procedures: refer to Dir 98/24/EC and further amendments and Good industrial health practices in the workplace.

8.2 Exposure controls

The intermediate must be manufactured and used under strictly controlled conditions during the entire life cycle, as reported in article 17 and/or article 18 of Regulation No. 1907/2006 (REACH):

- (a) the substance is rigorously contained by technical means during its whole lifecycle including manufacture, purification, cleaning and maintenance of equipment, sampling, analysis, loading and unloading of equipment or vessels, waste disposal or purification and storage;
- (b) procedural and control technologies shall be used that minimise emission and any resulting exposure;
- (c) only properly trained and authorised personnel handle the substance;
- (d) in the case of cleaning and maintenance works, special procedures such as purging and washing are applied before the system is opened and entered;
- (e) in cases of accident and where waste is generated, procedural and/or control technologies are used to minimise emissions and the resulting exposure during purification or cleaning and maintenance procedures;
- (f) substance-handling procedures are well documented and strictly supervised by the site operator.

8.2.1 Appropriate engineering controls

Minimize exposure dusts/vapours/aerosols Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, and flammability. Provide showers and eyewash fountains at the workplace.

8.2.2 Individual protection measures, such as personal protective equipment

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(a) Eye/face protection: If splashing is likely, full head and face protection (protective shield and/or safety goggles) should be used. (EN 166)

(b) Skin protection:

i) Hand protection: In the case of possible contact with the skin use gloves with long cuffs resistant to hydrocarbons, internally plush Presumably adequate materials: nitrile, PVC or PVA (polyvinyl alcohol) with protection from chemical agents at least 5 (breakthrough time > 240 min). Compatibility should be checked with the manufacturer. In the case, refer to UNI EN 374-1:2018. Gloves must be periodically inspected and changed in case of wear, perforations or contaminations. Gloves must be periodically inspected and changed in case of wear, perforations or contaminations.

ii) other: In the case of product handling, use antistatic working clothes with long sleeves in relation to the risks related to the classification of work areas. In the case, refer to UNI EN 14605:2009. Wash contaminated clothing and clean shoes before reuse.

(c) Respiratory protection: Open or well ventilated spaces: if the product is handled without adequate containment means for the vapours: full or half-face gas mask with filter for organic vapours (A) UNI EN14387:2021. In confined spaces, if exposure levels cannot be determined or estimated with adequate confidence, or an oxygen deficiency is possible, only SCBA's should be used. UNI 11719:2018.

(d) Thermal hazards: see point b



For more information on personal protective equipment, refer to the "Exposure control and personal protection" section."

8.2.3 Environmental exposure controls

Avoid release to the environment. Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills.

If discharging to domestic sewage treatment plant, no 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

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a) Physical state	Liquid low viscosity
b) Color	-
c) Odor	Petroleum odor
d) Melting point/freezing point	From -21°C to +6° °C (ASTM 1999 test method (CONCAWE, 2010a)
e) Boiling point or initial point and boiling range	172 °C 172 - >370 °C (ISO 3405; report 10CM00357)
f) Flammability	Liquid and vapors flammable
g) Lower and upper explosion limit	Study scientifically not necessary
h) Flash point	73 °C (Pensky Martens; ISO 2719; report 10CM00357)
i) Auto-ignition temperature	220 -250 °C (ASTM, 1991 Concawe 2010a)
j) Decomposition temperature	Not applicable
k) pH	Not applicable
l) Kinematic Viscosity	3.1 mm ² /s a 40 °C (ISO 3104; report 10CM00357)
m) Solubility	2,69E-12 – 2000 mg/l (derived range -QSAR)
n) Partition coefficient: <i>n</i> -octanol/water (log value)	1.99-18.2 (derived range-QSAR)
o) Vapor pressure	0.4 kPa a 40°C (EN 13016-1, Concawe 2010a)
p) Density and/or relative density	0.8825 kg/l a 15 °C (ISO 3675; report 10CM00357)
q) Relative vapor density	Not available
r) Particle characteristics	Not applicable

9.2 Other information

9.2.1 Information with regard to physical hazard classes

The substance is classified as flammable liquid. No chemical group associated with the molecule with explosive properties. The substance does not react exothermically with material

9.2.2 Other safety characteristics

Vapors may form explosive mixtures with air.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

The substance does not present additional dangers of reactivity than those reported in the next subtitle.

10.2 Chemical stability

This substance is stable in relation to its intrinsic properties.

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10.3 Possibility of hazardous reactions

Contact with strong oxidizers (peroxides, chromates, etc.) may cause a fire hazard. A mixture with nitrates or other strong oxidisers (e.g. chlorates, perchlorates, liquid oxygen) may create an explosive mass. Sensitivity to heat, friction or shock cannot be assessed in advance.

10.4 Conditions to avoid

Store separately from oxidising agents. Keep away from heat/sparks/open flames/hot surfaces. Do not smoke. Avoid Static Electricity.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

The product does not decompose when used for its intended uses.

SECTION 11. TOXICOLOGICAL INFORMATION

No experimental data were located on the toxicokinetics of gas oils in vivo.

Studies in animals have shown that gas oil is absorbed through the lungs. Physico-chemical considerations also suggest that highly respirable aerosols of poorly water soluble substances with a log Pow greater than zero will be absorbed to some extent from the respiratory tract. In the absence of further guidance, it will assumed that 50% of an inhaled dose of aerosolized gas oil will be absorbed by the lung in animals and humans.

No measured data are available on the dermal absorption of gas oils, however the occurrence of systemic tissue changes in repeated dose toxicity studies indicates that some absorption across the skin is possible. Results from the SKINPERM model indicate that uptake of gas oil across the skin is likely to be low, with an estimated dermal flux of 0.0001058 mg·cm⁻²·hour for human skin. However the reliability of this value is not known, and therefore complete absorption of gas oil by human skin has been assumed (conservative default) as recommended by the TGD (ECB, 2003).

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

a) Acute toxicity

Toxicity was evaluated on samples of products in this category. These studies have shown an oral LD50 > 2000 mg/kg bw. Therefore, not classified for acute oral toxicity in according according to EU regulations.

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The following is a summary of the more representative studies reported in the Registration dossier.

Method	Results	Remarks	Reference
Oral Route			
RAT (F/ M) ORAL (gavage) OECD Guideline 401	DL50: > 5000 mg/ kg (M/ F)	Key study Reliable without restrictions CAS 64741-44-2	API (1985a)

Acute Inhalation Toxicity:

Animal studies (rat) are available for samples of products in this category. Based on results of these studies, are classified as harmful by inhalation with Acute Tox 4; H332.

The following is a summary of the more representative studies reported in the Registration dossier.

Method	Results	Remarks	Reference
Inhalation Route			
RAT (M/ F) Aerosol mix OECD Guideline 403	LC50: >2.53 mg/L	Key study Reliable without restrictions CAS 64741-44-2	EMBSI 1991

Acute Dermal Toxicity:

Animal studies (rabbit) are available for samples of products in this category. These studies have shown an dermal LD50 > 2000 mg/kg bw. Therefore, are not classified for acute dermal toxicity in according according to EU regulations.

The following is a summary of the more representative studies reported in the Registration dossier.

Method	Results	Remarks	Reference
Dermal Route			
RABBIT OECD Guideline 402	DL50>2000 mg/kg (M/F)	Key study Reliable without restrictions CAS 64741-44-2	API (1985a)

b) Skin corrosion/irritation

No specific studies have been reported on corrosivity of these substances in this category. Considering the available studies, no corrosive action of these substances is expected.

The dermal irritation potential of samples belonging to this category of product has been tested in a large number of studies conducted in general on rabbit. Only some studies show mild skin irritation. Therefore are not classified for Skin corrosion/irritation in according according to EU regulations.

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Note: Repeated exposure may cause skin dryness or cracking.

The following is a summary of the more representative studies reported in the Registration dossier.

Method	Results	Remarks	Reference
RABBIT Coverage occlusive (each animal 2 sites with intact skin and 2 abraded skin sites) 24/72 ore OECD Guideline 404	Not irritating Mean Erythema score: 1.8 of max 4 (intact skin) (2/24h+1,7/72h) Mean Erythema score: 1.58 of max 4 abraded skin	Key study Reliable without restrictions CAS 64741-44-2	API (1985a)

c) Serious eye damage/irritation

The dermal irritation potential of samples belonging to this category of product has been tested in a large number of studies conducted in general on rabbit. The conclusions of these studies indicate an absence of significant irritation of the eyes, therefore are not classified for eye damage/irritation in according according to EU regulations.

The following is a summary of the more representative studies reported in the Registration dossier.

Method	Results	Remarks	Reference
Rabbit Time point: 24, 48, 72 hours OECD 405	not irritating Cornea score: 0 of max 80 (mean) Iris score: : 0 of max 10 (mean) Conjunctivae score: 0 of max 20 (mean)	Key study Reliable without restrictions CAS 64741-44-2	API (1985)

d) Respiratory or skin sensitization

Respiratory system

This endpoint is not a REACH requirement. Products of this category do not cause respiratory sensitization, it is not necessary to classify the substance.

Skin

Animal studies are available for samples of products in this category. Results from this study indicate no potential for skin sensitization, it is not necessary any classification of the substance.

The following is a summary of the more representative studies reported in the Registration dossier.

Method	Results	Remarks	Reference
guinea pig Buehler test OECD Guideline 406	Not sensitising	Supporting study Reliable without restrictions	API (1985a)

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CAS 64741-42-0

e) Germ cell mutagenicity

The key Ames test study showed no mutagenic activity. This result is supported by other studies. The key study in vivo chromosomal aberration tests also yielded negative outcomes.

Based on the outcome of the majority of studies conducted, it is unlikely that straight-run diesels are mutagenic to humans and do not meet the classification criteria under the CLP Regulation.

The following is a summary of the more representative studies reported in the Registration dossier.

Method	Results	Remarks	Reference
<i>In vitro</i> genic mutation in Salmonella thyphimurium TA 98 Doses: 5, 10, 15, 20, 30, 40, 50, 60 µl/plate OECD Guideline 471	Negative with metabolic activation	Key study Reliable without restriction CAS:64741-44-2 and CAS 68814-87-9	May K. (2013)
Chromosome aberration assay Rat male/female intraperitoneal 300, 1000, or 3000 mg/kg (nominal conc.) equivalent or similar to OECD Guideline 475	Negative	Key study Reliable without restrictions CAS 64741-44-2	American Petroleum Institute (API) 1985c

f) Carcinogenicity

Prolonged exposure to diesel from straight run may cause severe skin irritation that may develop into skin cancers (see study below). In the absence of irritation it was NOT observed the appearance of tumors. Therefore, gas oils from straight run does not require any classification according to the regulations on hazardous substances.

The following is a summary of the more representative studies reported in the Registration dossier.

Method	Result	Remarks	Reference
Mouse (male) 24 months Doses:50 µl Exposure half of life (3 times a week) OECD 453	Result : was found an incidence of tumors in the treated animals by 22%	Key study Reliable without restrictions CAS: 64741-44-2	API (1989)

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g) Reproductive toxicity

Effects on fertility

Based on the results of the studies, no classification of the substance is required under the legislation on hazardous substances.

Below is a summary of the most representative studies in the registration dossier.

Method	Result	Remarks	Reference
RAT female Screening for reproductive / developmental toxicity - based on test type (migrated information) dermal Doses / Concentrations: 0 (sham control), 1, 259 or 1036 mg/kg body weight/day Exposure: Seven days prior to mating through to gestational day 20 (Once daily) no guideline followed	First parental generation (P0) NOAEL (PO) 1 mg/kg bw/day (female) based on: vaginal discharge, body weight, body weight gain, food consumption, dermal irritation F1 generation NOAEL : 1 mg/kg bw/day (male/female) based on: reduced pup weight	Key study Reliable with restrictions CAS 64741-43-1	ARCO 1994

Developmental toxicity/teratogenicity

Development studies have found positive effects only at doses that also caused maternal toxicity. It is therefore not necessary classification of the substance as part of the Dangerous Substances legislation .

The following is a summary of the more representative studies reported in the Registration dossier.

Method	Result	Remarks	Reference
RAT dermal Doses / Concentrations: 0, 50, 250, or 500 mg/kg bw/day Exposure: Days 0 through 19 of gestation (Daily) equivalent or similar to guideline OECD Guideline 414 (Studio sulla tossicità per lo sviluppo prenatale)	LOAEL: 50 mg/kg/giorno NOAEL: 50 mg/ kg/giorno	Key study Reliable without restrictions CAS 64741-43-1	ARCO 1993

h) Specific Target Organ Toxicity (STOT) - Single Exposure

Data not available.

i) Specific Target Organ Toxicity (STOT) - Repeated Exposure

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NOAEL dermal 30 mg/kg/day and NOAEC inhalation of 1.75 mg/l for read-across .

Based on the results obtained the substance has been classified STOT Rep.Exp.2 H373 under the CLP Regulation .

Following is a summary of the most representative studies in the Registration Dossier

It is specified that for the oral route of exposure is not present information in the registration dossier (it is not necessary to perform repeated toxicity studies by the oral route, since the main routes of exposure for humans are the dermal and inhalation - ref . column 2 , Annex IX of the REACH Regulation).

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Method	Results	Remarks	Reference
Inhalation			
RAT (M/F) Inhalation (aerosol) Exposure: 13 weeks (sub-chronic) OECD Guideline 413	NOAEC: >1.71 mg/l Systemic effect (male/female) NOAEC: 0.88 mg/l Local effects (lung weight) (male/female)	Key study Read-across reliable with restrictions Diesel fuel	Lock, S., Dalbey, W. Schmoyer, R., Griesemer, K. (1984)
Dermal			
RATTO (M/F) Exposure: 13 weeks OECD Guideline 411	NOAEL (Systemic effects): 30 ml/kg/day (M/ F) NOEL (Local effects: Dermic irritation): 500 ml/kg/day (M/ F) LOAEL systemic effects): 125 ml/kg/day (M/ F)	Key study reliable with restrictions CAS 68334-30-5	Mobil (1992) Feuston, M.H., Low, L.K., Hamilton, C.E., Mackerer, C.R. (1994)

j) Aspiration hazard

Since this product has a viscosity $\leq 20,5$ mm²/s at 40 °C, it may occur the aspiration of liquid into the lungs, according to the criteria listed in Annex I part 3 of Regulation 1272/2008. Therefore, the product is classified Asp. Tox. 1, H304 (May be fatal if swallowed and enters airways).

Other information

There is no further information.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

The substance has no endocrine-disrupting properties.

11.2.2 Other information

The substance has moderate ability to cause photo irritation.

SECTION 12. ECOLOGICAL INFORMATION

According to the information below (toxicity short/long term to fish invertebrates algae and aquatic plants, biodegradation etc), this product is classified as: Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects).

12.1 Toxicity

The following is a summary of the more representative studies reported in the Registration dossier.

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Endpoint	Results	Remarks
Aquatic Toxicity		
Invertebrates Daphnia magna Short-term toxicity OECD 202 Method EU C.2	EL50 (24 h): > 1000 EL50 (48 h): 210 mg/l NOEL (48 h): 46 mg/l	Key study Reliable without restrictions CAS 68334-30-5 Read-Across Girling A and Cann, B (1996b)
Invertebrates Daphnia magna Long- term toxicity	NOELR 21 days : 0.167mg/l LL50 21 days: 10 mg/l	Key study Reliable without restrictions QSAR Redman, et al.(2010b)
Alga Raphidocelis subcapitata Short-term OECD 201 Metodo EU c.3.	EbL50 (72 h): 25 mg/l ErL50 (72 h): 78 mg/l NOEL (72 h): 3 mg/l	Key study Girling, A and Cann, B (1996a) Reliable without restrictions Read-across CAS 68334-30-5
Fish Oncorhynchus mykiss Short-term	LL50 96/ore: 1.301 mg/l	Key study Reliable without restrictions QSAR Redman, et al.(2010b)
Fish Long-term Oncorhynchus mykiss	NOEL 14d: 0.068 mg/l	Key study Reliable without restrictions QSAR Redman, et al.(2010b)

12.2 Persistence and degradability

Abiotic degradation

Hydrolysis: The substance is resistant to hydrolysis due to the lack of a functional group that is hydrolytically reactive. Therefore, this fate process will not contribute to a measurable degradative loss of the UVCB components in the environment.

Photolysis in air: Endpoint not required by REACH

Photolysis in water and soil: Endpoint not required by REACH

Biotic degradation

The standard tests for this endpoint do not apply to UVCB substances.

12.3 Bioaccumulative potential

Standard tests for this endpoint do not apply to UVCB substances.

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12.4 Mobility in soil

Standard tests for this endpoint do not apply to UVCB substances.

12.5 Results of PBT and vPvB assessment

For this substance, as intermediate a chemical safety report , is not prescribed; therefore, the results of the PBT and vPvB assessments are not available.

12.6 Endocrine disrupting properties

The substance has no endocrine-disrupting properties.

12.7 Other adverse effects

This substance may contribute to ozone formation in the near surface atmosphere.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Do not dispose the product, either new or used, by discharging into sewers, tunnels, lakes or water courses. Dispose wastes and contaminated packaging according to official regulations. European Waste Catalogue code(s) (Decision 2001/118/CE): 13 07 03*. These codes can be given only as a suggestion, according to the original composition of the product, and its intended (foreseeable) use(s). The final user has the responsibility for the attribution of the most suitable code, according to the actual use(s) of the material, contaminations or alterations. The product does not contain halogenated compounds. Disposal of emptied containers: dispose of in accordance with local regulations. Do not cut, weld, bore, burn or incinerate emptied containers, unless they have been cleaned and declared safe.

SECTION 14. TRANSPORT INFORMATION

14.1 UN number or ID Number

ADR/RID/ADN: 1202

IATA/IMDG: 3082 (If flash point up to 60°C, closed cup)

14.2 UN proper shipping name

GAS OIL or DIESEL FUEL or HEATING OIL LIGHT

IATA / IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(flash point up to 60°C)

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14.3 Transport hazard class(es)

Road/railway transport (RID/ADR/ADN):

Class:	3
Danger code:	F1
Label:	3
Hazard Identification Number:	30
Tunnel restrictions code:	D/E

Sea transport (IMDG)

Class:	9
	Note: flash point up to 60°C

Air transport (IATA):

Class:	9
	Note: flash point up to 60°C

14.4 Packing group

III

14.5 Environmental hazards

Substance is hazardous to the environment under the code ADR, RID, ADN e IMDG.

14.6 Special precautions for users

Wear gloves (tested to EN374) if hand contact with substance likely. Refer to section 7 of the SDS "Handling and Storage"

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15. REGULATORY INFORMATION

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

- *Title VII authorizations under the REACH Regulation (EC Reg. No. 1907/2006):* This product is not subject to authorization

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- *Title VIII restrictions under the REACH Regulation (EC Reg. No. 1907/2006): Annex XVII, items 3 and 40.*
Other UE:

- *The substance is dangerous under the Seveso Regulation (Dir. 2012/18/UE):*

Annex 1 part 1:

Category P5c: Flammable liquid

Category E2: Hazardous to the Aquatic Environment in Category Chronic 2

Annex 1 part 2:

Category 34: Petroleum products and alternative fuels

- *Directive 98/24/EC (on the protection of the health and safety of workers from the risks related to chemical agents at work) : Hazardous chemical agent*
- *Directive 97/42/EC and 99/38/CE: not subject, non-carcinogenic and non-mutagenic agent*

Dispose wastes and contaminated packaging according to official regulations.

Note: On-site and transported isolated intermediates are exempt from authorization (REACH, Article 2, paragraph 8). In addition, with regard to restrictions, any updates to REACH Annex XVII do not apply to on-site isolated intermediates (REACH Article 68, paragraph 1).

15.2 Chemical safety assessment

Chemical Safety Assessment has not been carried out for this product.

SECTION 16. OTHER INFORMATION

List of relevant hazard statements:

H226: Flammable liquid and vapour.

H332: Harmful if inhaled.

H304: May be fatal if swallowed and enters airways.

H373: May cause damage to organs through prolonged or repeated exposure (Liver, spleen, bone marrow)

H411: Toxic to aquatic life with long lasting effects.

EUH066: Repeated exposure may cause skin dryness or cracking.

Advice on any training appropriate for workers:

Propely train all workers potentially exposed to this substance on the basis of the contents of this safety data sheet.

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Key literature references and sources for data:

Registration dossier. Study in the section 11 and 12 by CSR 2022

Legend to abbreviations and acronyms:

ACGIH: American Conference of Governmental Industrial Hygienists

CSR: Chemical Safety Report

DNEL: Derived No effect Level

DMEL: Derived Minimal Effect Level

EC50: Half maximal effective concentration

IC50: Half maximal inhibitory concentration

LC50: Lethal concentration, 50%

LD50: Median lethal dose

PNEC: Predicted No Effect Concentration

PBT: Persistent, Bioaccumulative and Toxic substance

STOT: Specific Target Organ Toxicity

(STOT) RE: Repeated Exposure

(STOT) SE: Single Exposure

TDLO: Lowest published toxic dose

TLV: Threshold Limit Values

vPvB: Very Persistent and Very Bioaccumulative

Compilation date 29/11/2010

Revision date 01/10/2014

Reason for Rev00 of 01/10/2014: Update pursuant to Annex I of EU Regulation 453/2010, of CLP Regulation EC 1272/2008 including the 4th ATP (Adaptations to Technical Progress) required for substances from 1.12.14, of the DSD regulation (67/548/EEC) including the 31th ATP.

Revision date 04/05/2015

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Reason for the Rev.A of 04/05/2015: Update of emergency telephone numbers. Update to the 5th ATP

Revision date 21/12/2015

Reason for Rev.B dated 21/12/2015: Updating of the following sections: 2, 8, 11, 14, 15, 16 and of the exposure scenarios

Review date 14/07/2016

Reason for Rev.C dated 14/07/2016: Updating of the following sections: 2, 7, 8, 16, exposure scenarios eliminated since the substance was registered as an intermediate under SCC conditions.

Revision date 10/04/2020

Reason for Rev.D of 04/10/2020: Update of the following sections: 6, 8 (replacement of pictograms in accordance with UNI EN 7010 Safety Signs 2019), 9 (insertion of calculated values for solubility and LogPow), 11 (updated test of Ames in Mutagenicity), 12 (entered values calculated for biodegradation, bioaccumulation and mobility in the soil) as CSR 2019; and 15 (note inserted in section 15.1).

Revision date 02/11/2020

Reason for Rev.E of 02/11/2020: Update of sections 14 (transport information) and 15 (titles).

Revision date 23/01/2023

Reason for Rev.F of 01/23/2023: Update of the format in according to Reg 878/2020 update of sections 1, 8, 11, 12, 14, 16.