

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

1.1. Product identifier

Chemical type	: Substance
Substance name	: Gas oils(petroleum), light vacuum
Trade name	: Vacuum Gas Oil
EC no	: 265-059-9
CAS No.	: 64741-58-8
REACH registration No.	: 01-2119475498-21-0033
Product code	: 256 SDS#PbR00256
Synonyms	: VGO, VGOHS

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

1.2.1. Relevant identified uses

Use of the substance/preparation	: Manufacture of substances Intermediate Formulation [mixing] of preparations and/or re-packaging Coatings Release agent. Building and construction work. Road work Manufacture of rubber products. Fuels Lubricant Functional fluids Explosive Binding agent Use in Oil and Gas field drilling and production operations Metal working fluids
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1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Only representative:
Petrobras Europe Ltd.
4th Floor, 20 North Audley Street
London W1K 6WL, United Kingdom
Fax number: +44(0) 20 7355 8750
E-mail: reach@petrobras.com.br

Manufacturer:
Petróleo Brasileiro S. A.
Avenida Chile, 65.
20035-900 Rio de Janeiro - Brazil
E-mail: sac@petrobras.com.br

1.4. Emergency telephone number

Emergency number	: For Chemical Emergency, Spill, Leak, Fire, Exposure or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada (collect calls accepted): 1-703-527-3887
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute Tox. 4 (Inhalation)	H332
Skin Irrit. 2	H315
Carc. 2	H351
STOT RE 2	H373
Asp. Tox. 1	H304
Aquatic Chronic 2	H411

Full text of H-phrases: see section 16.

Classification according to Directive 67/548/EEC or 1999/45/EC

N; R51/53
Xn; R65
Xn; R20
Xi; R38
Carc.Cat.3; R40

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Full text of R-phrases: see section 16.

Adverse physicochemical, human health and environmental effects

On exposure to high temperature, may decompose, releasing toxic gases. Repeated exposure may cause skin dryness or cracking.

2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H332 - Harmful if inhaled
H351 - Suspected of causing cancer
H373 - May cause damage to organs through prolonged or repeated exposure
H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (CLP) :

P261 - Avoid breathing mist, spray, vapours.
P280 - Wear eye protection, protective clothing, protective gloves, face protection.
P301+P310 - If swallowed, immediately call a doctor.
P331 - Do NOT induce vomiting
P332+P313 - If skin irritation occurs: Get medical advice/attention
P501 - Dispose of contents/container to hazardous or special waste collection point.

2.3. Other hazards

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

other hazards which do not result in classification

: Combustible liquid. Spilled material may present a slipping hazard. Repeated exposure may cause liver damage or failure. May cause photosensitization.

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Gas oils(petroleum), light vacuum	(CAS No.) 64741-58-8 (EC no) 265-059-9	100	Xn; R65 Xn; R20 Carc.Cat.3; R40 Xi; R38 N; R51/53
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Gas oils(petroleum), light vacuum	(CAS No.) 64741-58-8 (EC no) 265-059-9	100	Asp. Tox. 1, H304 Carc. 2, H351 Skin Irrit. 2, H315 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Aquatic Chronic 2, H411

Full text of R-, H- and EUH-phrases: see section 16.

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Consult a doctor/medical service if you feel unwell.
First-aid measures after inhalation : Remove victim to fresh air. In case of breathing difficulties administer oxygen. If symptoms persist call a doctor.
First-aid measures after skin contact : Remove contaminated clothing and shoes. Rinse immediately with plenty of water for 15 minutes. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, take medical advice.
First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. Seek medical advice (show the label where possible).

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

Symptoms/injuries : Repeated exposure may cause liver damage or failure. May cause photosensitization.

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Symptoms/injuries after inhalation	: sensation of dryness and pain in the nose. Irritation of mucous membranes. High concentration of vapours may induce: headache, dizziness, drowsiness, nausea and vomiting. Excessive concentrations may lead to unconsciousness.
Symptoms/injuries after skin contact	: Repeated exposure may cause skin dryness or cracking. Repeated or prolonged skin contact may cause dermatitis and defatting. Redness.
Symptoms/injuries after eye contact	: Slight eye irritant.
Symptoms/injuries after ingestion	: Ingestion may cause nausea, vomiting and diarrhea. stomach pain.

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

Treat symptomatically. Symptoms may be delayed.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:	: carbon dioxide (CO ₂), dry chemical powder, foam. Water spray.
Unsuitable extinguishing media	: Do not use a water jet since it may cause the fire to spread.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Combustible liquid. Will float and can be reignited on water surface. On combustion, forms: carbon oxides (CO and CO ₂). Nitrogen oxides (NO _x).
Explosion hazard	: In closed containers, pressure build up could result in distortion, blowing and in extreme cases bursting of the container. May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety.
Protective equipment for firefighters	: In case of fire: Wear self-contained breathing apparatus. Refer to section 8.
Other information	: A layer of floating combustible liquid may be present.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Wear suitable protective clothing, gloves and eye/face protection. Remove all sources of ignition. Stop leak if safe to do so. Contact with walking surface may result in formation of slippery film/falling hazard. Refer to section 8.
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6.1.2. For emergency responders

Protective equipment	: In case of fire: Wear self-contained breathing apparatus. Refer to section 8.
Emergency procedures	: Contact with walking surface may result in formation of slippery film/falling hazard. Keep upwind. Eliminate all sources of ignition, avoid sparks, flames and do not smoke in risk area. Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not discharge into drains or the environment. Prevent spreading over great surfaces (e.g. by damming or installing oil booms).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Sweep up or vacuum up the product. Place spent adsorbent in sealed packages and contact specialist waste disposal contractor. Collect up the product and place it in a spare container: - suitably labelled.
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6.4. Reference to other sections

Refer to sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Provide local exhaust or general room ventilation to minimize vapour concentrations. Avoid contact with skin, eye and clothing. Do not breathe dust/fume/gas/mist/vapours/spray. Keep container closed when not in use. Avoid all unnecessary exposure. Do not eat, drink and do not smoke in areas where product is used. Handle in accordance with good industrial hygiene and safety procedures.
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7.2. Conditions for safe storage, including any incompatibilities

Technical measures:	: Use only in well-ventilated areas. Keep away from food, drink and animal feedingstuffs. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Storage condition(s)	: Keep container tightly closed in a cool, well-ventilated place. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Incompatible materials	: Strong oxidizing agents. Strong acid.

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Vacuum Gas Oil (64741-58-8)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	4300 mg/m ³
Long-term - systemic effects, dermal	2.9 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	68 mg/m ³ /day
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	2600 mg/m ³
Long-term - systemic effects, inhalation	20 mg/m ³ /day
Long-term - systemic effects, dermal	1.3 mg/kg bodyweight/day

8.2. Exposure controls

- Appropriate engineering controls : Exposures should be minimized in accordance with good industrial hygiene practices. Provide local exhaust or general room ventilation to minimize vapour concentrations. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use explosion-proof electrical equipment.
- Personal protective equipment : Protective goggles. Gloves. Protective clothing. Combined gas/dust mask with filter type A/P2.



- Hand protection : Impermeable protective nitrile gloves.
- Eye protection : Chemical goggles or face shield with safety glasses.
- Skin and body protection : Wear suitable protective clothing. Wear fire/flame resistant/retardant clothing.
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Combined gas/dust mask with filter type A/P2. In confined space use self-contained breathing apparatus.
- Environmental exposure controls : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Relevant water authorities should be notified of any large spillage to water course or drain.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Oily.
Colour	: No data available
Odour	: hydrocarbons.
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Solidification point	: No data available
Boiling point	: 273-401.5 °C ASTM D86
Flash point	: 108 °C ASTM D93
Relat. evapor. rate comp. to butylacetate	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: > 1
Relative density	: 0.93 g/cm ³
Solubility	: insoluble in water.
Log Pow	: > 3
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: 7.77 cSt (at 40 °C)
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Avoid ignition sources. heat sources. High temperature. Incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents. strong acids.

10.6. Hazardous decomposition products

low molecular weight hydrocarbons. Carbon oxides (CO, CO₂). Nitrogen oxides (NO_x). Sulfur oxides. On exposure to high temperature, may decompose, releasing toxic gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if inhaled.

Vacuum Gas Oil (64741-58-8)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
LC50 inhalation rat (mg/l)	4.1 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Not classified

Not irritating

Respiratory or skin sensitisation : Not classified

Not sensitizing

Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer.

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : May cause damage to organs through prolonged or repeated exposure.

Vacuum Gas Oil (64741-58-8)	
NOAEL (dermal,rat/rabbit,90 days)	30 mg/kg bodyweight/day

Aspiration hazard : May be fatal if swallowed and enters airways.

Potential Adverse human health effects and symptoms : Repeated exposure may cause liver damage or failure. May cause photosensitization. Absorbed through the skin. Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

Other information : Not classifiable as to carcinogenicity to humans (IARC Group 3).

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : In case of large spills the product may be hazardous to aquatic organisms due to possible formation of a film on the surface water which can diminish dissolved oxygen levels.

Ecology - air : Photo-chemical ozone recombination potential:.

Ecology - water : Toxic to aquatic life with long lasting effects.

Vacuum Gas Oil (64741-58-8)	
LC50 fishes	21 mg/l 96 hours
LC50 other aquatic organisms	> 1000 ppm 40 hours - microorganism
EC50 Daphnia	> 5.3 mg/l 48 hours
NOEC (acute)	0.2 mg/l 21 days- daphnia
NOEC (chronic)	0.083 mg/l 14 days
ErC50 (algae)	22 mg/l 72 hours

12.2. Persistence and degradability

Vacuum Gas Oil (64741-58-8)	
Persistence and degradability	Product is not easily biodegradable.

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12.3. Bioaccumulative potential

Vacuum Gas Oil (64741-58-8)

Log Pow > 3

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Vacuum Gas Oil (64741-58-8)

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

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations. Dispose of this material and its container to hazardous or special waste collection point.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

UN-No. : 3082

14.2. UN proper shipping name

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport document description : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, (E)

14.3. Transport hazard class(es)

Class (UN) : 9

Hazard labels (UN) : 9



14.4. Packing group

Packing group (UN) : III

14.5. Environmental hazards

Marine pollutant :



Other information : No supplementary information available.

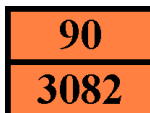
14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 90

Classification code : M6

Orange plates :



Tunnel restriction code : E

Limited quantities (ADR) : LQ07

Excepted quantities (ADR) : E1

EAC code : *3Z

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available

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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No ingredients included in the REACH Candidate list

Other regulations, restrictions and prohibition : Compliance with following regulations: Regulation (EC) 1907/2006 as amended. Regulation (EC) 1272/2008 as amended. Directive 1999/45/EC as amended. Directive 67/548/EEC as amended.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

CSA has been carried out.

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment - chronic hazard Category 2
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 2	Carcinogenicity Category 2
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H332	Harmful if inhaled
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects
R20	Harmful by inhalation.
R38	Irritating to skin.
R40	Limited evidence of a carcinogenic effect
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.

SDS PETROBRAS USES

The information presented in this Safety Data Sheet is based on current knowledge and is believed to be complete and accurate. It describes the product for the purposes of health, safety and environment requirements only and shall, therefore, be used only as a guide. The data refers to a specific product and may not be valid for combined uses with other products. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. Petrobras shall not be responsible for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices.