

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

#### 1.1. Product identifier

Product form	: Mixture
Trade name	: Gas Oil
Product code	: 650; SDS #:PbR0143
Synonyms	: Gas Oil 50ppm / Gas Oil 10ppm / Gas Oil 1800 ppm / Gas Oil 0,1% / Ultra Low Sulphur Diesel
Product group	: Trade product

#### 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 Cleaning/washing agent Use in Oil and Gas field drilling and production operations Metal working fluids Release agent. Building and construction work. Road work Manufacture of rubber products. Fuels Lubricant Water treatment chemicals. Functional 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

Petrobras International Braspetro B.V. – PIB BV  
Prins Bernhardplein 200, 1097 – JB Amsterdam  
The Netherlands

All communications shall be addressed exclusively to the following address:

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4th Floor, 20 North Audley Street  
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Fax number: +44(0) 20 7355 8750  
E-mail: reach@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. 1B	H350
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

Carc.Cat.2; R45  
Xn; R20  
Xn; R65  
Xn; R48/21  
Xi; R38  
N; R51/53

Full text of R-phrases: see section 16.

##### Adverse physicochemical, human health and environmental effects

Inhalation may affect the nervous system causing headache, possibly dizziness, nausea, weakness, loss of coordination and unconsciousness.

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### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07

GHS08

GHS09

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H332 - Harmful if inhaled  
H350 - May cause 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.  
P301+P310 - If swallowed, immediately call a doctor.  
P331 - Do NOT induce vomiting  
P501 - Dispose of contents/container to hazardous or special waste collection point.

#### Labelling according to Directive 67/548/EEC or 1999/45/EC

Hazard symbols :



T - Toxic

N - Dangerous for the environment

Hazardous ingredients :

Distillates (petroleum), hydrodesulfurized middle, Fuels, diesel

R-phrases :

R20 - Harmful by inhalation.  
R38 - Irritating to skin.  
R45 - May cause cancer.  
R48/21 - Harmful: danger of serious damage to health by prolonged exposure in contact with skin.  
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R65 - Harmful: may cause lung damage if swallowed.

S-phrases :

S23 - Do not breathe vapour/aerosol.  
S24 - Avoid contact with skin.  
S36/37 - Wear suitable protective clothing and gloves.  
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S51 - Use only in well-ventilated areas.  
S53 - Avoid exposure - obtain special instructions before use.  
S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.  
S57 - Use appropriate container to avoid environmental contamination.  
S62 - If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Extra phrases :

Reserved for industrial and professional use.

### 2.3. Other hazards

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

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

other hazards which do not result in classification

: Combustible liquid. May cause headache, nausea and irritation of respiratory tract. Dizziness.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Distillates (petroleum), hydrodesulfurized middle	(CAS No.) 64742-80-9 (EC no) 265-183-3 (EC index no) 649-223-00-0 (REACH-no) 01-2119480406-37	90 - 100	Xn; R65 Xi; R38 Xn; R48/21 Carc.Cat.2; R45 N; R51/53 Xn; R20

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Name	Product identifier	%	Classification according to Directive 67/548/EEC
Fuels, diesel	(CAS No.) 68334-30-5 (EC no) 269-822-7 (EC index no) 649-224-00-6 (REACH-no) 01-2119484664-27	0 - 10	Carc.Cat.3; R40 Xn ; R65 Xi; R38 N; R51/53 Xn; R20

  

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Distillates (petroleum), hydrodesulfurized middle	(CAS No.) 64742-80-9 (EC no) 265-183-3 (EC index no) 649-223-00-0 (REACH-no) 01-2119480406-37	90 - 100	Asp. Tox. 1, H304 Skin Irrit. 2, H315 Carc. 1B, H350 STOT RE 2, H373 Aquatic Chronic 2, H411 Acute Tox. 4 (Inhalation), H332
Fuels, diesel	(CAS No.) 68334-30-5 (EC no) 269-822-7 (EC index no) 649-224-00-6 (REACH-no) 01-2119484664-27	0 - 10	Asp. Tox. 1, H304 Skin Irrit. 2, H315 Acute Tox. 4 (Inhalation), H332 Carc. 2, H351 STOT RE 2, H373 Aquatic Chronic 2, H411

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

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. In case of breathing difficulties administer oxygen. Seek medical advice (show the label where possible).
- First-aid measures after skin contact : Remove contaminated clothing and shoes. Rinse thoroughly with plenty of water for at least 20 minutes and take medical advice. Seek medical advice (show the label where possible).
- First-aid measures after eye contact : Rinse immediately and plentifully with water, also under the eyelids, for at least 20 minutes. Seek medical advice (show the label where possible).
- First-aid measures after ingestion : Do not induce vomiting. If swallowed, rinse mouth with water (only if the person is conscious). Rinse mouth immediately and drink large quantities of water. Seek medical advice (show the label where possible).

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

- Symptoms/injuries after inhalation : May cause irritation to the respiratory tract. Dizziness, headaches, nausea.
- Symptoms/injuries after skin contact : Irritating to skin. Prolonged or repeated contacts with the skin may cause dermatitis.
- Symptoms/injuries after eye contact : Causes serious eye irritation.

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

Do not rub the skin and eyes after direct contact with the product.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media: : carbon dioxide (CO<sub>2</sub>), dry chemical powder, foam.
- 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.
- Reactivity : Hazardous combustion products. Carbon monoxide. Nitrogen oxides (NO<sub>x</sub>). Sulfur oxides. Carbon dioxide (CO<sub>2</sub>).

#### 5.3. Advice for firefighters

- Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Do not use a water jet since it may cause the fire to spread.
- Protective equipment for firefighters : In case of fire: Wear self-contained breathing apparatus. Wear proper protective equipment. Refer to section 8.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Protective equipment : Evacuate personnel to a safe area. Refer to section 8.
- Emergency procedures : Eliminate leaks immediately.

##### 6.1.2. For emergency responders

- Protective equipment : Refer to section 8.

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### 6.2. Environmental precautions

Stop leak if safe to do so. Do not discharge into surface water. Do not flush down sewers. Prevent spreading over great surfaces (e.g. by damming or installing oil booms). Prevent entry to sewers and public waters.

### 6.3. Methods and material for containment and cleaning up

- For containment : Consult the appropriate authorities about waste disposal.
- Methods for cleaning up : Collect up the product and place it in a spare container: - suitably labelled. Keep the recovered product for subsequent recycling. Absorb remaining liquid with sand or inert absorbent and remove to safe place. Retain contaminated washing water and dispose. Dispose of this material and its container to hazardous or special waste collection point. Consult the appropriate authorities about waste disposal.
- Other information : Comply with local regulations for disposal. Relevant water authorities should be notified of any large spillage to water course or drain.

### 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 : Handle in accordance with good industrial hygiene and safety procedures. Do not smoke. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Wear recommended personal protective equipment.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures: : Provide adequate ventilation. Only use anti-static equipped (spark-free) tools. Floors should be impenetrable, resistant to liquids and easy to clean. Ground equipment electrically.
- Storage condition(s) : Keep away from open flames, hot surfaces and sources of ignition. Store in tightly closed, leak-proof containers.
- Incompatible products : Oxidizing agent.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

- Appropriate engineering controls : Provide adequate ventilation. 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.

- Personal protective equipment : Gloves. Protective goggles. Gas mask.



- Hand protection : Protective gloves made of PVC.
- Eye protection : Chemical goggles or safety glasses.
- Respiratory protection : An approved organic vapour respirator/supplied air or self-contained breathing apparatus must be used when vapour concentration exceeds applicable exposure limits. In case of fire: Wear self-contained breathing apparatus.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : clear.
- Colour : reddish brown.
- Odour : Strong, characteristic. Kerosene.
- Odour threshold : No data available
- pH : No data available
- Melting point : No data available
- Solidification point : No data available
- Boiling point : 176.5 - 401.5 °C
- Flash point : 78 °C ASTM D93
- Relative evaporation rate (butylacetate=1) : No data available

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Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 0.93 - 0.98 g/cm <sup>3</sup> @ 20°C
Solubility	: Soluble in organic solvents. Water: not significant
Log Pow	: No data available
Log Kow	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: 400 °C
Viscosity, kinematic	: 3.613 (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

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Hazardous combustion products. Carbon monoxide. Nitrogen oxides (NO<sub>x</sub>). Sulfur oxides. Carbon dioxide (CO<sub>2</sub>).

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No flames, No sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

Oxidizing agents.

### 10.6. Hazardous decomposition products

On burning: release of (highly) toxic gases/vapours. Carbon monoxide. Sulfur oxides. Polycyclic-aromatic hydrocarbons (PAH). Exposure to fire may cause containers to rupture/explode. Nitrogen oxides (NO<sub>x</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Harmful if inhaled.

Gas Oil	
LD50 dermal rabbit	≥ 5000 mg/kg

Distillates (petroleum), hydrosulfurized middle (64742-80-9)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 1.78 mg/l/4h

Fuels, diesel (68334-30-5)	
LD50 oral rat	> 9 mg/kg
LD50 dermal rat	> 1800 mg/kg
LC50 inhalation rat (mg/l)	> 1.7 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause 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.

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<b>Distillates (petroleum), hydrodesulfurized middle (64742-80-9)</b>	
LOAEL (dermal, rat/rabbit, 90 days)	30 mg/kg bodyweight/day
LOAEL (inhalation, rat, vapour, 90 days)	23 mg/l/6h/day 28 days
NOAEL (dermal, rat/rabbit, 90 days)	30 mg/kg bodyweight/day
NOAEL (inhalation, rat, vapour, 90 days)	1.71 mg/l/6h/day

<b>Fuels, diesel (68334-30-5)</b>	
LOAEL (inhalation, rat, gas, 90 days)	1.71 ppmV/6h/day
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 : May cause respiratory irritation. High concentration of vapours may induce: headache, nausea, dizziness. May produce skin irritation. Prolonged or repeated contacts with the skin may cause dermatitis.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : 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.

<b>Distillates (petroleum), hydrodesulfurized middle (64742-80-9)</b>	
LC50 fishes	> 1.13 mg/l 96 hours
EC50 Daphnia	> 2 mg/l 48 hours
NOEC (chronic)	0.163 mg/l 21 days- daphnia
ErC50 (algae)	> 1 mg/l 72 hours

<b>Fuels, diesel (68334-30-5)</b>	
LC50 fishes	> 3.2 mg/l 96 hours
EC50 Daphnia	> 2 mg/l 48 hours
NOEC (acute)	0.2 21 days- daphnia
ErC50 (algae)	> 3 mg/l 72 hours

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

<b>Gas Oil</b>	
Ecology - soil	Do not allow to enter into soil/subsoil. If product enters soil, it will be mobile and may contaminate groundwater.

### 12.5. Results of PBT and vPvB assessment

<b>Gas Oil</b>	
This substance/mixture does not meet the PBT criteria of REACH, annex XIII.	
This substance/mixture does not meet the 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) : Consult the appropriate authorities about waste disposal.

Waste treatment methods : Can be incinerated according to local regulations. Disposal must be done according to official regulations.

## SECTION 14: Transport information

Not a dangerous good in sense of transport regulations.

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no REACH candidate substance

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Other regulations, restrictions and prohibition regulations : Compliance with following regulations: Not classified as dangerous in compliance with Directive 67/548/EEC and/or Directive 1999/45/EC. Not classified as dangerous according to the criteria of directive(s) 67/548/EEC and/or 1999/45/EC. 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 established. Exposure scenario has not been updated yet.

## SECTION 16: Other information

Sources of Key data : PETROBRAS. MSDS.  
Abbreviations and acronyms : ASTM - American Society for Testing and Materials . CLP - Classification, Labelling and Packaging. CSR - Chemical Safety Report. EC - European Community. EEC - European Economic Community. GHS - Globally Harmonised System. REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals. SDS - Safety Data Sheet.

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. 1B	Carcinogenicity Category 1B
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
H350	May cause cancer
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
R45	May cause cancer.
R48/21	Harmful: danger of serious damage to health by prolonged exposure in contact with skin.
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 EU (REACH Annex II)

*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.*