

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Chemical type	: Substance
Substance name	: Lubricating oils
Trade name	: Bright Stock
EC index no	: 649-484-00-0
EC no	: 278-012-2
CAS No.	: 74869-22-0
REACH registration No.	: 01-2119495601-36-0007
Product code	: 904, 90M, 95E, 90L, SDS # PbR0050
Synonyms	: Bright Stock 150 (PBS 33) (Product code 904) / Bright Stock 140 (PBS 30) (Product code 90M) / Extensor Bright Stock 150 (Product code 95E) / Hydrogenated Bright Stock for Export (Product code 90L)

**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 agent Use in Oil and Gas field drilling and production operations Metal working fluids Release agent. Agrochemicals Building and construction work. Road work Manufacture of rubber products. Polymer preparations and compounds Fuels Lubricant Use as laboratory reagent. mining (including offshore industries). Water treatment chemicals. Functional fluids Binding agent Explosive
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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]**

Not classified

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

Not classified

# Bright Stock

## Safety Data Sheet

according to Regulation (EC) No. 453/2010

### Adverse physicochemical, human health and environmental effects

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.

### 2.2. Label elements

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

No labelling applicable

### 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 : When exposed to heat, may decompose liberating hazardous gases.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Lubricating oils (contains less than 3% DMSO-extract)	(CAS No.) 74869-22-0 (EC no) 278-012-2 (EC index no) 649-484-00-0	100	Not classified
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Lubricating oils (contains less than 3% DMSO-extract)	(CAS No.) 74869-22-0 (EC no) 278-012-2 (EC index no) 649-484-00-0	100	Not classified

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 after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of breathing difficulties administer oxygen. In case of irregular breathing or respiratory arrest provide artificial respiration. If medical advice is needed, have product container or label at hand.
- First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Rinse thoroughly with plenty of water for at least 20 minutes and take medical advice. If medical advice is needed, have product container or label at hand.
- First-aid measures after eye contact : Rinse immediately and plentifully with water, also under the eyelids, for at least 20 minutes. Seek immediate medical advice. If medical advice is needed, have product container or label at hand.
- First-aid measures after ingestion : If swallowed, do not induce vomiting: seek medical advice immediately and show this container label. If swallowed, rinse mouth with water (only if the person is conscious). Drink plenty of water.

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

- Symptoms/injuries after inhalation : Slightly irritating to respiratory system.
- Symptoms/injuries after skin contact : Slightly irritating to skin. Prolonged/repetitive skin contact may cause skin defatting or dermatitis.
- Symptoms/injuries after eye contact : Slightly irritating to eyes.
- Symptoms/injuries after ingestion : Nausea.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media: : Foam. Carbon dioxide (CO<sub>2</sub>). Water fog. Powder.
- Unsuitable extinguishing media : Water spray. Do not use a solid water stream as it may scatter and spread fire.

### 5.2. Special hazards arising from the substance or mixture

- Reactivity : On combustion, forms. Carbon dioxide (CO<sub>2</sub>). Sulphur dioxide (SO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). Carbon monoxide.

### 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.

# Bright Stock

## Safety Data Sheet

according to Regulation (EC) No. 453/2010

### SECTION 6: Accidental release measures

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

General measures : Use water spray/stream to protect personnel and to cool endangered containers. Emergency cooling must be provided for in case of fire. Remove product from area of fire.

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

Protective equipment : Wear suitable protective clothing, gloves and eye/face protection. Refer to section 8.  
Emergency procedures : Stop leak if safe to do so. Remove all sources of ignition.

##### 6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye/face protection. In case of fire: Wear self-contained breathing apparatus. Refer to section 8.  
Emergency procedures : Evacuate unnecessary personnel. Remove all sources of ignition. Stop leak if safe to do so. Eliminate leaks immediately.

#### 6.2. Environmental precautions

Stop leak if safe to do so. Avoid release to the environment. Contaminated fire-fighting water must be collected separately. Prevent spreading over great surfaces (e.g. by damming or installing oil booms). Do not discharge into drains or the environment.

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

Methods for cleaning up : Collect in closed containers for disposal. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Ensure all waste water is collected and treated via a waste water treatment plant. When in liquid state (heated) must be chilled with water to solidify.  
Other information : Relevant water authorities should be notified of any large spillage to water course or drain. Do not allow to enter into soil/subsoil. Eliminate all ignition sources if safe to do so. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

#### 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. Use only in well-ventilated areas. Use personal protective equipment as required.

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

Technical measures: : Floors should be impenetrable, resistant to liquids and easy to clean. The floor should be leak tight, jointless and not absorbent.  
Incompatible materials : Oxidizing agents, strong.  
Storage area : Keep away from open flames, hot surfaces and sources of ignition. Ensure the grounding of containers, apparatus, pumps and suction equipment. Store in dry, cool, well-ventilated area.  
Special rules on packaging : Portable Tanks/vessels.

#### 7.3. Specific end use(s)

No data available.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Lubricating oils (74869-22-0)		
Belgium	Limit value (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Belgium	Short time value (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Italy - Portugal - USA ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Lubricating oils (74869-22-0)		
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal	1 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	2.7 mg/m <sup>3</sup> /day	
DNEL/DMEL (General Population)		
Acute - systemic effects, oral	0.74 mg/kg bodyweight	
Long-term - systemic effects, inhalation	1.2 mg/m <sup>3</sup> /day	

#### 8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate ventilation.  
Personal protective equipment : Wear protective gloves/protective clothing/eye protection/face protection. The entire protective clothing must be washed after use. Used working clothes should not be used outside the work area. Do not eat, drink or smoke when using this product.

# Bright Stock

## Safety Data Sheet

according to Regulation (EC) No. 453/2010

Hand protection	: Wear protective gloves. PVC (Polyvinyl chloride).
Eye protection	: Wear eye protection/face protection.
Skin and body protection	: Wear suitable protective clothing or Rubber apron.
Respiratory protection	: Wear respiratory protection. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, closed-circuit breathing apparatus must be used!. 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	: light yellow.
Odour	: odourless.
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Solidification point	: No data available
Boiling point	: 389-720 °C
Flash point	: > 280 °C ASTM D 92
Relat. evapor. rate comp. to butylacetate	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Vapour pressure	: < 5 mmHg @ 25°C
Relative vapour density at 20 °C	: No data available
Relative density	: 0.9 g/cm <sup>3</sup> @ 20°C
Solubility	: Water: not significant
Log Pow	: 3.9-6
Self ignition temperature	: 360 °C (Combustion point/Fire point: >320°C)
Decomposition temperature	: > 400 °C
Viscosity, kinematic	: 478.4 cSt @ 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

On combustion, forms. Carbon dioxide (CO<sub>2</sub>). Sulphur dioxide (SO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). Carbon monoxide.

#### 10.2. Chemical stability

Stable at normal conditions. When exposed to heat, may decompose liberating hazardous gases.

#### 10.3. Possibility of hazardous reactions

No data available.

#### 10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

#### 10.5. Incompatible materials

Oxidizing agents, strong.

#### 10.6. Hazardous decomposition products

No data available.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>Lubricating oils (contains less than 3% DMSO-extract) (74869-22-0)</b>	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5.53 mg/l/4h

# Bright Stock

## Safety Data Sheet

according to Regulation (EC) No. 453/2010

Skin corrosion/irritation	: Not classified Not irritating
Serious eye damage/irritation	: Not classified Not irritating
Respiratory or skin sensitisation	: Not classified Not sensitizing
Germ cell mutagenicity	: Not classified Negative
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified

### Lubricating oils (contains less than 3% DMSO-extract) (74869-22-0)

NOAEL (oral,rat,90 days)	< 125 mg/kg bodyweight/day
NOAEL (dermal,rat/rabbit,90 days)	> 2000 mg/kg bodyweight/day
NOAEL (inhalation,rat,vapour,28 days)	> 0.98 mg/l/6h/day

Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Ames test negative.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: Do not allow agent or/and its container to leak into waters. (Do not clean release apparatus in the direct vicinity of surface waters/Avoid indirect entry into farmyard gullies or road gullies).
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.

### Lubricating oils (contains less than 3% DMSO-extract) (74869-22-0)

LC50 fishes	> 100 mg/l 96 hours
LC50 other aquatic organisms	> 1000 mg/l 21 days- daphnia
NOEC (acute)	> 10000 mg/l 96 hours- shrimp
NOEC (chronic)	> 10 mg/l 21 days- daphnia

### 12.2. Persistence and degradability

#### Bright Stock (74869-22-0)

Persistence and degradability	Inherently biodegradable.
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### 12.3. Bioaccumulative potential

#### Bright Stock (74869-22-0)

BCF fishes	132 estimated
Log Pow	3.9-6
Bioaccumulative potential	Bioaccumulative potential.

### 12.4. Mobility in soil

#### Bright Stock (74869-22-0)

Ecology - soil	Low mobility (soil).
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### 12.5. Results of PBT and vPvB assessment

#### Bright Stock (74869-22-0)

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

### 12.6. Other adverse effects

Other adverse effects	: No data available.
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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations	: Consult the local waste disposal expert about waste disposal. Do not empty into drains or the aquatic environment. Dispose of this material and its container to hazardous or special waste collection point. Disposal must be done according to official regulations.
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## SECTION 14: Transport information

Not a dangerous good in sense of transport regulations.

# Bright Stock

## Safety Data Sheet

according to Regulation (EC) No. 453/2010

### 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 regulations : Compliance with following regulations: Regulation (EC) 1907/2006 as amended. Regulation (EC) 1272/2008 as amended. Directive 67/548/EEC as amended. Directive 1999/45/EC as amended.

##### 15.1.2. National regulations

Regional legislation : No data has been reported. In case of need contact our Product Safety office.

#### 15.2. Chemical safety assessment

Substance is not classified as dangerous. Exposure scenarios don't need to be provided.

### 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.

#### 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.*