

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

<b>Product name</b>	Castrol Manual EP 80W-90
<b>Product code</b>	467150-BE02
<b>SDS no.</b>	467150
<b>Product type</b>	Liquid.

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

Identified uses
General use of lubricants and greases in vehicles or machinery-Industrial
General use of lubricants and greases in vehicles or machinery-Professional

<b>Use of the substance/ mixture</b>	Transmission fluid For specific application advice see appropriate Technical Data Sheet or consult our company representative.
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**1.3 Details of the supplier of the safety data sheet**

<b>Supplier</b>	BP Fuels & Lubricants AS, Drammensveien 167, NO - 0212 Oslo Norway
<b>E-mail address</b>	MSDSadvice@bp.com

**1.4 Emergency telephone number**

<b>EMERGENCY TELEPHONE NUMBER</b>	Telefonnummer: + 47 22 59 13 00 (Giftinformasjonssentralen) Telefaxnummer: + 47 22 60 85 75 (Giftinformasjonssentralen) Carechem: +44 (0) 1235 239 670 (24/7)
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**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

<b>Product definition</b>	Mixture
<b>Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]</b>	Aquatic Chronic 3, H412

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

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

**2.2 Label elements**

<b>Signal word</b>	No signal word.
<b>Hazard statements</b>	H412 - Harmful to aquatic life with long lasting effects.
<b>Precautionary statements</b>	
<b>Prevention</b>	P273 - Avoid release to the environment.
<b>Response</b>	Not applicable.
<b>Storage</b>	Not applicable.
<b>Disposal</b>	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	Contains Amines, C10-14-tert-alkyl. May produce an allergic reaction.

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

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**SECTION 2: Hazards identification**

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

**Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** Not applicable.

**Tactile warning of danger** Not applicable.

**2.3 Other hazards**

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

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

**Other hazards which do not result in classification** Defatting to the skin.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures**

**Product definition** Mixture

Highly refined base oil (IP 346 DMSO extract < 3%). Proprietary performance additives.

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Distillates (petroleum), hydrotreated heavy paraffinic	REACH #: 01-2119484627-25 EC: 265-157-1 CAS: 64742-54-7 Index: 649-467-00-8	≥25 - ≤50	Not classified.	[6]
Distillates (petroleum), solvent-dewaxed heavy paraffinic	REACH #: 01-2119471299-27 EC: 265-169-7 CAS: 64742-65-0 Index: 649-474-00-6	≥25 - ≤50	Not classified.	[6]
Residual oils (petroleum), solvent-dewaxed	REACH #: 01-2119480472-38 EC: 265-166-0 CAS: 64742-62-7 Index: 649-471-00-X	≥10 - ≤25	Not classified.	[6]
Residual oils (petroleum), hydrotreated	REACH #: 01-2119489287-22 EC: 265-160-8 CAS: 64742-57-0 Index: 649-470-00-4	≥10 - ≤25	Not classified.	[6]
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	REACH #: 01-2119473797-19 EC: - CAS: -	≤0.1	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)	[1]

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

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

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## SECTION 3: Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.
<b>Skin contact</b>	Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.
<b>Inhalation</b>	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
<b>Ingestion</b>	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Get medical attention if symptoms occur.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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

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

#### Potential acute health effects

<b>Inhalation</b>	Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.
<b>Ingestion</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	Defatting to the skin. May cause skin dryness and irritation.
<b>Eye contact</b>	No known significant effects or critical hazards.

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

<b>Inhalation</b>	Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
<b>Ingestion</b>	Ingestion of large quantities may cause nausea and diarrhoea.
<b>Skin contact</b>	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
<b>Eye contact</b>	Potential risk of transient stinging or redness if accidental eye contact occurs.

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

<b>Notes to physician</b>	Treatment should in general be symptomatic and directed to relieving any effects.
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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	Use foam or all-purpose dry chemical to extinguish.
<b>Unsuitable extinguishing media</b>	Do not use water jet. The use of a water jet may cause the fire to spread by splashing the burning product.

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

<b>Hazards from the substance or mixture</b>	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous combustion products</b>	Combustion products may include the following: carbon oxides (CO, CO <sub>2</sub> ) (carbon monoxide, carbon dioxide)

### 5.3 Advice for firefighters

<b>Special precautions for fire-fighters</b>	No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. This material is harmful to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
<b>Special protective equipment for fire-fighters</b>	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

Contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment.

#### For emergency responders

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

### 6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

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

#### Small spill

Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

#### Large spill

Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilt product. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

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

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

#### Protective measures

Put on appropriate personal protective equipment. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid contact of spilt material and runoff with soil and surface waterways. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Empty containers retain product residue and can be hazardous.

#### Advice on general occupational hygiene

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

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

Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep away from heat and direct sunlight. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store and use only in equipment/containers designed for use with this product. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

#### Not suitable

Prolonged exposure to elevated temperature

### 7.3 Specific end use(s)

#### Recommendations

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

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**Format** Norway

**Language** ENGLISH

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**SECTION 8: Exposure controls/personal protection**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**8.1 Control parameters**

Occupational exposure limits

Product/ingredient name	Exposure limit values
Distillates (petroleum), hydrotreated heavy paraffinic	<b>FOR-2011-12-06-1358 (Norway).</b> TWA: 1 mg/m³ 8 hours. Issued/Revised: 2/1996 Form: mineral oil particles TWA: 50 mg/m³ 8 hours. Issued/Revised: 2/1996 Form: Vapour
Distillates (petroleum), solvent-dewaxed heavy paraffinic	<b>FOR-2011-12-06-1358 (Norway).</b> TWA: 1 mg/m³ 8 hours. Issued/Revised: 2/1996 Form: mineral oil particles TWA: 50 mg/m³ 8 hours. Issued/Revised: 2/1996 Form: Vapour
Residual oils (petroleum), solvent-dewaxed	<b>FOR-2011-12-06-1358 (Norway).</b> TWA: 1 mg/m³ 8 hours. Issued/Revised: 2/1996 Form: mineral oil particles TWA: 50 mg/m³ 8 hours. Issued/Revised: 2/1996 Form: Vapour
Residual oils (petroleum), hydrotreated	<b>FOR-2011-12-06-1358 (Norway).</b> TWA: 1 mg/m³ 8 hours. Issued/Revised: 2/1996 Form: mineral oil particles TWA: 50 mg/m³ 8 hours. Issued/Revised: 2/1996 Form: Vapour

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived No Effect Level

No DNELs/DMELs available.

Predicted No Effect Concentration

No PNECs available

**8.2 Exposure controls**

Appropriate engineering controls

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

Individual protection measures

Hygiene measures

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

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

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## SECTION 8: Exposure controls/personal protection

[Eye/face protection](#)

Safety glasses with side shields.

[Skin protection](#)

[Hand protection](#)

### General Information:

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

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

Recommended: Nitrile gloves.

### Breakthrough time:

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

Continuous contact:

Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained.

If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.

Short-term / splash protection:

Recommended breakthrough times as above.

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

### Glove Thickness:

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

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

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

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

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

### Skin and body

Use of protective clothing is good industrial practice.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

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## SECTION 8: Exposure controls/personal protection

### Refer to standards:

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

### Environmental exposure controls

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

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	Liquid.
Colour	Amber. [Light]
Odour	Not available.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	-33 °C
Flash point	Open cup: 236°C (456.8°F) [Cleveland.]
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Density	890 kg/m <sup>3</sup> (0.89 g/cm <sup>3</sup> ) at 15°C
Solubility(ies)	insoluble in water.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Kinematic: 133 mm <sup>2</sup> /s (133 cSt) at 40°C Kinematic: 14 mm <sup>2</sup> /s (14 cSt) at 100°C
Explosive properties	Not available.
Oxidising properties	Not available.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

10.1 Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
10.2 Chemical stability	The product is stable.
10.3 Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
10.4 Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
10.5 Incompatible materials	Reactive or incompatible with the following materials: oxidising materials.

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## SECTION 10: Stability and reactivity

### 10.6 Hazardous decomposition products

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

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	500	N/A	N/A	N/A	N/A

#### Information on likely routes of exposure

Routes of entry anticipated: Dermal, Inhalation.

#### Potential acute health effects

##### Inhalation

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

##### Ingestion

No known significant effects or critical hazards.

##### Skin contact

Defatting to the skin. May cause skin dryness and irritation.

##### Eye contact

No known significant effects or critical hazards.

#### Symptoms related to the physical, chemical and toxicological characteristics

##### Inhalation

May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs.

##### Ingestion

No specific data.

##### Skin contact

Adverse symptoms may include the following:  
irritation  
dryness  
cracking

##### Eye contact

No specific data.

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

##### Inhalation

Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.

##### Ingestion

Ingestion of large quantities may cause nausea and diarrhoea.

##### Skin contact

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

##### Eye contact

Potential risk of transient stinging or redness if accidental eye contact occurs.

#### Potential chronic health effects

##### General

No known significant effects or critical hazards.

##### Carcinogenicity

No known significant effects or critical hazards.

##### Mutagenicity

No known significant effects or critical hazards.

##### Developmental effects

No known significant effects or critical hazards.

##### Fertility effects

No known significant effects or critical hazards.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Environmental hazards

Harmful to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

Expected to be biodegradable.

### 12.3 Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

### 12.4 Mobility in soil

#### Soil/water partition coefficient (K<sub>oc</sub>)

Not available.

#### Mobility

Spillages may penetrate the soil causing ground water contamination.

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## SECTION 12: Ecological information

### 12.5 Results of PBT and vPvB assessment

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

### 12.6 Other adverse effects

**Other ecological information** Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

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

**Hazardous waste** Yes.

#### European waste catalogue (EWC)

Waste code	Waste designation
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils

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

#### Packaging

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

**Special precautions** This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

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

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-	-
<b>14.4 Packing group</b>	-	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	-	-	-	-

**14.6 Special precautions for user** Not available.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not available.

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## SECTION 15: Regulatory information

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

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

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

**Other regulations**

**REACH Status**

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

**United States inventory (TSCA 8b)**

All components are active or exempted.

**Australia inventory (AICS)**

All components are listed or exempted.

**Canada inventory**

All components are listed or exempted.

**China inventory (IECSC)**

All components are listed or exempted.

**Japan inventory (ENCS)**

All components are listed or exempted.

**Korea inventory (KECI)**

All components are listed or exempted.

**Philippines inventory (PICCS)**

All components are listed or exempted.

**Taiwan Chemical Substances Inventory (TCSI)**

All components are listed or exempted.

**Ozone depleting substances (1005/2009/EU)**

Not listed.

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

Not listed.

**EU - Water framework directive - Priority substances**

None of the components are listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**15.2 Chemical safety assessment**

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

## SECTION 16: Other information

**Abbreviations and acronyms**

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

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**SECTION 16: Other information**

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

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

Classification	Justification
Aquatic Chronic 3, H412	Calculation method
<b>Full text of abbreviated H statements</b>	
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
<b>Full text of classifications [CLP/GHS]</b>	
Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
Aquatic Acute 1, H400	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1, H410	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Skin Corr. 1B, H314	SKIN CORROSION/IRRITATION - Category 1B
STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

**History**

<b>Date of issue/ Date of revision</b>	27/10/2020.
<b>Date of previous issue</b>	25/04/2019.
<b>Prepared by</b>	Product Stewardship

 Indicates information that has changed from previously issued version.

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## Annex to the extended Safety Data Sheet (eSDS)

Industrial

### Identification of the substance or mixture

Product definition	Mixture
Code	467150-BE02
Product name	Castrol Manual EP 80W-90

### Section 1: Title

Short title of the exposure scenario	General use of lubricants and greases in vehicles or machinery - Industrial
List of use descriptors	<p><b>Identified use name:</b> General use of lubricants and greases in vehicles or machinery-Industrial</p> <p><b>Process Category:</b> PROC01, PROC08b, PROC09, PROC02</p> <p><b>Sector of end use:</b> SU03</p> <p><b>Subsequent service life relevant for that use:</b> No.</p> <p><b>Environmental Release Category:</b> ERC04, ERC07</p> <p><b>Specific Environmental Release Category:</b> ATIEL-ATC SPERC 4.Biv1</p>

Processes and activities covered by the exposure scenario	Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.
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### Section 2 Operational conditions and risk management measures

#### Section 2.1 Control of worker exposure

No exposure scenario is presented because the product is not classified for Human Health

#### Contributing scenarios: Operational conditions and risk management measures

#### Section 2.2: Control of environmental exposure

##### Amounts used:

**EU tonnage of risk determining substance per year:** 2.63E+3 Tonnes/year

##### Frequency and duration of use:

**Emission days:** 300

##### Environment factors not influenced by risk management:

**Local freshwater dilution factor:** 10

**Local marine water dilution factor:** 100

##### Other conditions affecting environmental exposure:

Negligible wastewater emissions as process operates without water contact.

**Release fraction to air (after typical onsite RMMs):** 5.00E-05

**Release fraction to soil from process (after typical onsite RMMs):** 0

**Release fraction to wastewater from process (after typical onsite RMMs and before sewage treatment plan):** Not available.

##### Technical conditions and measures at process level (source) to prevent release:

Common practices vary across sites thus conservative process release estimates used.

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General use of lubricants and greases in vehicles or machinery - Industrial

<b>Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:</b>	Prevent discharge of undissolved substance to or recover from onsite wastewater. User sites are assumed to be provided with oil/water separators and waste water to be discharged via a sewage treatment plant
<b>Organisational measures to prevent/limit release from site:</b>	Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
<b>Conditions and measures related to sewage treatment plant:</b>	
<b>Estimated substance removal from wastewater via on-site sewage treatment</b>	Not available.
<b>Assumed domestic sewage treatment plant flow rate (m3/d)</b>	2.00E+3
<b>Maximum allowable site tonnage (M<sub>Safe</sub>) based on release following total wastewater treatment removal as product:</b>	Not available.
<b>Conditions and measures related to external treatment of waste for disposal:</b>	External treatment and disposal of waste should comply with applicable local and/or national regulations.
<b>Conditions and measures related to external recovery of waste:</b>	External recovery and recycling of waste should comply with applicable local and/or national regulations.

### Section 3: Exposure estimation and reference to its source

<b>Exposure estimation and reference to its source - Environment</b>	
<b>Exposure assessment (environment):</b>	Used ECETOC TRA model (May 2010 release).

<b>Exposure estimation and reference to its source - Workers</b>	
<b>Exposure assessment (human):</b>	No exposure scenario is presented because the product is not classified for Human Health

### Section 4: Guidance to check compliance with the exposure scenario

<b>Environment</b>	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see <a href="http://www.ATIEL.org/REACH_GES">www.ATIEL.org/REACH_GES</a>
<b>Health</b>	No exposure scenario is presented because the product is not classified for Human Health

## Annex to the extended Safety Data Sheet (eSDS)

Professional

### Identification of the substance or mixture

Product definition	Mixture
Code	467150-BE02
Product name	Castrol Manual EP 80W-90

### Section 1: Title

Short title of the exposure scenario	General use of lubricants and greases in vehicles or machinery - Professional
List of use descriptors	<p><b>Identified use name:</b> General use of lubricants and greases in vehicles or machinery-Professional</p> <p><b>Process Category:</b> PROC01, PROC02, PROC08a, PROC08b, PROC20</p> <p><b>Sector of end use:</b> SU22</p> <p><b>Subsequent service life relevant for that use:</b> No.</p> <p><b>Environmental Release Category:</b> ERC09a, ERC09b</p> <p><b>Specific Environmental Release Category:</b> ATIEL-ATC SPERC 9.Bp.v1</p>

Processes and activities covered by the exposure scenario	Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.
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### Section 2 Operational conditions and risk management measures

#### Section 2.1 Control of worker exposure

No exposure scenario is presented because the product is not classified for Human Health

#### Contributing scenarios: Operational conditions and risk management measures

#### Section 2.2: Control of environmental exposure

##### Amounts used:

**EU tonnage of risk determining substance per year:** 5.39 Tonnes/year

##### Frequency and duration of use:

**Emission days:** 365

##### Environment factors not influenced by risk management:

**Local freshwater dilution factor:** 10

**Local marine water dilution factor:** 100

##### Other conditions affecting environmental exposure:

Negligible wastewater emissions as process operates without water contact.

**Release fraction to air (after typical onsite RMMs):** 1.00E-04

**Release fraction to soil from process (after typical onsite RMMs):** 1E-03

**Release fraction to wastewater from process (after typical onsite RMMs and before sewage treatment plan):** Not available.

##### Technical conditions and measures at process level (source) to prevent release:

Common practices vary across sites thus conservative process release estimates used.



<b>Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:</b>	Prevent discharge of undissolved substance to or recover from onsite wastewater. User sites are assumed to be provided with oil/water separators and waste water to be discharged via a sewage treatment plant
<b>Organisational measures to prevent/limit release from site:</b>	Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
<b>Conditions and measures related to sewage treatment plant:</b>	
<b>Estimated substance removal from wastewater via on-site sewage treatment</b>	No data available yet
<b>Assumed domestic sewage treatment plant flow rate (m3/d)</b>	2.00E+3
<b>Maximum allowable site tonnage (M<sub>Safe</sub>) based on release following total wastewater treatment removal as product:</b>	No data available yet
<b>Conditions and measures related to external treatment of waste for disposal:</b>	External treatment and disposal of waste should comply with applicable local and/or national regulations.
<b>Conditions and measures related to external recovery of waste:</b>	External recovery and recycling of waste should comply with applicable local and/or national regulations.

### Section 3: Exposure estimation and reference to its source

<b>Exposure estimation and reference to its source - Environment</b>	
<b>Exposure assessment (environment):</b>	Used ECETOC TRA model (May 2010 release).

<b>Exposure estimation and reference to its source - Workers</b>	
<b>Exposure assessment (human):</b>	No exposure scenario is presented because the product is not classified for Human Health

### Section 4: Guidance to check compliance with the exposure scenario

<b>Environment</b>	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see <a href="http://www.ATIEL.org/REACH_GES">www.ATIEL.org/REACH_GES</a>
<b>Health</b>	No exposure scenario is presented because the product is not classified for Human Health

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<b>Date of previous issue</b> 25 April 2019.		<b>(Norway)</b>	