

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

Product name	Castrol ON EV Transmission Fluid D1
UFI:	C7P0-6082-X00A-7NY6
Product code	470478-DE41
SDS #	470478
Product type	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	

Use of the substance/ mixture	EV Transmission Fluid - Dry e-motor For specific application advice see appropriate Technical Data Sheet or consult our company representative. For professional users only.
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**1.3 Details of the supplier of the safety data sheet**

Supplier	Lubricants UK Limited, Chertsey Road, Sunbury On Thames, Middlesex, TW16 7BP
	+44 (0)345 600 8125
E-mail address	MSDSadvice@bp.com

**1.4 Emergency telephone number**

**EMERGENCY  
TELEPHONE NUMBER** Carechem: +44 (0) 1235 239 670 (24/7)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

Product definition	Mixture
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**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Asp. Tox. 1, H304

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**

UFI:	C7P0-6082-X00A-7NY6
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**Hazard pictograms**

Signal word	Danger
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Hazard statements	H304 - May be fatal if swallowed and enters airways. H412 - Harmful to aquatic life with long lasting effects.
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**Precautionary statements**

General	P102 - Keep out of reach of children. P101 - If medical advice is needed, have product container or label at hand.
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Product name	Castrol ON EV Transmission Fluid D1	Product code	470478-DE41	Page:	1/26
Version 7	Date of issue 26 February 2025	Format	United Kingdom (UK)	Language	ENGLISH
Date of previous issue	26 April 2024.		(United Kingdom)		

## SECTION 2: Hazards identification

<b>Prevention</b>	P273 - Avoid release to the environment.
<b>Response</b>	P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
<b>Storage</b>	P405 - Store locked up.
<b>Disposal</b>	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	<input checked="" type="checkbox"/> ubricating oils (petroleum), C20-50, hydrotreated neutral oil-based
<b>Supplemental label elements</b>	Not applicable.
<b>EU Regulation (EC) No. 1907/2006 (REACH)</b>	
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	Not applicable.
<b>Special packaging requirements</b>	
<b>Containers to be fitted with child-resistant fastenings</b>	Yes, applicable.
<b>Tactile warning of danger</b>	Yes, applicable.
<b>2.3 Other hazards</b>	
<b>Results of PBT and vPvB assessment</b>	Product does not meet the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII.
<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	<input checked="" type="checkbox"/> his mixture contains substances that are assessed to be a PBT or a vPvB, refer to Section 3.2.
<b>Other hazards which do not result in classification</b>	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	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
<input checked="" type="checkbox"/> ubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	REACH #: 01-2119474889-13 EC: 276-738-4 CAS: 72623-87-1 Index: 649-483-00-5	≥75 - ≤90	Asp. Tox. 1, H304	-	[1]
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	REACH #: 01-2119474878-16 EC: 276-737-9 CAS: 72623-86-0 Index: 649-482-00-X	≤3	Asp. Tox. 1, H304	-	[1]
Distillates (petroleum), solvent-dewaxed heavy paraffinic	REACH #: 01-2119471299-27 UK (GB) REACH #: UK-01-0119695008-1 EC: 265-169-7 CAS: 64742-65-0 Index: 649-474-00-6	≤3	Asp. Tox. 1, H304	-	[1]
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, <0.03% aromatics	REACH #: 01-2119826592-36 EC: 934-954-2 CAS: -	≤3	Asp. Tox. 1, H304	-	[1]
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl	REACH #: 01-2119480426-35 01-2120052100-80	<1	Repr. 2, H361d Aquatic Chronic 4, H413	-	[1] [2]

<b>Product name</b>	Castrol ON EV Transmission Fluid D1	<b>Product code</b>	470478-DE41	<b>Page:</b>	2/26
<b>Version</b> 7	<b>Date of issue</b> 26 February 2025	<b>Format</b>	United Kingdom (UK)	<b>Language</b>	ENGLISH
<b>Date of previous issue</b>	26 April 2024.		(United Kingdom)		

## SECTION 3: Composition/information on ingredients

derivatives	CAS: 192268-65-8 Index: 607-501-00-9				
zinc isodecyl phosphorodithioate	REACH #: 01-2120767616-43 EC: 246-618-6 CAS: 25103-54-2	≤0.3	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
2,6-di-tert-butylphenol	REACH #: 01-2119490822-33 EC: 204-884-0 CAS: 128-39-2	≤0.3	Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]

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

### Type

Substance classified with a health or environmental hazard

Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

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. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Aspiration hazard if swallowed. Can enter lungs and cause damage. Get medical attention immediately.
<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>	Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.
<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

#### Notes to physician

Treatment should in general be symptomatic and directed to relieving any effects. Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.

<b>Product name</b>	Castrol ON EV Transmission Fluid D1	<b>Product code</b>	470478-DE41	<b>Page:</b>	3/26
<b>Version</b>	7	<b>Date of issue</b>	26 February 2025	<b>Format</b>	United Kingdom (UK)
<b>Date of previous issue</b>				<b>Language</b>	ENGLISH (United Kingdom)

## 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.
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<b>Hazardous combustion products</b>	Combustion products may include the following: carbon oxides (CO, CO <sub>2</sub> ) (carbon monoxide, carbon dioxide)
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### 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

<b>For non-emergency personnel</b>	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.
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<b>For emergency responders</b>	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".
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<b>6.2 Environmental precautions</b>	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.
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### 6.3 Methods and material for containment and cleaning up

<b>Small spill</b>	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.
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<b>Large spill</b>	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.
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<b>6.4 Reference to other sections</b>	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.
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<b>Product name</b>	Castrol ON EV Transmission Fluid D1	<b>Product code</b>	470478-DE41	<b>Page:</b>	4/26
<b>Version</b>	7	<b>Date of issue</b>	26 February 2025	<b>Format</b>	United Kingdom (UK)
<b>Date of previous issue</b>	26 April 2024.	<b>Language</b>	ENGLISH	<b>(United Kingdom)</b>	

## 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

<b>Protective measures</b>	Put on appropriate personal protective equipment. Do not swallow. Aspiration hazard if swallowed. Can enter lungs and cause damage. Never siphon by mouth. 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.
<b>Advice on general occupational hygiene</b>	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.
<b>7.2 Conditions for safe storage, including any incompatibilities</b>	Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. 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.
<b>Not suitable</b>	Prolonged exposure to elevated temperature

### 7.3 Specific end use(s)

<b>Recommendations</b>	See section 1.2 and Exposure scenarios in annex, if applicable.
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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

<b>Occupational exposure limits</b>	No exposure limit value known.
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.	
<b>Recommended monitoring procedures</b>	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

<b>Appropriate engineering controls</b>	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.
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#### Individual protection measures

<b>Hygiene measures</b>	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.
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<b>Product name</b>	Castrol ON EV Transmission Fluid D1	<b>Product code</b>	470478-DE41	<b>Page:</b>	5/26
<b>Version</b>	7	<b>Date of issue</b>	26 February 2025	<b>Format</b>	United Kingdom (UK)
<b>Date of previous issue</b>	26 April 2024.			<b>Language</b>	ENGLISH (United Kingdom)

## SECTION 8: Exposure controls/personal protection

### 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.

### 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.

Product name	Castrol ON EV Transmission Fluid D1	Product code	470478-DE41	Page:	6/26
Version 7	Date of issue	26 February 2025	Format	United Kingdom (UK)	Language ENGLISH
Date of previous issue	26 April 2024.			(United Kingdom)	

## SECTION 8: Exposure controls/personal protection

### 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.

### 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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

Physical state	Liquid.										
Colour	Brown.										
Odour	Not available.										
Odour threshold	Not available.										
Melting point/freezing point	Not available.										
Initial boiling point and boiling range	Not available.										
Flammability	Not available.										
Lower and upper explosion limit	Not available.										
Flash point	Open cup: >180°C (>356°F) [Cleveland ASTM D 92]										
Auto-ignition temperature	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>°C</th> <th>°F</th> <th>Method</th> </tr> </thead> <tbody> <tr> <td>Distillates (petroleum) hydrotreated middle</td> <td>225</td> <td>437</td> <td></td> </tr> </tbody> </table>			Ingredient name	°C	°F	Method	Distillates (petroleum) hydrotreated middle	225	437	
Ingredient name	°C	°F	Method								
Distillates (petroleum) hydrotreated middle	225	437									
Decomposition temperature	Not available.										
pH	Not applicable.										
Kinematic viscosity	Kinematic: 18 mm <sup>2</sup> /s (18 cSt) at 40°C Kinematic: 4.3 to 4.8 mm <sup>2</sup> /s (4.3 to 4.8 cSt)										
Solubility	<table border="1"> <thead> <tr> <th>Media</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>water</td> <td>Not soluble</td> </tr> </tbody> </table>			Media	Result	water	Not soluble				
Media	Result										
water	Not soluble										
Partition coefficient n-octanol/water (log value)	Not applicable.										

Vapour pressure	Vapour Pressure at 20°C			Vapour pressure at 50°C			
	Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	<0.07501	<0.01	ASTM D 5191				
Distillates (petroleum), hydrotreated heavy paraffinic	<0.07501	<0.01	ASTM D 5191				
Lubricating oils	<0.07501	<0.01	ASTM D 5191				

Product name	Castrol ON EV Transmission Fluid D1	Product code	470478-DE41	Page: 7/26
Version 7	Date of issue	26 February 2025	Format	United Kingdom (UK)
			Language	ENGLISH (United Kingdom)
Date of previous issue	26 April 2024.			

## SECTION 9: Physical and chemical properties

(petroleum), C15-30, hydrotreated neutral oil-based						
Distillates (petroleum), solvent-dewaxed heavy paraffinic	<0.07501	<0.01	ASTM D 5191			
Distillates (petroleum), solvent-refined heavy paraffinic	<0.07501	<0.01	ASTM D 5191			
<b>Density and/or Relative density</b>	<1000 kg/m <sup>3</sup> (<1 g/cm <sup>3</sup> ) at 15°C					
<b>Relative vapour density</b>	Not available.					
<b>Particle characteristics</b>						
<b>Median particle size</b>	Not applicable.					
<b>9.2 Other information</b>						
<b>Evaporation rate</b>	Not available.					
<b>Explosive properties</b>	Not available.					
<b>Oxidising properties</b>	Not available.					
<b>Pour point</b>	-48 °C					

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
<b>10.2 Chemical stability</b>	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
<b>10.4 Conditions to avoid</b>	Avoid all possible sources of ignition (spark or flame).
<b>10.5 Incompatible materials</b>	Reactive or incompatible with the following materials: oxidising materials.
<b>10.6 Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

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

#### Acute toxicity

Product/ingredient name	Result / Route	Test authority / Number	Species	Dose	Exposure	Remarks
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	LC50 Inhalation	OECD 403	Rat	>5 mg/l	4 hours	Based on studies with similar substances.
	LD50 Dermal	OECD 402	Rat	>5000 mg/kg	-	
	LD50 Oral	OECD 423	Rat	>5000 mg/kg	-	Based on studies with similar substances.
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	LC50 Inhalation	OECD 403	Rat	>5 mg/l	4 hours	Based on studies with similar substances.
	LD50 Dermal	OECD 402	Rat	>2000 mg/kg	-	

Product name	Castrol ON EV Transmission Fluid D1	Product code	470478-DE41	Page: 8/26
Version 7	Date of issue	26 February 2025	Format	United Kingdom (UK)
			Language	ENGLISH
Date of previous issue	26 April 2024.			(United Kingdom)

**SECTION 11: Toxicological information**

								substances.
	LD50 Oral	OECD	401	Rat	>5000 mg/kg	-		Based on studies with similar substances.
Distillates (petroleum), solvent-dewaxed heavy paraffinic	LC50 Inhalation Dusts and mists	OECD	403	Rat	>5.53 mg/l	4 hours	-	
	LD50 Dermal	OECD	402	Rat	>2000 mg/kg	-		Based on studies with similar substances.
	LD50 Oral	OECD	401	Rat	>5000 mg/kg	-		Based on studies with similar substances.
Distillates (petroleum) hydrotreated middle	LC50 Inhalation Dusts and mists	OECD	403	Rat	>5 mg/l	4 hours		Based on studies with similar substances.
	LD50 Dermal	OECD	402	Rabbit	>2000 mg/kg	-		Based on studies with similar substances.
	LD50 Oral	OECD	401	Rat	>5000 mg/kg	-		Based on studies with similar substances.
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	LD50 Dermal	-	-	Rabbit	>2000 mg/kg	-	-	-
	LD50 Oral	OECD	401	Rat	>2000 mg/kg	-	-	-
zinc isodecyl phosphorodithioate	LD50 Dermal	OECD	402	Rat	>5000 mg/kg	-		Based on studies with similar substances.
	LD50 Oral	OECD	401	Rat	3100 mg/kg	-		Based on studies with similar substances.
2,6-di-tert-butylphenol	LD50 Dermal	-	-	Rabbit	>5000 mg/kg	-	-	-
	LD50 Oral	OECD	401	Rat	>5000 mg/kg	-	-	-

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)
zinc isodecyl phosphorodithioate	2500	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product name	Castrol ON EV Transmission Fluid D1	Product code	470478-DE41	Page: 9/26
Version 7	Date of issue 26 February 2025	Format	United Kingdom (UK) (United Kingdom)	Language ENGLISH
Date of previous issue	26 April 2024.			

**SECTION 11: Toxicological information**

Product/ingredient name	Test authority / Test number	Species	Route / Result	Test concentration	Remarks
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	OECD 405	Rabbit	Eyes - Severe irritant	-	Based on studies with similar substances.
	OECD 404	Rabbit	Skin - Non-irritant to skin.	-	Based on studies with similar substances.
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	OECD 405	Rabbit	Eyes - Non-irritating to the eyes.	-	Based on studies with similar substances.
	OECD 404	Rabbit	Skin - Non-irritant to skin.	-	Based on studies with similar substances.
Distillates (petroleum), solvent-dewaxed heavy paraffinic	OECD 405	Rabbit	Eyes - Non-irritating to the eyes.	-	Based on studies with similar substances.
	-	Rabbit	Skin - Non-irritant to skin.	-	Based on studies with similar substances.
Distillates (petroleum) hydrotreated middle	OECD 405	Rabbit	Eyes - Not irritant	-	Based on studies with similar substances.
	OECD 404	Rabbit	Skin - Not irritant	-	Based on studies with similar substances.
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	OECD 405	Rabbit	Eyes - Non-irritating to the eyes.	-	-
	OECD 404	Rabbit	Skin - Non-irritant to skin.	-	-
zinc isodecyl phosphorodithioate	OECD 437	Unspecified	Eyes - Non-irritating to the eyes.	-	BCOP
	OECD 431	Unspecified	Skin - Non-irritant to skin.	-	RHE
2,6-di-tert-butylphenol	OECD 405	Rabbit	Eyes - Non-irritating to the eyes.	-	-
	OECD 404	Rabbit	Skin - Irritant	-	-

**Sensitiser**

Product/ingredient name	Route	Test authority / Test number	Species	Result	Remarks
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	skin	OECD 406	Guinea pig	Not sensitising	Based on studies with similar substances.
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	skin	OECD 406	Guinea pig	Not sensitising	Based on studies with similar substances.
Distillates (petroleum),	skin	OECD 406	Guinea pig	Not sensitising	Based on studies

Product name	Castrol ON EV Transmission Fluid D1	Product code	470478-DE41	Page: 10/26
Version 7	Date of issue	26 February 2025	Format	United Kingdom (UK)
			Language	ENGLISH
Date of previous issue	26 April 2024.			(United Kingdom)

**SECTION 11: Toxicological information**

solvent-dewaxed heavy paraffinic						with similar substances.
Distillates (petroleum) hydrotreated middle	skin	OECD	406	Guinea pig	Not sensitising	-
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	skin	OECD	406	Guinea pig	Not sensitising	-
zinc isodecyl phosphorodithioate	skin	OECD	406	Guinea pig	Not sensitising	Based on studies with similar substances.
2,6-di-tert-butylphenol	skin	OECD	406	Guinea pig	Not sensitising	-

**GERM CELL MUTAGENICITY**

Product/ingredient name	Test authority / Test number	Cell	Type	Result	Remarks		
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	OECD 473 In vitro Mammalian Chromosomal Aberration Test	-	Experiment: In vitro	Subject: Mammal - species unspecified	Positive	Based on studies with similar substances.	
	OECD 471 Bacterial Reverse Mutation Test	-	Experiment: In vitro	Subject: Bacteria	Negative	Based on studies with similar substances.	
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	-	Experiment: In vitro	Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.	
	OECD 474 Mammalian Erythrocyte Micronucleus Test	-	Experiment: In vivo	Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.	
	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	OECD 471 Bacterial Reverse Mutation Test	-	Experiment: In vitro	Subject: Bacteria	Negative	Based on studies with similar substances.
	OECD 473 In vitro Mammalian Chromosomal Aberration Test	-	Experiment: In vitro	Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.	
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	-	Experiment: In vitro	Subject: Unspecified	Negative	Based on studies with similar substances.	
	OECD 474 Mammalian Erythrocyte Micronucleus Test	-	Experiment: In vivo	Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.	
	Distillates (petroleum), solvent-dewaxed heavy paraffinic	OECD 471 Bacterial Reverse Mutation Test	-	Experiment: In vitro	Subject: Bacteria	Negative	Based on studies with similar substances.
	OECD 473 In vitro Mammalian Chromosomal Aberration Test	-	Experiment: In vitro	Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.	

Product name	Castrol ON EV Transmission Fluid D1	Product code	470478-DE41	Page: 11/26
Version 7	Date of issue	26 February 2025	Format	United Kingdom (UK)
			Language	ENGLISH
Date of previous issue	26 April 2024.			(United Kingdom)

**SECTION 11: Toxicological information**

Distillates (petroleum) hydrotreated middle	OECD 471 Bacterial Reverse Mutation Test	-	Experiment: In vitro	Subject: Bacteria	Negative	Based on studies with similar substances.
	OECD 473 In vitro Mammalian Chromosomal Aberration Test	-	Experiment: In vitro	Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	-	Experiment: In vitro	Subject: Unspecified	Negative	Based on studies with similar substances.
	OECD 474 Mammalian Erythrocyte Micronucleus Test	-	Experiment: In vivo	Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	OECD 471 Bacterial Reverse Mutation Test	-	Experiment: In vitro	Subject: Bacteria	Negative	-
	OECD 473 In vitro Mammalian Chromosomal Aberration Test	-	Experiment: In vitro	Subject: Mammal - species unspecified	Negative	-
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	-	Experiment: In vitro	Subject: Mammal - species unspecified	Negative	-
zinc isodecyl phosphorodithioate	OECD 471 Bacterial Reverse Mutation Test	-	Experiment: In vitro	Subject: Bacteria	Negative	Based on studies with similar substances.
	OECD 474 Mammalian Erythrocyte Micronucleus Test	-	Experiment: In vivo	Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.
2,6-di-tert-butylphenol	OECD 471 Bacterial Reverse Mutation Test	-	Experiment: In vitro	Subject: Bacteria	Negative	-
	OECD 473 In vitro Mammalian Chromosomal Aberration Test	-	Experiment: In vitro	Subject: Mammal - species unspecified	Negative	-

**Carcinogenicity**

Product/ingredient name	Test authority / Test number	Species	Route	Exposure	Result	Remarks
Distillates (petroleum), solvent-dewaxed heavy paraffinic	OECD 451	Mouse	Dermal	-	Negative	Based on studies with similar substances.

**Reproductive toxicity**

Product name	Castrol ON EV Transmission Fluid D1	Product code	470478-DE41	Page: 12/26
Version 7	Date of issue 26 February 2025	Format	United Kingdom (UK)	Language ENGLISH
Date of previous issue	26 April 2024.		(United Kingdom)	

**SECTION 11: Toxicological information**

Product/ ingredient name	Test authority / Test number	Species	Route	Exposure	Developmental	Maternal toxicity	Fertility	Remarks
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	OECD 421	Rat	Oral	-	Negative	Negative	Negative	Based on studies with similar substances.
Distillates (petroleum), solvent-dewaxed heavy paraffinic	OECD 421	Rat	Oral	-	Negative	Negative	Negative	Based on studies with similar substances.
Distillates (petroleum) hydrotreated middle	OECD 422	Rat	Inhalation	-	Negative	Negative	Negative	Based on studies with similar substances.
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	OECD 421	Rat	Oral	-	Negative	Negative	Negative	-
zinc isodecyl phosphorodithioate	OECD 421	Rat	Oral	-	Negative	Negative	Negative	-
2,6-di-tert-butylphenol	OECD 421	Rat	Oral	-	Equivocal	Positive	Negative	Not classified.

Aspiration hazard

Product/ingredient name	Result
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	ASPIRATION HAZARD - Category 1
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	ASPIRATION HAZARD - Category 1
Distillates (petroleum), solvent-dewaxed heavy paraffinic	ASPIRATION HAZARD - Category 1
Distillates (petroleum) hydrotreated middle	ASPIRATION HAZARD - Category 1

**Conclusion/Summary** May be fatal if swallowed and enters airways. Classification on basis substance is a hydrocarbon and has a kinematic viscosity of 20.5 mm<sup>2</sup>/s or less, measured at 40°C.

**Conclusion/Summary** Not available.

**Information on likely routes of exposure** Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

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

**Ingestion** Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.

**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** Adverse symptoms may include the following:  
nausea or vomiting

**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.

Product name	Castrol ON EV Transmission Fluid D1	Product code	470478-DE41	Page: 13/26
Version 7	Date of issue 26 February 2025	Format	United Kingdom (UK)	Language ENGLISH
Date of previous issue	26 April 2024.		(United Kingdom)	

## SECTION 11: Toxicological information

<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.
<b>Potential chronic health effects</b>	
<b>General</b>	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

Not available.

#### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Test authority / Test number	Species	Type / Result	Exposure	Effects	Remarks
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	OECD 202	Daphnia	Acute EL50 >10000 mg/l	48 hours	-	Based on studies with similar substances.
	OECD 203	Fish	Acute LL50 >100 mg/l	96 hours	-	Based on studies with similar substances.
	OECD 201	Algae	Acute NOEL $\geq$ 100 mg/l	72 hours	-	-
	OECD 211	Daphnia	Chronic NOEL $\geq$ 1000 mg/l	21 days	-	Based on studies with similar substances.
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	OECD 202	Daphnia	Acute EL50 >1000 mg/l	48 hours	-	Based on studies with similar substances.
	OECD 201	Algae	Acute ErL50 100 mg/l	72 hours	-	Based on studies with similar substances.
	OECD 203	Fish	Acute LL50 >100 mg/l	96 hours	-	Based on studies with similar substances.
	OECD 201	Algae	Chronic NOELR 100 mg/l	72 hours	-	Based on studies with similar substances.
	OECD 211	Daphnia	Chronic NOELR 10 to 1000 mg/l	21 days	-	Based on studies

**Product name** Castrol ON EV Transmission Fluid D1

**Product code** 470478-DE41

**Page:** 14/26

**Version** 7 **Date of issue** 26 February 2025

**Format** United Kingdom (UK)

**Language** ENGLISH

**Date of previous issue** 26 April 2024.

(United Kingdom)

**SECTION 12: Ecological information**

							with similar substances.
Distillates (petroleum), solvent-dewaxed heavy paraffinic	OECD	201	Algae	Acute EL50 >100 mg/l	72 hours	-	Based on studies with similar substances.
	OECD	202	Daphnia	Acute EL50 >10000 mg/l	48 hours	-	Based on studies with similar substances.
	OECD	203	Fish	Acute LL50 >100 mg/l	96 hours	-	Based on studies with similar substances.
	OECD	201	Algae	Chronic NOEL ≥100 mg/l	72 hours	-	Based on studies with similar substances.
	OECD	211	Daphnia	Chronic NOEL 10 mg/l	21 days	-	Based on studies with similar substances.
Distillates (petroleum) hydrotreated middle	ISO	14669	Other - <i>Acartia tonsa</i>	Acute EL50 >1000 mg/l	48 hours	-	Based on studies with similar substances.
	ISO	10253	Algae	Acute ErL50 >10000 mg/l	72 hours	-	Based on studies with similar substances.
	OECD	203	Fish	Acute LL50 >1028 mg/l	96 hours	-	Based on studies with similar substances.
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	OECD	201	Algae	Acute EC50 >100 mg/l	72 hours	-	-
	OECD	202	Daphnia	Acute EC50 >100 mg/l	48 hours	-	-
	OECD	203	Fish	Acute LC50 >100 mg/l	96 hours	-	-
	OECD	201	Algae	Chronic NOEC >100 mg/l	72 hours	-	-
	OECD	211	Daphnia	Chronic NOEC 0.026 mg/l	21 days	-	-
	OECD	210	Fish	Chronic NOEC 0.0044 mg/l	87 days	-	-
zinc isodecyl phosphorodithioate	OECD	202	Daphnia	Acute EC50 0.2 mg/l	48 hours	-	-
	OECD	201	Algae	Acute ErC50 >1.6 mg/l	72 hours	-	-
<b>Product name</b> Castrol ON EV Transmission Fluid D1				<b>Product code</b> 470478-DE41		<b>Page:</b> 15/26	
Version 7	<b>Date of issue</b> 26 February 2025			<b>Format</b>	United Kingdom (UK)	<b>Language</b>	ENGLISH
<b>Date of previous issue</b>		26 April 2024.			<b>(United Kingdom)</b>		

## SECTION 12: Ecological information

2,6-di-tert-butylphenol	OECD 203	Fish	Acute LC50 >0.28 mg/l	96 hours	-	-
	OECD 201	Algae	Acute EL50 1.2 mg/l	96 hours	-	-
	OECD 202	Daphnia	Acute EL50 0.45 mg/l	48 hours	-	-
	OECD 203	Fish	Acute LC50 1.4 mg/l	96 hours	-	-
	OECD 201	Algae	Chronic NOEC 0.64 mg/l	96 hours	-	-
	OECD 211	Daphnia	Chronic NOEC 0.035 mg/l	21 days	-	-

**Environmental hazards** Harmful to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

Expected to be biodegradable.

Product/ingredient name	Test authority / Test number	Result - Exposure	Remarks
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	OECD 301F	31 % - Inherent - 28 days	Based on studies with similar substances.
Distillates (petroleum), solvent-dewaxed heavy paraffinic	OECD 301F	31 % - Not readily - 28 days	Based on studies with similar substances.
Distillates (petroleum) hydrotreated middle	OECD 301F	60 % - Readily - 28 days	-
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	OECD 301D	0 % - Not readily - 28 days	-
zinc isodecyl phosphorodithioate	OECD 301b	1 % - Not readily - 28 days	Based on studies with similar substances.
2,6-di-tert-butylphenol	OECD 301B	24 % - Not readily - 28 days	-

### 12.3 Bioaccumulative potential

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

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	4.8 to 8.8	-	High
2,6-di-tert-butylphenol	4.5	-	High

### 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.

### 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.

Product name	Castrol ON EV Transmission Fluid D1	Product code	470478-DE41	Page: 16/26
Version 7	Date of issue 26 February 2025	Format	United Kingdom (UK)	Language ENGLISH
			(United Kingdom)	
Date of previous issue	26 April 2024.			

## SECTION 12: Ecological information

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	No	N/A	N/A	No	N/A	N/A	N/A
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	No	N/A	N/A	No	N/A	N/A	N/A
Distillates (petroleum), solvent-dewaxed heavy paraffinic	No	N/A	N/A	No	N/A	N/A	N/A
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclo, <0.03% aromatics	No	N/A	N/A	No	N/A	N/A	N/A
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	SVHC (Candidate)	Specified	Specified	Specified	N/A	N/A	N/A
zinc isodecyl phosphorodithioate	No	N/A	N/A	No	N/A	N/A	N/A
2,6-di-tert-butylphenol	No	N/A	N/A	No	N/A	N/A	N/A

**12.6 Endocrine disrupting properties** Not available.

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

**12.7 Other adverse effects** No known significant effects or critical hazards.

## 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 or ID number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-	-
<b>Product name</b>	Castrol ON EV Transmission Fluid D1		<b>Product code</b>	470478-DE41
<b>Version</b> 7	<b>Date of issue</b> 26 February 2025	<b>Format</b>	United Kingdom (UK)	<b>Language</b> ENGLISH
<b>Date of previous issue</b>	26 April 2024.		<b>Page:</b> 17/26	

**SECTION 14: Transport information**

<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 Maritime transport in bulk according to IMO instruments** Not available.

**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**

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
Reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	PBT	Candidate	2025D(2024) 7663-DC	1/21/2025

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

Product/ingredient name	%	Designation [Usage]
Castrol ON EV Transmission Fluid D1	95-100	3 3 [Lamp fuel] 3 [Grill lighter fluid]

**Labelling** Not applicable.

**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 (AIIC)** All components are listed or exempted.

**Canada inventory** All components are listed or exempted.

**China inventory (IECSC)** At least one component is not listed.

**Japan inventory (CSCL)** All components are listed or exempted.

**Korea inventory (KECI)** At least one component is not listed.

**Philippines inventory (PICCS)** At least one component is not listed.

**Taiwan Chemical Substances Inventory (TCSI)** All components are listed or exempted.

**Explosive precursors** Not applicable.

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

Not listed.

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

<b>Product name</b>	Castrol ON EV Transmission Fluid D1	<b>Product code</b>	470478-DE41	<b>Page:</b>	18/26
<b>Version</b>	7	<b>Date of issue</b>	26 February 2025	<b>Format</b>	United Kingdom (UK)
<b>Date of previous issue</b>				<b>Language</b>	ENGLISH (United Kingdom)

## SECTION 15: Regulatory information

Not listed.

### Persistent Organic Pollutants

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  
 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]

<b>Product name</b>	Castrol ON EV Transmission Fluid D1	<b>Product code</b>	470478-DE41	<b>Page:</b>	19/26
<b>Version</b>	7	<b>Date of issue</b>	26 February 2025	<b>Format</b>	United Kingdom (UK)
<b>Date of previous issue</b>	26 April 2024.	<b>Language</b>	ENGLISH (United Kingdom)		

## SECTION 16: Other information

Classification	Justification	
Asp. Tox. 1, H304 Aquatic Chronic 3, H412	Calculation method Calculation method	
<b>Full text of abbreviated H statements</b>	H226 H302 H304 H312 H315 H318 H332 H335 H361d H400 H410 H413 EUH066	Flammable liquid and vapour. Harmful if swallowed. May be fatal if swallowed and enters airways. Harmful in contact with skin. Causes skin irritation. Causes serious eye damage. Harmful if inhaled. May cause respiratory irritation. Suspected of damaging the unborn child. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. May cause long lasting harmful effects to aquatic life. Repeated exposure may cause skin dryness or cracking.
<b>Full text of classifications [CLP/GHS]</b>	Acute Tox. 4 Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 4 Asp. Tox. 1 Eye Dam. 1 Flam. Liq. 3 Repr. 2 Skin Irrit. 2 STOT SE 3	ACUTE TOXICITY - Category 4 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4 ASPIRATION HAZARD - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 FLAMMABLE LIQUIDS - Category 3 REPRODUCTIVE TOXICITY - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

### History

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**Prepared by** Product Stewardship

 Indicates information that has changed from previously issued version.

### Notice to reader

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<b>Product name</b> Castrol ON EV Transmission Fluid D1	<b>Product code</b> 470478-DE41	<b>Page:</b> 20/26
<b>Version</b> 7	<b>Date of issue</b> 26 February 2025	<b>Format</b> United Kingdom (UK) (United Kingdom)
<b>Date of previous issue</b> 26 April 2024.		<b>Language</b> ENGLISH

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

Industrial

### Identification of the substance or mixture

Product definition	Mixture
Code	470478-DE41
Product name	Castrol ON EV Transmission Fluid D1

### Section 1: Title

**Short title of the exposure scenario** General use of lubricants and greases in vehicles or machinery - Industrial

**List of use descriptors** Identified use name: General use of lubricants and greases in vehicles or machinery-Industrial

Process Category: PROC01, PROC02, PROC08b, PROC09

Sector of end use: SU03

Subsequent service life relevant for that use: No.

Environmental Release Category: ERC04, ERC07

Specific Environmental Release Category: ATIEL-ATC SPERC 4.Biv1

**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.

### Section 2 Operational conditions and risk management measures

#### Section 2.1 Control of worker exposure

##### Product characteristics:

**Physical state:** Liquid, vapour pressure < 0.5 kPa

**Concentration of substance in product:** Covers use of substance/product up to 100 % (unless stated differently)

**Frequency and duration of use:** Covers daily exposures up to 8 hours

**Other conditions affecting workers exposure:** Assumes use at not more than 20°C above ambient temperature. Assumes a good basic standard of occupational hygiene is implemented

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

General measures applicable to all activities:

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Use suitable eye protection. Avoid direct eye contact with product also via contamination on hands.

General exposures (closed systems):

No other specific measures identified.

Initial factory fill of equipment Use in contained systems:

No other specific measures identified.

Initial factory fill of equipment Open systems:

Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out operation for more than 4 hours.

Operation of equipment containing engine oils and similar Use in contained systems:

No other specific measures identified.

Equipment cleaning and maintenance:

Drain down system prior to equipment break-in or maintenance. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Equipment cleaning and maintenance Operation is carried out at elevated temperature (> 20°C above ambient temperature):

Drain down and flush system prior to equipment break-in or maintenance. Provide extract ventilation to emission

points when contact with warm (>50°C) lubricant is likely. Wear chemical-resistant gloves (tested to EN374) in combination with intensive management supervision controls. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

**Storage:**  
Store substance within a closed system.

## 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:

**Release fraction to wastewater from process (after typical onsite RMMs and before sewage treatment plan)** 2.00E-11

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

**Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:** Prevent discharge of undissolved substance to or recover from onsite wastewater.

### Organisational measures to prevent/limit release from site:

### Conditions and measures related to sewage treatment plant:

**Estimated substance removal from wastewater via on-site sewage treatment** 0.09

**Assumed domestic sewage treatment plant flow rate (m<sup>3</sup>/d)** 2.00E+3

**Maximum allowable site tonnage (M<sub>Safe</sub>) based on release following total wastewater treatment removal as product:** 1587.9

### Conditions and measures related to external treatment of waste for disposal:

**Conditions and measures related to external recovery of waste:** External treatment and disposal of waste should comply with applicable local and/or national regulations.

External recovery and recycling of waste should comply with applicable local and/or national regulations.

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

### Exposure estimation and reference to its source - Environment

**Exposure assessment (environment):** Used ECETOC TRA model (May 2010 release).

### Exposure estimation and reference to its source - Workers

**Exposure assessment (human):** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

## 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>	Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

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

Professional

### Identification of the substance or mixture

Product definition	Mixture
Code	470478-DE41
Product name	Castrol ON EV Transmission Fluid D1

### Section 1: Title

**Short title of the exposure scenario** General use of lubricants and greases in vehicles or machinery - Professional

**List of use descriptors** Identified use name: General use of lubricants and greases in vehicles or machinery-Professional

Process Category: PROC01, PROC02, PROC08a, PROC08b, PROC20

Sector of end use: SU22

Subsequent service life relevant for that use: No.

Environmental Release Category: ERC09a, ERC09b

Specific Environmental Release Category: ESVOCSpERC 9.6b.v1

**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.

### Section 2 Operational conditions and risk management measures

#### Section 2.1 Control of worker exposure

##### Product characteristics:

**Physical state:** Liquid, vapour pressure < 0.5 kPa

**Concentration of substance in product:** Covers use of substance/product up to 100 % (unless stated differently)

**Frequency and duration of use:** Covers daily exposures up to 8 hours

**Other conditions affecting workers exposure:** Assumes use at not more than 20°C above ambient temperature. Assumes a good basic standard of occupational hygiene is implemented

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

General measures applicable to all activities:

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Use suitable eye protection. Avoid direct eye contact with product also via contamination on hands.

Operation of equipment containing engine oils and similar Use in contained systems:

No other specific measures identified.

Material transfers Non-dedicated facility:

Avoid carrying out activities involving exposure for more than 4 hours per day. Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training.

Equipment cleaning and maintenance Dedicated facility:

Drain down system prior to equipment break-in or maintenance. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Storage:

Store substance within a closed system.

## 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:

**Release fraction to air (after typical onsite RMMs)** 5.00E-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)** 2.50E-04

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

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

### Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:

Prevent discharge of undissolved substance to or recover from onsite wastewater.

User sites are assumed to be provided with oil/water separators and for waste water to be discharged via public sewer system.

### Organisational measures to prevent/limit release from site:

Do not apply industrial sludge to natural soils.

Sewage sludge should be incinerated, contained or reclaimed.

### Conditions and measures related to sewage treatment plant:

**Estimated substance removal from wastewater via on-site sewage treatment** 0.09

**Assumed domestic sewage treatment plant flow rate (m<sup>3</sup>/d)** 2.00E+3

**Maximum allowable site tonnage (M<sub>safe</sub>) based on release following total wastewater treatment removal as product:** 20.1

### Conditions and measures related to external treatment of waste for disposal:

External treatment and disposal of waste should comply with applicable local and/or national regulations.

### Conditions and measures related to external recovery of waste:

External recovery and recycling of waste should comply with applicable local and/or national regulations.

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

### Exposure estimation and reference to its source - Environment

**Exposure assessment (environment):** Used ECETOC TRA model (May 2010 release).

### Exposure estimation and reference to its source - Workers

**Exposure assessment (human):** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

## 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>	Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.