

SAFETY DATA SHEET



Castrol ON EV Transmission Fluid D2

Section 1. Identification

Product Identifier	Castrol ON EV Transmission Fluid D2
Product type	Liquid.
Code	470525-DE41
SDS #	470525
Product use	EV Transmission Fluid - Dry e-motor For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Supplier	BP Lubricants USA Inc. 1500 Valley Road Wayne, NJ 07470 Telephone: 1-888-CASTROL
EMERGENCY HEALTH INFORMATION:	1 (800) 447-8735 Outside the US: +1 703-527-3887 (CHEMTREC)
Emergency Telephone Number	Centro Nacional de Control de Intoxicaciones: +506 2223-1028 1 (800) 424-9300 CHEMTREC (USA)

Section 2. Hazard identification

Classification of the substance or mixture	AQUATIC HAZARD (ACUTE) - Category 3 AQUATIC HAZARD (LONG-TERM) - Category 3
<u>GHS label elements</u>	
Signal word	No signal word.
Hazard statements	H412 - Harmful to aquatic life with long lasting effects.
<u>Precautionary statements</u>	P102 - Keep out of reach of children. P101 - If medical advice is needed, have product container or label at hand. P273 - Avoid release to the environment.
Prevention	
Response	Not applicable.
Storage	Not applicable.
Disposal	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Other hazards which do not result in classification	None known.

Section 3. Composition/information on ingredients

Substance/mixture	Mixture
Highly refined base oil (IP 346 DMSO extract < 3%). Synthetic base stock. Proprietary performance additives.	

Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	≥50 - ≤75	72623-87-1
Dec-1-ene, homopolymer, hydrogenated	≥10 - ≤25	68037-01-4
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	≥10 - ≤25	68037-01-4
Distillates (petroleum), solvent-dewaxed heavy paraffinic	≤3	64742-65-0
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	<1	192268-65-8
zinc isodecyl phosphorodithioate	≤0.3	25103-54-2
2,6-di-tert-butylphenol	≤0.3	128-39-2

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	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.
Skin contact	Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion	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 adverse health effects persist or are severe.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.

Most important symptoms/effects. acute and delayed

Potential acute health effects

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

Over-exposure signs/symptoms

Eye contact	No specific data.
Inhalation	May be harmful by inhalation if exposure to vapor, mists or fumes resulting from thermal decomposition products occurs.
Skin contact	Adverse symptoms may include the following: irritation dryness cracking
Ingestion	No specific data.

Section 4. First aid measures

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects.
Specific treatments	No specific treatment.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	Use foam or all-purpose dry chemical to extinguish.
Unsuitable extinguishing media	Do not use water jet.

Specific hazards arising from the chemical	Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects.
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Hazardous thermal decomposition products	Combustion products may include the following: carbon oxides (CO, CO ₂) (carbon monoxide, carbon dioxide)
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Special protective actions for fire-fighters	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.
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Special protective equipment for fire-fighters	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
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Section 6. Accidental release measures

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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.
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For emergency responders	Entry into a confined space or poorly ventilated area contaminated with vapor, 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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Environmental precautions	Avoid dispersal of spilled 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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Methods and materials 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.
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Section 6. Accidental release measures

Large spill

Stop leak if without risk. Move containers from spill area. Approach 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 spilled product. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Avoid contact of spilled material and runoff with soil and surface waterways.

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. Contaminated work clothing should not be allowed out of the workplace. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

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

Not suitable

Prolonged exposure to elevated temperature

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Distillates (petroleum), solvent-dewaxed heavy paraffinic	ACGIH TLV (United States, 1/2023). [Mineral Oil, pure, highly and severely refined] TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction

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

Biological exposure indices

No exposure indices known.

Appropriate engineering controls

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

Section 8. Exposure controls/personal protection

Environmental exposure controls

selection and appropriate standards. For further information contact your national organisation for standards.

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. 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.

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.

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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety glasses with side shields.

Skin protection

Hand protection

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Nitrile gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Body protection

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.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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.

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

Physical state	Liquid.
Color	Brown.

Section 9. Physical and chemical properties and safety characteristics

Odor

Not available.

Odor threshold

Not available.

pH

Not applicable.

Melting point/freezing point

Not available.

Boiling point, initial boiling point, and boiling range

Not available.

Drop Point

Not available.

Pour point

-57 °C

Flash point

Open cup: >220°C (>428°F) [Cleveland ASTM D 92]

Evaporation rate

Not available.

Flammability

Not available.

Lower and upper explosion limit/flammability limit

Not available.

Vapor pressure

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	<0.07501	<0.01	ASTM D 5191			
Dec-1-ene, homopolymer, hydrogenated	<0.0041	<0.00055	ASTM E 1194-87			
Distillates (petroleum), hydrotreated heavy paraffinic	<0.07501	<0.01	ASTM D 5191			
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			

Relative vapor density

Not available.

Relative density

Not available.

Density

<1000 kg/m³ (<1 g/cm³) at 15°C

Solubility(ies)

Media	Result
water	Not soluble

Solubility in water

Not available.

Partition coefficient: n-octanol/water

Not applicable.

Auto-ignition temperature

Ingredient name	°C	°F	Method
Dec-1-ene, homopolymer, hydrogenated	343 to 369	649.4 to 696.2	ASTM D 2159
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	343 to 369	649.4 to 696.2	ASTM D 2159

Decomposition temperature

Not available.

Section 9. Physical and chemical properties and safety characteristics

Viscosity	Kinematic: 32.2 mm ² /s (32.2 cSt) at 40°C Kinematic: 6.3 to 6.8 mm ² /s (6.3 to 6.8 cSt) at 100°C (ASTM D 445)
Particle characteristics	
Median particle size	Not applicable.

Section 10. Stability and reactivity

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

Section 11. Toxicological information

Information on toxicological effects					
Acute toxicity					
Product/ingredient name	Test	Species	Result	Exposure	Remarks
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours	Based on studies with similar substances.
	LD50 Dermal	Rat	>5000 mg/kg	-	Based on studies with similar substances.
	LD50 Oral	Rat	>5000 mg/kg	-	Based on studies with similar substances.
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	LD50 Dermal	Rat	>2000 mg/kg	-	Based on studies with similar substances.
	LD50 Oral	Rat	>2000 mg/kg	-	-
Distillates (petroleum), solvent-dewaxed heavy paraffinic	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours	Based on studies with similar

Section 11. Toxicological information

						substances.
	LD50 Dermal	Rat	>2000 mg/kg	-		Based on studies with similar substances.
	LD50 Oral	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	Rat	>2000 mg/kg	-		-
zinc isodecyl phosphorodithioate	LD50 Dermal	Rat	>5000 mg/kg	-		Based on studies with similar substances.
	LD50 Oral	Rat	3100 mg/kg	-		Based on studies with similar substances.
2,6-di-tert-butylphenol	LD50 Dermal	Rabbit	>5000 mg/kg	-		-
	LD50 Oral	Rat	>5000 mg/kg	-		-

Conclusion/Summary

Not available.

Irritation/Corrosion						
Product/ingredient name	Species	Result	Score	Exposure	Observation Conc.	Remarks
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	Rabbit	Eyes - Severe irritant	-	-	-	Based on studies with similar substances.
	Rabbit	Skin - Non-irritant to skin.	-	-	-	Based on studies with similar substances.
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	Rabbit	Eyes - Non-irritating to the eyes.	-	-	-	Based on studies with similar substances.
	Rabbit	Skin - Non-irritant to skin.	-	-	-	-
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Rabbit	Eyes - Non-irritating to the eyes.	-	-	-	Based on studies with similar substances.

Section 11. Toxicological information

	Rabbit	Skin - Non-irritant to skin.	-	-	-	-	Based on studies with similar substances.
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	Rabbit	Eyes - Non-irritating to the eyes.	-	-	-	-	-
	Rabbit	Skin - Non-irritant to skin.	-	-	-	-	-
zinc isodecyl phosphorodithioate	Unspecified	Eyes - Non-irritating to the eyes.	-	-	-	-	BCOP
	Unspecified	Skin - Non-irritant to skin.	-	-	-	-	RHE
2,6-di-tert-butylphenol	Rabbit	Eyes - Non-irritating to the eyes.	-	-	-	-	-
	Rabbit	Skin - Irritant	-	-	-	-	-

Sensitization

Product/ingredient name	Route of exposure	Species	Result	Remarks
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	skin	Guinea pig	Not sensitizing	Based on studies with similar substances.
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	skin	Guinea pig	Not sensitizing	-
Distillates (petroleum), solvent-dewaxed heavy paraffinic	skin	Guinea pig	Not sensitizing	Based on studies with similar substances.
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	skin	Guinea pig	Not sensitizing	-
zinc isodecyl phosphorodithioate	skin	Guinea pig	Not sensitizing	Based on studies with similar substances.
2,6-di-tert-butylphenol	skin	Guinea pig	Not sensitizing	-

Germ cell mutagenicity

Product/ingredient name	Test	Experiment	Result	Remarks
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Section 11. Toxicological information

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	OECD 473 <i>In vitro</i> 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 <i>In vitro</i> 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.
	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	Based on studies with similar substances.
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	OECD 473 <i>In vitro</i> Mammalian Chromosomal Aberration 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.
	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	Based on studies with similar substances.
	OECD 473 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.
Distillates (petroleum), solvent-dewaxed heavy paraffinic	OECD 476 <i>In vitro</i> 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.
	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	Based on studies with similar substances.
	OECD 473 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.
	OECD 476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: 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 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammal - species unspecified	Negative	-
	OECD 476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammal - species unspecified	Negative	-
	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	Based on studies with similar substances.
zinc isodecyl phosphorodithioate	OECD 474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.
	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	-
	OECD 473 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammal - species unspecified	Negative	-
2,6-di-tert-butylphenol	OECD 476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammal - species unspecified	Negative	-
	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	-

Product name Castrol ON EV Transmission Fluid D2	Product code 470525-DE41	Page: 11/16
Date of issue 07/11/2025.	Format GHS - Costa Rica	Language ENGLISH
Version 3.02	GHS - Costa Rica	(ENGLISH)

Section 11. Toxicological information

OECD 473 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammal - species unspecified	Negative	-
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Conclusion/Summary Not available.

Carcinogenicity

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

Conclusion/Summary Not available.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure	Remarks
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	Negative	Negative	Negative	Rat	Oral	-	-
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	Negative	Negative	Negative	Rat	Oral	-	-
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	Negative	Negative	Negative	Rat	Oral	-	-
zinc isodecyl phosphorodithioate	Negative	Negative	Negative	Rat	Oral	-	-
2,6-di-tert-butylphenol	Positive	Negative	Equivocal	Rat	Oral	-	-

Conclusion/Summary Not available.

Aspiration hazard

Name	Result
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	ASPIRATION HAZARD - Category 1
Dec-1-ene, homopolymer, hydrogenated	ASPIRATION HAZARD - Category 1
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	ASPIRATION HAZARD - Category 1
Distillates (petroleum), solvent-dewaxed heavy paraffinic	ASPIRATION HAZARD - Category 1

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

Potential acute health effects

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

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

Eye contact	No specific data.
Skin contact	Adverse symptoms may include the following: irritation dryness cracking
Inhalation	May be harmful by inhalation if exposure to vapor, mists or fumes resulting from thermal decomposition products occurs.
Ingestion	No specific data.
<u>Delayed and immediate effects and also chronic effects from short and long term exposure</u>	
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 diarrhea.
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.
<u>Potential chronic health effects</u>	
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

Environmental effects

This material is harmful to aquatic life with long lasting effects.

Toxicity

No testing has been performed by the manufacturer.

Product/ingredient name	Species	Test/Result	Exposure	Effects	Remarks
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	Daphnia	Acute EL50 >10000 mg/l	48 hours	-	Based on studies with similar substances. Based on studies with similar substances.
	Fish	Acute LL50 >100 mg/l	96 hours	-	
	Algae	Acute NOEL ≥100 mg/l	72 hours	-	
	Daphnia	Chronic NOEL ≥1000 mg/l	21 days	-	Based on studies with similar substances.
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	Algae	Acute EL50 >1000 mg/l	72 hours	-	Based on studies with similar substances.
	Daphnia	Acute EL50 >1000 mg/l	48 hours	-	Based on studies with

Section 12. Ecological information

					similar substances.
	Fish	Acute LL50 >1000 mg/l	96 hours	-	-
	Daphnia	Chronic NOELR 125 mg/l	21 days	-	Based on studies with similar substances.
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Daphnia	Acute EL50 >1000 mg/l	48 hours	-	Based on studies with similar substances.
	Algae	Acute ErL50 100 mg/l	72 hours	-	Based on studies with similar substances.
	Fish	Acute LL50 >100 mg/l	96 hours	-	Based on studies with similar substances.
	Algae	Chronic NOELR 100 mg/l	72 hours	-	Based on studies with similar substances.
	Daphnia	Chronic NOELR 10 to 1000 mg/l	21 days	-	Based on studies with similar substances.
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	Algae	Acute EC50 >100 mg/l	72 hours	-	-
	Daphnia	Acute EC50 >100 mg/l	48 hours	-	-
	Fish	Acute LC50 >100 mg/l	96 hours	-	-
	Algae	Chronic NOEC >100 mg/l	72 hours	-	-
	Daphnia	Chronic NOEC 0.026 mg/l	21 days	-	-
	Fish	Chronic NOEC 0.0044 mg/l	87 days	-	-
zinc isodecyl phosphorodithioate	Daphnia	Acute EC50 0.2 mg/l	48 hours	-	-
	Algae	Acute ErC50 >1.6 mg/l	72 hours	-	-
	Fish	Acute LC50 >0.28 mg/l	96 hours	-	-
2,6-di-tert-butylphenol	Algae	Acute EL50 1.2 mg/l	96 hours	-	-
	Daphnia	Acute EL50 0.45 mg/l	48 hours	-	-
	Fish	Acute LC50 1.4 mg/l	96 hours	-	-
	Algae	Chronic NOEC 0.64 mg/l	96 hours	-	-
	Daphnia	Chronic NOEC 0.035 mg/l	21 days	-	-

Product name Castrol ON EV Transmission Fluid D2	Product code 470525-DE41	Page: 14/16
Date of issue 07/11/2025.	Format GHS - Costa Rica	Language ENGLISH
Version 3.02	GHS - Costa Rica	(ENGLISH)

Section 12. Ecological information

Persistence and degradability

Partially biodegradable.

Product/ingredient name	Test	Result	Remarks
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	OECD 301F	31 % - Inherent - 28 days	Based on studies with similar substances.
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	-

Bioaccumulative potential

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

Product/ingredient name	LogP _{ow}	BCF	Potential
Dec-1-ene, homopolymer, hydrogenated	>6.5	-	High
Dec-1-ene, homopolymer, hydrogenated	>10	-	High
Dec-1-ene, oligomers, hydrogenated			
reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	4.8 to 8.8	-	High
2,6-di-tert-butylphenol	4.5	-	High

Mobility in soil

Soil/water partition coefficient (K_{oc}) Not available.

Mobility Spillages may penetrate the soil causing ground water contamination.

Other adverse effects

No known significant effects or critical hazards.

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

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	ADR/RID	ADN	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

Special precautions for user

Not available.

Transport in bulk according to IMO instruments

Not available.

Section 15. Regulatory information

International regulations

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

Other regulations

Australia inventory (AIIIC)

Canada inventory

China inventory (IECSC)

Japan inventory (CSCL)

Korea inventory (KECI)

Philippines inventory (PICCS)

Taiwan Chemical Substances Inventory (TCSI)

United States inventory (TSCA 8b)

REACH Status

All components are listed or exempted.

All components are listed or exempted.

All components are listed or exempted.

All components are listed or exempted.

All components are listed or exempted.

All components are listed or exempted.

All components are listed or exempted.

All components are active or exempted.

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

Date of issue/Date of revision

: 7/11/2025

Date of previous issue

: 4/26/2024

Version

: 3.02

15/16

Product name Castrol ON EV Transmission Fluid D2	Product code 470525-DE41	Page: 16/16
Date of issue 07/11/2025.	Format GHS - Costa Rica	Language ENGLISH
Version 3.02	GHS - Costa Rica	(ENGLISH)

Section 16. Other information

History

Date of printing	7/11/2025
Date of issue/Date of revision	7/11/2025
Date of previous issue	4/26/2024
Version	3.02
Prepared by	Product Stewardship
Key to abbreviations	<p>ATE = Acute Toxicity Estimate</p> <p>BCF = Bioconcentration Factor</p> <p>GHS = Globally Harmonized System of Classification and Labelling of Chemicals</p> <p>IATA = International Air Transport Association</p> <p>IBC = Intermediate Bulk Container</p> <p>IMDG = International Maritime Dangerous Goods</p> <p>LogPow = logarithm of the octanol/water partition coefficient</p> <p>MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)</p> <p>REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]</p> <p>UN = United Nations</p> <p>Varies = may contain one or more of the following 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1VOC = Volatile Organic Compound</p>

Indicates information that has changed from previously issued version.

Notice to reader

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