

SAFETY DATA SHEET



Castrol EDGE 0W-40

In accordance with Industrial Safety and Health Act

Section 1. Chemical product and company identification

Product name Castrol EDGE 0W-40
Code 463998-DE01
SDS no. 463998
Supplier BP Korea Ltd.
19F., 302, Teheran-ro, Gangnam-gu, Seoul, 06210
Republic of Korea

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EMERGENCY TELEPHONE NUMBER Carechem: +65 3158 1074 (24/7)

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

Use of the substance/mixture Engine oils.
For specific application advice see appropriate Technical Data Sheet or consult our company representative.

Section 2. Hazards identification

GHS Classification Not classified.

GHS label elements, including precautionary statements

Signal word No signal word.

Hazard statements No known significant effects or critical hazards.

Precautionary statements

Prevention Not applicable.

Response Not applicable.

Storage Not applicable.

Disposal Not applicable.

Other hazards which do not result in classification None known.

Section 3. Composition/information on ingredients

Substance/mixture Mixture

Synthetic base stock. Proprietary performance additives.

Hazardous ingredients

Ingredient name	Synonym	CAS number	%
Distillates (petroleum), hydrotreated heavy paraffinic	Baseoil - unspecified; Distillates, petroleum, hydrotreated heavy paraffinic; Mineral oil, petroleum distillates, hydrotreated heavy paraffinic; Distillates (petroleum), hydro-treated	64742-54-7	50.20998036

Section 3. Composition/information on ingredients

1-Decene, homopolymer, hydrogenated	heavy paraffinic; Paraffin oil; HYDROTREATED HEAVY PARAFFINIC DISTILLATE; DISTILLATES (PETROLEUM) HYDROFVLD; Distillates (petroleum), hydrotreated heavy paraffinic, Baseoil - unspecified Dec-1-ene, oligomers, hydrogenated; 1-Decene, homopolymer, hydrogenated; Hydrogenated polydecene; E 907; hydrogenated poly-1-decene; hydrogenated polydec-1-ene; hydrogenated poly-alpha-olefin; 1-Decene, hydrogenated; Hydrogenated decene homopolymer; Hydrogenation products of dec-1-ene polymer; Hydrogenation reaction products of polymer of dec-1-ene; Hydrogenated polymer of dec-1-ene; HOMOPOLYMER, DECENE HYDROGENATED; synthetic oil	68037-01-4	5
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	Dec-1-ene, oligomers, hydrogenated; 1-Decene, homopolymer, hydrogenated; Hydrogenated polydecene; E 907; hydrogenated poly-1-decene; hydrogenated polydec-1-ene; hydrogenated poly-alpha-olefin; 1-Decene, hydrogenated; Hydrogenated decene homopolymer; Hydrogenation products of dec-1-ene polymer; Hydrogenation reaction products of polymer of dec-1-ene; Hydrogenated polymer of dec-1-ene; HOMOPOLYMER, DECENE HYDROGENATED; synthetic oil	68037-01-4	5
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	Baseoil - unspecified; Lubricating oils, petroleum, C15-30, hydrotreated	72623-86-0	2.0693

Section 3. Composition/information on ingredients

	<p>neutral oil based; Paraffin oil; Lubricating oils (petroleum), C15-C30, hydrotreated neutral oil-based; Lubricating oils, petroleum, C15-30-hydrotreated neutral oil-based; Lubricating oils (petroleum), (C=15-30), hydrotreated neutral oil-based; OILS, LUBRICATING (PETROLEUM) HYDROTREATED NEUTRAL OIL-BASED C15-30; Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based, Baseoil - unspecified</p>		
<p>Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based</p>	<p>Baseoil - unspecified; Lubricating oils, petroleum, C20-50, hydrotreated neutral oil based; Lubricating oils, petroleum, C20-50-hydrotreated neutral oil-based; Lubricating oils (petroleum), (C=20-50) hydrotreated neutral oil-based; Lubricating oils (petroleum), C20-50 hydrotreated neutral oil based; OILS, LUBRICATING (PETROLEUM) C20-50, HYDROTREATED NEUTRAL OIL-BASED; Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, Baseoil - unspecified; Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based; Lubricating oils (petroleum), C20-C50, hydrotreated neutral oilbased</p>	<p>72623-87-1</p>	<p>2.0093</p>
<p>bis(nonylphenyl)amine</p>	<p>Benzenamine, ar-nonyl-N-(nonylphenyl)-; nonyl-N-(nonylphenyl)aniline; bis(nonylphenyl)amine, dinonyldiphenylamine; Bis(nonan-1-ylphenyl)amine; p, p'-Dialkyl(C8-9)diphenylamine; N,N-bis(octyl (or nonyl)phenylamine; ar-Nonyl-N-(nonylphenyl)benzenamine; ANILINE, AR-NONYL-N-</p>	<p>36878-20-3</p>	<p>1.2876704</p>

Section 3. Composition/information on ingredients

Nickel	(NONYLPHENYL)-; diphenylamine, dinonyl; 2-nonyl-N-(2-nonylphenyl) aniline -	7440-02-0	0.0000071
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Non-hazardous ingredients

Ingredient name	Synonym	CAS number	%
Trade secret.	Trade secret.	Trade secret.	22.02
Trade secret.	Trade secret.	Trade secret.	2.306 - 2.8825
Trade secret.	Trade secret.	Trade secret.	1.065
Trade secret.	Trade secret.	Trade secret.	0.85547
Trade secret.	Trade secret.	Trade secret.	0.2803 - 0.7965
Trade secret.	Trade secret.	Trade secret.	0.73872
Trade secret.	Trade secret.	Trade secret.	0.61224
Trade secret.	Trade secret.	Trade secret.	0.58125
Trade secret.	Trade secret.	Trade secret.	0.58125
Trade secret.	Trade secret.	Trade secret.	0.1153 - 0.5765
Trade secret.	Trade secret.	Trade secret.	0.1153 - 0.5765
Trade secret.	Trade secret.	Trade secret.	0.1153 - 0.5765
Trade secret.	Trade secret.	Trade secret.	0.1153 - 0.5765
Trade secret.	Trade secret.	Trade secret.	0.1153 - 0.5765
Trade secret.	Trade secret.	Trade secret.	0.1153 - 0.5765
Trade secret.	Trade secret.	Trade secret.	0.1153 - 0.5765
Trade secret.	Trade secret.	Trade secret.	0.1153 - 0.5765
Trade secret.	Trade secret.	Trade secret.	0.35
Trade secret.	Trade secret.	Trade secret.	0.32967
Trade secret.	Trade secret.	Trade secret.	0.26288
Trade secret.	Trade secret.	Trade secret.	0.25
Trade secret.	Trade secret.	Trade secret.	0.165 - 0.22
Trade secret.	Trade secret.	Trade secret.	0.11 - 0.165
Trade secret.	Trade secret.	Trade secret.	0.08 - 0.14
Trade secret.	Trade secret.	Trade secret.	0.05765 - 0.1153

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

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 recognised skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

Inhalation

If inhaled, remove to fresh air. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Get medical attention if symptoms occur.

Ingestion

Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

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

Specific treatments

No specific treatment.

Section 4. First aid measures

Notes to physician

Treatment should in general be symptomatic and directed to relieving any effects. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training.

Section 5. Firefighting measures

Extinguishing media

Suitable

In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.

Not suitable

Do not use water jet.

Specific hazards arising from the chemical

In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products

Combustion products may include the following:
carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide)
nitrogen oxides (NO, NO₂ etc.)

Special protective equipment for fire-fighters

Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

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.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.

Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Small spill

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

Large spill

Stop leak if without risk. Move containers from spill area. 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. 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).

Advice on general occupational hygiene

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

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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 7. Handling and storage

Not suitable

Prolonged exposure to elevated temperature.

Section 8. Exposure controls/personal protection

Control parameters

Ingredient name	Exposure limits
Distillates (petroleum), hydrotreated heavy paraffinic	ACGIH TLV (United States). [Mineral Oil, pure, highly and severely refined] TWA: 5 mg/m ³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	ACGIH TLV (United States). [Mineral Oil, pure, highly and severely refined] TWA: 5 mg/m ³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction
Nickel	Ministry of Employment and Labor (Republic of Korea). TWA: 1 mg/m ³ 8 hours. Issued/Revised: 7/2018

Biological exposure indices

No exposure indices known.

Other ingredients including trade secret: not applicable

Recommended monitoring procedures

Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

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 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.

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.

Personal protective equipment

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 protection

Safety glasses with side shields.

Section 8. Exposure controls/personal 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.

Skin 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.

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.

Section 9. Physical and chemical properties

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

Appearance

Physical state

Liquid.

Colour

Amber.

Odour

Not available.

Odour threshold

Not available.

pH

Not applicable.

Melting/freezing point

Not available.

Boiling point, initial boiling point, and boiling range

Not available.

Flash point

☑ Closed cup: 200.5°C (392.9°F) [Pensky-Martens ASTM D 93]

Evaporation rate

Not available.

Flammability (solid, gas)

Not available.

Lower and upper explosive (flammable) limits

Not applicable. Based on - Physical state

Vapour pressure

Not available.

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method

Section 9. Physical and chemical properties

Distillates (petroleum), hydrotreated heavy paraffinic	<0.08	<0.011	ASTM D 5191			
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	<0.0041	<0.00055	ASTM E 1194-87			
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	<0.08	<0.011	ASTM D 5191			
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	<0.08	<0.011	ASTM D 5191			
bis(nonylphenyl)amine	<0.01	<0.0013	EU A.4	0.0019	0.00025	EU A.4

Solubility(ies)

Media	Result
Water	Not soluble

Vapour density	Not available.
Relative density	Not available.
Density	<1000 kg/m ³ (<1 g/cm ³) at 15°C
Partition coefficient: n-octanol/water	Not applicable.
Auto-ignition temperature	

Ingredient name	°C	°F	Method
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	343 to 369	649.4 to 696.2	ASTM D 2159
1-Decene, 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
bis(nonylphenyl)amine	440	824	EU A.15

Decomposition temperature	Not available.
Viscosity	Kinematic: 73.9 mm ² /s (73.9 cSt) at 40°C Kinematic: 13.1 to 15 mm ² /s (13.1 to 15 cSt) at 100°C
Molecular weight	Not applicable as it is a mixture
Particle characteristics	
Median particle size	Not applicable.

Section 10. Stability and reactivity

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 polymerisation will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
Incompatible materials	Reactive or incompatible with the following materials: oxidising materials.

Section 10. Stability and reactivity

Hazardous decomposition products

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

Section 11. Toxicological information

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

Acute toxicity

Inhalation

Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion

No known significant effects or critical hazards.

Skin contact

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

Eye contact

No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation

No specific data.

Ingestion

No specific data.

Skin

Adverse symptoms may include the following:
irritation
dryness
cracking

Eyes

No specific data.

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

Product/ingredient name	Test	Species	Result	Exposure	Remarks
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Distillates (petroleum), hydrotreated heavy paraffinic	LD50 Dermal	Rabbit	>5000 mg/kg	-	Based on studies with similar substances. Based on studies with similar substances. Based on studies with similar substances.
	LD50 Oral	Rat	>5000 mg/kg	-	
	LD50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours	
1-Decene, homopolymer, hydrogenated	LD50 Dermal	Rat	>2000 mg/kg	-	Based on studies with similar substances. Based on studies with similar substances.
	LD50 Oral	Rat	>5000 mg/kg	-	
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	LD50 Inhalation Dusts and mists	Rat	>5.2 mg/l	4 hours	-
	LD50 Dermal	Rat	>2000 mg/kg	-	Based on studies with similar substances.
	LD50 Oral	Rat	>2000 mg/kg	-	-

Section 11. Toxicological information

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours	Based on studies with similar substances. Based on studies with similar substances. Based on studies with similar substances.
	LD50 Dermal	Rat	>2000 mg/kg	-	
	LD50 Oral	Rat	>5000 mg/kg	-	
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. Based on studies with similar substances. Based on studies with similar substances.
	LD50 Dermal	Rat	>5000 mg/kg	-	
	LD50 Oral	Rat	>5000 mg/kg	-	
bis(nonylphenyl)amine	LD50 Dermal	Rabbit	>2000 mg/kg	-	Based on studies with similar substances. Based on studies with similar substances.
	LD50 Oral	Rat	>5000 mg/kg	-	

Irritation/Corrosion

Product/ingredient name	Test authority / Test number	Species	Route / Result	Conc.	Remarks
Distillates (petroleum), hydrotreated heavy paraffinic	OECD 405	Rabbit	Eyes - Non-irritating to the eyes.	-	Based on studies with similar substances. Based on studies with similar substances.
	OECD 404	Rabbit	Skin - Mild irritant	-	
1-Decene, homopolymer, hydrogenated	OECD 405	Rabbit	Eyes - Non-irritating to the eyes.	-	-
	OECD 404	Rabbit	Skin - Non-irritant to skin.	-	
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	OECD 405	Rabbit	Eyes - Non-irritating to the eyes.	-	Based on studies with similar substances. -
	OECD 404	Rabbit	Skin - Non-irritant to skin.	-	
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	OECD 405	Rabbit	Eyes - Non-irritating to the eyes.	-	Based on studies with similar

Section 11. Toxicological information

	OECD	404	Rabbit	Skin - Non-irritant to skin.	-	substances. Based on studies with similar substances.
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.
bis(nonylphenyl)amine	OECD	405	Rabbit	Eyes - Non-irritating to the eyes.	-	Based on studies with similar substances.
	OECD	404	Rabbit	Skin - Mild irritant	-	Based on studies with similar substances.

Skin corrosion or irritation Not available for product and all ingredients.

Serious eye damage/eye irritation Not available for product and all ingredients.

Respiratory Irritation Not available for product and all ingredients.

Sensitisation

Respiratory Sensitisation Not available for product and all ingredients.

Skin Sensitisation

Product/ingredient name	Route of exposure	Species	Result	Remarks
Distillates (petroleum), hydrotreated heavy paraffinic	skin	Guinea pig	Not sensitising	Based on studies with similar substances.
1-Decene, homopolymer, hydrogenated	skin	Guinea pig	Not sensitising	-
Dec-1-ene, homopolymer, hydrogenated	skin	Guinea pig	Not sensitising	-
Dec-1-ene, oligomers, hydrogenated	skin	Guinea pig	Not sensitising	-
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	skin	Guinea pig	Not sensitising	Based on studies with similar substances.
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	skin	Guinea pig	Not sensitising	Based on studies with similar substances.
bis(nonylphenyl)amine	skin	Guinea pig	Not sensitising	Based on studies with similar substances.

CMR - ISHA Article 42 Public Notice No 2016-41 Occupational Exposure Limits

Product/ingredient name	CAS number	Classification
Nickel	7440-02-0	CARCINOGENICITY - Category 2

Section 11. Toxicological information

Carcinogenicity

Not available for product and all ingredients.

Germ cell mutagenicity

Product/ingredient name	Test	Experiment	Result	Remarks
Distillates (petroleum), hydrotreated heavy paraffinic	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	Based on studies with similar substances.
	473 In vitro Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.
	476 In vitro Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.
	474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammal - species unspecified	Negative	Based on studies with similar substances.
1-Decene, homopolymer, hydrogenated	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	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.
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	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 474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammal -	Negative	Based on studies with similar substances.

Section 11. Toxicological information

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	OECD 471 Bacterial Reverse Mutation Test	species unspecified Experiment: In vitro	Negative	Based on studies with similar substances.
	OECD 473 In vitro Mammalian Chromosomal Aberration Test	Subject: Bacteria Experiment: In vitro	Negative	Based on studies with similar substances.
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	Subject: Mammal - species unspecified Experiment: In vitro	Negative	Based on studies with similar substances.
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	OECD 474 Mammalian Erythrocyte Micronucleus Test	Subject: Unspecified Experiment: In vivo	Negative	Based on studies with similar substances.
	OECD 473 In vitro Mammalian Chromosomal Aberration Test	Subject: Mammal - species unspecified Experiment: In vitro	Positive	Based on studies with similar substances.
	OECD 471 Bacterial Reverse Mutation Test	Subject: Mammal - species unspecified Experiment: In vitro	Negative	Based on studies with similar substances.
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	Subject: Bacteria Experiment: In vitro	Negative	Based on studies with similar substances.
	OECD 474 Mammalian Erythrocyte Micronucleus Test	Subject: Mammal - species unspecified Experiment: In vivo	Negative	Based on studies with similar substances.
bis(nonylphenyl)amine	471 Bacterial Reverse Mutation Test	Subject: Mammal - species unspecified Experiment: In vitro	Negative	Based on studies with similar substances.
	476 In vitro Mammalian Cell Gene Mutation Test	Subject: Bacteria Experiment: In vitro	Negative	Based on studies with similar substances.
	487 In vitro Micronucleus Test	Subject: Mammal - species unspecified Experiment: In vitro	Negative	-
		Subject: Mammal - species unspecified		

Reproductive toxicity

Section 11. Toxicological information

Product/ ingredient name	Test detail	Species	Exposure	Developmental toxin	Maternal toxicity	Fertility	Remarks
Decene, homopolymer, hydrogenated	OECD 415	Rat	Oral -	Negative	Negative	Negative	-
Dec-1-ene, homopolymer, hydrogenated	OECD 415	Rat	Oral -	Negative	Negative	Negative	-
Dec-1-ene, oligomers, hydrogenated Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	OECD 421	Rat	Oral -	Negative	Negative	Negative	Based on studies with similar substances.

Teratogenicity 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.

Specific target organ toxicity (single exposure)

Not available for product
and all ingredients.

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Nickel	Category 1	-	-

Potential chronic health effects

General USED ENGINE OILS
Combustion products resulting from the operation of internal combustion engines contaminate engine oils during use. Used engine oil may contain hazardous components which have the potential to cause skin cancer. Frequent or prolonged contact with all types and makes of used engine oil must therefore be avoided and a high standard of personal hygiene maintained.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Aspiration hazard

Name	Result
Distillates (petroleum), hydrotreated heavy paraffinic	ASPIRATION HAZARD - Category 1
1-Decene, homopolymer, hydrogenated	ASPIRATION HAZARD - Category 1
Dec-1-ene, homopolymer, hydrogenated	ASPIRATION HAZARD - Category 1
Dec-1-ene, oligomers, hydrogenated	ASPIRATION HAZARD - Category 1
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	ASPIRATION HAZARD - Category 1
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	ASPIRATION HAZARD - Category 1

Other information Not available.

Section 12. Ecological information

Ecotoxicity

No known significant effects or critical hazards.

Persistence/degradability

Partially biodegradable.

Mobility in soil

Spillages may penetrate the soil causing ground water contamination.

Bioaccumulative potential

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

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 minimised wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Disposal precautions

This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	IMDG	IATA
A. UN number	Not regulated.	Not regulated.
B. UN proper shipping name	-	-
C. Transport hazard class(es)	-	-
D. Packing group	-	-
E. Environmental hazards	No.	No.
F. Additional information	-	-

Special precautions for user Not available.

Section 15. Regulatory information

Regulation according to ISHA

ISHA article 117 (Harmful substances prohibited from manufacture)

None of the components are listed.

Section 15. Regulatory information

ISHA article 118 (Harmful substances requiring permission) None of the components are listed.

Exposure Limits of Chemical Substances and Physical Factors

The following components have an OEL:

Distillates (petroleum), hydrotreated heavy paraffinic
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based
Nickel

ISHA Enforcement Regs Annex 19 (Exposure standards established for harmful factors) The following components are listed: Nickel and its insoluble inorganic compounds

ISHA Enforcement Regs Annex 21 (Harmful factors subject to Work Environment Measurement) None of the components are listed.

ISHA Enforcement Regs Annex 22 (Harmful Factors Subject to Special Health Check-up) The following components are listed: metal working fluids: oil mist, mineral

Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control) None of the components are listed.

Regulation according to Chemicals Control Act

Article 20 Toxic Chemicals (K-Reach Article 20) Not applicable

Article 18 Prohibited (K-Reach Article 27) None of the components are listed.

Article 20 Restricted (K-Reach Article 27) None of the components are listed.

CCA Article 11 (TRI) None of the components are listed.

CCA Article 39 (Accident Precaution Chemicals) None of the components are listed.

Dangerous Materials Safety Management Act
Class: Class 4 - Flammable Liquid
Item: 6. Class 4 petroleums
Threshold: 6000 L
Danger category: III
Signal word: Contact with sources of ignition prohibited

Wastes regulation Designated Waste

Regulation according to other foreign laws

Australia inventory (AIIIC) All components are listed or exempted.

Canada inventory All components are listed or exempted.

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

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

Japan inventory (CSCL) At least one component is not listed.

Korea inventory (KECI) All components are listed or exempted.

Section 15. Regulatory information

Philippines inventory (PICCS)	At least one component is not listed.
Taiwan inventory (TCSI)	All components are listed or exempted.
United States inventory (TSCA 8b)	All components are active or exempted.

Section 16. Other information

History

Source of Information	Sources of key data used to compile the Safety Data Sheet: Hazard assessment review data, toxicological reviews, and product physical properties; component supplier hazard communication data; and other publically available resources.
Date first prepared	17/05/2011
Number of revisions and date of last revision	11 28/11/2022.
Prepared by	Product Stewardship Group
Key to abbreviations	AMP = Acceptable Maximum Peak ACGIH = American Conference of Governmental Industrial Hygienists, an agency that promulgates exposure standards. ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail ADG Code = Australian Code for the Transport of Dangerous Goods by Road and Rail CAS Number = Chemical Abstracts Service Registry Number HAZCHEM Code = Emergency action code of numbers and letters which gives information to emergency services. Its use is required by the ADG Code for Dangerous Goods in bulk. ICAO = International Civil Aviation Organization. IATA = International Air Transport Association, the organization promulgating rules governing shipment of goods by air. IMDG = International Maritime Organization Rules, rules governing shipment of goods by water. IP 346 = A chemical screening assay for dermal toxicity. The European Commission has recommended that Method IP 346 be used as the basis for labelling certain lubricant oil base stocks for carcinogenicity. The EU Commission has stipulated that the classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346. (See Note L, European Commission Directive 67/548/EEC as amended and adapted.) DMSO is a solvent. NOHSC = National Occupational Health & Safety Commission, Australia REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006] TWA = Time weighted average STEL = Short term exposure limit UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods. TCCA = Toxic Chemical Control Act GHS = Global Harmonized System ISHA = Industrial Safety and Health Act 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, 72623-87-1

▣ Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.