

Castrol EDGE 0W-40 A3/B4

Section 1. Identification

GHS product identifier	Castrol EDGE 0W-40 A3/B4
Product code	467465-MY01
SDS no.	467465
Relevant identified uses of the substance or mixture and uses advised against	
Use of the substance/ mixture	Automotive engine crankcase lubricant. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Supplier	BP Taiwan Marketing Limited Level 57-1, TAIPEI 101 Tower, No. 7, Section 5, Xinyi Road, Taipei, 11049, Taiwan, R.O.C.
	Tel: +886 70 1011 9900
EMERGENCY TELEPHONE NUMBER	Carechem: +886 2 8793 3212 (24/7)

Section 2. Hazards identification

Classification of the substance or mixture	Not classified.
GHS label elements	
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	Defatting to the skin. USED ENGINE OILS Used engine oil may contain hazardous components which have the potential to cause skin cancer. See Toxicological Information, section 11 of this Safety Data Sheet.

Section 3. Composition/information on ingredients

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

Chinese name	% (w/w)	CAS number	Type
Distillates (petroleum), hydrotreated heavy paraffinic	≥25 - ≤50	64742-54-7	[1] [2]
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	≥25 - ≤50	68037-01-4	[1]
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	≤5	72623-86-0	[1] [2]
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	≤5	72623-87-1	[1] [2]
Distillates (petroleum), solvent-dewaxed heavy paraffinic	≤3	64742-65-0	[2]
Distillates (petroleum), hydrotreated heavy paraffinic	≤3	64742-54-7	[2]

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Section 3. Composition/information on ingredients

Distillates (petroleum), solvent-dewaxed light paraffinic	≤3	64742-56-9	[1] [2]
物品名稱	% (w/w)	化學文摘社登記號碼(CAS No.)	類型
氫化處理的重質蠟族石油餾分	≥25 - ≤50	64742-54-7	[1] [2]
1-癸烯，同元聚合物，氫化 1-癸烯，低聚合物，氫化	≥25 - ≤50	68037-01-4	[1]
潤滑油 (石油)，C15-30，氫化中性油基	≤5	72623-86-0	[1] [2]
潤滑油 (石油)，C20-50，氫化中性油基	≤5	72623-87-1	[1] [2]
溶劑脫蠟重質蠟族石油餾分	≤3	64742-65-0	[2]
氫化處理的重質蠟族石油餾分	≤3	64742-54-7	[2]
溶劑脫蠟輕質蠟族石油餾分	≤3	64742-56-9	[1] [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.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

Section 4. First aid measures

Description of necessary first aid measures

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. Get medical attention if symptoms occur.
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.
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.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.

Most important symptoms/effects, acute and delayed

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

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

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

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.
Unsuitable extinguishing media	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, CO ₂) (carbon monoxide, carbon dioxide)
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.
Special protective equipment for fire-fighters	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

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

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).

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.

Not suitable

Prolonged exposure to elevated temperature.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Distillates (petroleum), hydrotreated heavy paraffinic	TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan). [Oil mist] STEL: 10 mg/m ³ 15 minutes. Issued/ Revised: 1/2005 Form: Mist TWA: 5 mg/m ³ 8 hours. Issued/Revised: 1/2005 Form: Mist
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan). [Oil mist] STEL: 10 mg/m ³ 15 minutes. Issued/ Revised: 1/2005 Form: Mist TWA: 5 mg/m ³ 8 hours. Issued/Revised: 1/2005 Form: Mist
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan). [Oil mist] STEL: 10 mg/m ³ 15 minutes. Issued/ Revised: 1/2005 Form: Mist TWA: 5 mg/m ³ 8 hours. Issued/Revised: 1/2005 Form: Mist
Distillates (petroleum), solvent-dewaxed heavy paraffinic	TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan). [Oil mist] STEL: 10 mg/m ³ 15 minutes. Issued/

Section 8. Exposure controls/personal protection

Distillates (petroleum), hydrotreated heavy paraffinic	Revised: 1/2005 Form: Mist TWA: 5 mg/m ³ 8 hours. Issued/Revised: 1/2005 Form: Mist TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan). [Oil mist] STEL: 10 mg/m ³ 15 minutes. Issued/ Revised: 1/2005 Form: Mist TWA: 5 mg/m ³ 8 hours. Issued/Revised: 1/2005 Form: Mist
Distillates (petroleum), solvent-dewaxed light paraffinic	TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan). [Oil mist] STEL: 10 mg/m ³ 15 minutes. Issued/ Revised: 1/2005 Form: Mist TWA: 5 mg/m ³ 8 hours. Issued/Revised: 1/2005 Form: Mist

Biological exposure indices

No exposure indices known.

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.

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 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

Section 8. Exposure controls/personal protection

Other skin protection

and/or impervious chemical suits and boots will be required.

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

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

Appearance

Physical state

Liquid.

Colour

Amber. [Dark]

Odour

Mild.

Odour 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.

Flash point

Closed cup: 210°C (410°F) [Pensky-Martens ASTM D 93]

Open cup: >210°C (>410°F) [Cleveland ASTM D 92]

Evaporation rate

Not available.

Flammability

Not available.

Not applicable. Based on - Physical state

Lower and upper explosion limit/flammability limit

Not available.

Vapour pressure

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Distillates (petroleum), hydrotreated heavy paraffinic	<0.08	<0.011	ASTM D 5191			
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			
Distillates (petroleum), solvent-dewaxed heavy paraffinic	<0.08	<0.011	ASTM D 5191			
Polybutene (Isobutylene/butene copolymer)	<0.75	<0.1				

Relative vapour density

Not available.

Relative density

Not available.

Density

<1000 kg/m³ (<1 g/cm³) at 15°C

Solubility(ies)

Media	Result
water	Not soluble

Partition coefficient: n-octanol/water

Not applicable.

Auto-ignition temperature

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Section 9. Physical and chemical properties

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
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	343 to 369	649.4 to 696.2	ASTM D 2159
Polybutene (Isobutylene/butene copolymer)	215	419	EU A.15

Decomposition temperature

Not available.

Viscosity

Kinematic: 76.91 mm²/s (76.91 cSt) at 40°C

Kinematic: 13 to 14 mm²/s (13 to 14 cSt) at 100°C

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 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.

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

Aspiration hazard

Name	Result
Distillates (petroleum), hydrotreated heavy paraffinic	ASPIRATION HAZARD - Category 1
Dec-1-ene, homopolymer, hydrogenated 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
Distillates (petroleum), solvent-dewaxed light paraffinic	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

Routes of entry anticipated: Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact

No known significant effects or critical hazards.

Inhalation

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

Skin contact

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

Ingestion

No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact

No specific data.

Inhalation

No specific data.

Skin contact

Adverse symptoms may include the following:
irritation
dryness
cracking

Ingestion

No specific data.

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

Eye contact

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

Inhalation

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

Skin contact

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

Section 11. Toxicological information

Ingestion	Ingestion of large quantities may cause nausea and diarrhoea.
<u>Potential chronic health effects</u>	
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.
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.

Section 12. Ecological information

Environmental effects	No known significant effects or critical hazards.
<u>Persistence and degradability</u>	Not expected to be rapidly degradable.
<u>Bioaccumulative potential</u>	This product is not expected to bioaccumulate through food chains in the environment.
<u>Mobility in soil</u>	
Soil/water partition coefficient (K_{oc})	Not available.
Mobility	Spillages may penetrate the soil causing ground water contamination.
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. 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. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
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Section 14. Transport information

	IMDG	IATA
UN number	Not regulated.	Not regulated.
UN proper shipping name	-	-
Transport hazard class(es)	-	-
Packing group	-	-

Section 14. Transport information

Environmental hazards	No.	No.
Additional information	-	-

Special precautions for user Not available.

Section 15. Regulatory information

Not applicable.

TCCSCA List of concerned chemicals

Not applicable.

OSHA Enforcement Rules Article 28 This product contains substances "Specially hazardous to health": Toluene, Lead.

OSHA Article 29 Employers shall not employ persons under the age of 18 to perform any potentially dangerous or harmful work involving this product. (OSHA Art. 29 par 3)

OSHA Article 30 Employers shall not employ female laborers who are still within their first postpartum year to perform potentially dangerous and hazardous work involving this product. (OSHA Art. 30 second part, par 2)

Montreal Protocol

Ingredient name	Status
Not listed.	

Stockholm Convention on Persistent Organic Pollutants

Ingredient name	List name	Status
Not listed.		

Rotterdam Convention on Prior Informed Consent (PIC)

Ingredient name	Status
Not listed.	

Regulation according to other foreign laws

REACH Status For the REACH status of this product please consult your company contact, as identified in Section 1.

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

Canada inventory status 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.

Philippines inventory (PICCS) All components are listed or exempted.

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

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

United States inventory (TSCA 8b) At least one component is not listed.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
Not classified.	

References Not available.

Organisation that prepared the SDS BP

History

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Section 16. Other information

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Key to abbreviations	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor 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) REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006] UN = United Nations 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

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.