

SAFETY DATA SHEET



Castrol Axle GL-5 80W-90

Section 1. Identification

GHS product identifier Castrol Axle GL-5 80W-90
Product code 467197-MY01
SDS no. 467197
Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture Gear lubricant
For specific application advice see appropriate Technical Data Sheet or consult our company representative.
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Section 2. Hazards identification

Classification of the substance or mixture SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

GHS label elements

Signal word No signal word.
Hazard statements H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements

Prevention P103 - Read label before use.
P102 - Keep out of reach of children.
P101 - If medical advice is needed, have product container or label at hand.
Response P273 - Avoid release to the environment.
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 Defatting to the skin.

Section 3. Composition/information on ingredients

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

Chinese name	Concentration	CAS number	Type
Distillates (petroleum), hydrotreated heavy paraffinic	≥50 - ≤75	64742-54-7	[2]
Residual oils (petroleum), solvent-dewaxed	≥10 - ≤25	64742-62-7	[2]
Residual oils (petroleum), hydrotreated	≥10 - ≤25	64742-57-0	[2]
(Z)-octadec-9-enylamine	≤0.1	112-90-3	[1]
化學品名稱	濃度	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	≥50 - ≤75	64742-54-7	[2]
蒸餘油(石油), 溶劑脫蠟	≥10 - ≤25	64742-62-7	[2]
加氫處理的殘油(石油)	≥10 - ≤25	64742-57-0	[2]
油胺	≤0.1	112-90-3	[1]

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.

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Section 3. Composition/information on ingredients

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Toxic and concerned chemical substance
- [4] Additional disclosure due to company policy

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. 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.
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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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	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.
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	Contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. 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). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and material for containment and cleaning up

Section 6. Accidental release measures

Small spill

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

Large spill

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

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 vapour 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 spilt 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. 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). 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
Residual oils (petroleum), solvent-dewaxed	TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan). 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
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Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Section 8. Exposure controls/personal protection

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 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

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

Appearance

Physical state	Liquid.
Colour	Amber. [Light]
Odour	Not available.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.

Section 9. Physical and chemical properties

Boiling point, initial boiling point, and boiling range	Not available.
Drop Point	Not available.
Flash point	Closed cup: >180°C (>356°F) [Pensky-Martens]
Evaporation rate	Not available.
Flammability	Not available. Not applicable. Based on - Physical state
Lower and upper explosion limit/flammability limit	Not available.
Vapour pressure	Not available.
Relative vapour density	Not available.
Relative density	Not available.
Density	<1000 kg/m ³ (<1 g/cm ³) at 30°C
Solubility	insoluble in water.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Kinematic: 136.9 mm ² /s (136.9 cSt) at 40°C Kinematic: 13.8 to 15 mm ² /s (13.8 to 15 cSt) at 100°C
Particle characteristics	
Median particle size	

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

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
(Z)-octadec-9-enylamine	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
(Z)-octadec-9-enylamine	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
(Z)-octadec-9-enylamine	ASPIRATION HAZARD - Category 1

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

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.

Section 11. Toxicological information

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

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.

Ingestion Ingestion of large quantities may cause nausea and diarrhoea.

Potential chronic health effects

General No known significant effects or critical hazards.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

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

Persistence and degradability

Expected to be biodegradable.

Bioaccumulative potential

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

Mobility in soil

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. 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	IMDG	IATA
UN number	Not regulated.	Not regulated.
UN proper shipping name	-	-
Transport hazard class(es)	-	-
Packing group	-	-
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 Article 29 None of the components are listed.

OSHA Article 30 None of the components are listed.

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 (AIIIC) All components are listed or exempted.

Canada inventory status All components are listed or exempted.

China inventory (IECSC) All components are listed or exempted.

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) All components are active or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3	Calculation method Calculation method

References Not available.

Organisation that prepared the SDS BP

History

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Version 3.05

Prepared by Product Stewardship

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

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